PRINCIPALS' LEVELS OF EMOTIONAL INTELLIGENCE AS AN INFLUENCE ON SCHOOL CULTURE

by

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Abstract

It is not fully known what assumptions can be made, if any, regarding the emotional intelligence (EI) of a school principal and the influence that has on a school's culture. This study measured the EI of 15 principals willing to participate from randomly selected school districts in Wyoming, using the Mayer-Salovey-Caruso EI Test (MSCEIT), which measures four categories of EI: (1) Managing Emotions, assessed using the Emotional Management task and the Social Management task, (2) Understanding Emotions, assessed using the Blends task and the Changes task, (3) Using Emotions, assessed using the Sensations task and the Facilitation task, and (4) Perceiving Emotions, assessed using the Faces task and the Pictures task.

All teachers from the participating schools were questioned using the David C. Anchin School Culture Quality Survey. This survey measures teachers' perceptions of (1) Having a shared vision, (2) Facilitative leadership, (3) Teamwork and cooperation of staff, and (4) Nurturing a learning community. This instrument is designed specifically to measure the work culture of teachers, which enables them to do their job well.

Data analysis included a hierarchical linear model of the current status of teachers' perceptions of the school culture's four categories (shared vision, facilitative leadership, teamwork and cooperation, and nurturing a learning community) and the current status of the four categories of emotional intelligence of the principal (managing emotions, using emotions, understanding emotions, and perceiving emotions).

CHAPTER 1

INTRODUCTION

Background

Since the publication of *A Nation at Risk* (1984), public education in the United States has experienced numerous studies, task forces, and other initiatives to "reform" school to better meet the needs of an evolving society. This change evolution is occurring in the context of existing schools that have a one-hundred year culture which some have described as based on an "industrial model" and on societal expectations that no longer exist (Senge, et al, 2000). This institutional culture, i.e., the industrial model, has historically been one of the focal points of the "education reform" movement. That is, in an industrial model setting the "product" is not a measure of students' learning, but instead an easily measurable output. It is the hypotheses of this researcher that schools, in order to become more successful, need to be more personalized and personable institutions. This would move schools from an "industrial model" environment to an environment that could be characterized, at least in part, as being people-centered.

In the *Principles of the Coalition of Essential Schools* (1984), the author, Theodore Sizer, identified the need for schools to have a more personalized environment in order to improve student achievement. One key to this personalization comes with building and maintaining strong interpersonal relationships among all people in the school, i.e., students and staff. According to Deal and Peterson (1991), the interpersonal relationships help to form the school's culture, the "deep patterns of values, beliefs, and

traditions that have formed over the course of [the school's] history" (p. 16). Values, beliefs, and traditions are predicated on personal perceptions and individual desired outcomes, e.g., student achievement. The type of culture which leads to increased student achievement includes and is certainly not limited to what a leader (principal) does to achieve a balance between being task oriented and people oriented (John & Taylor, 1999). If, for example, the management tasks of a school are in the forefront, the culture of the school must reflect this focus. On the other hand, if the focus of the school is on people to affect the outcomes, e.g., student achievement, the culture of the school reflects this focus. Hallam and Campbell (1992) describe eight characteristics of creating and maintaining a caring school culture. Two of the characteristics identify team building and relationships. Clearly, the emphasis in both team building and developing relationships is focused on maximizing the personal dimension of schools.

Marzano and Marzano (2003) take the concept of personal school culture one step further by emphasizing the link between teachers and teachers with students as the key to high student achievement. Therefore, a leader's (principal's) sensitivity and ability to foster positive relationships with staff and students would seem to correlate with increased student achievement (Waters, Marzano, & McNulty, 2003). From experience, people remember those teachers who had a personal as well as an academic commitment to students. This commitment results in higher achievement for students and helps to foster a school culture that is open, empowering, collegial, and collaborative. Creating an ideal culture for teaching and learning is a major challenge for school leaders.

A culture that improves student achievement is critical once again because of a renewed era of high accountability. The *No Child Left Behind Act* (NCLB) *of 2002*

requires more from educators than any other federal legislation: all children are to be proficient in state standards by the year 2014. Although each state can determine the definition for "proficiency," the academic gains required by the federal government are measured in annual increments. Failure to make gains toward student proficiency of the standards for two years earns a school the label of "needing improvement." Once a school is given such a label, parents will have a choice to send their children to an alternative school, with the district required to fund the transportation to and from the school of choice. On a smaller scale, not making adequate yearly progress measured by each state's established incremental growth merits a headline in the newspaper and public scrutiny. Educators, in general, and particularly district leaders are searching for ways to make the gains required by *No Child Left Behind*. Leaders are turning to researchers to find curricula to implement, and they are looking at what makes some schools better able to meet state standards than other schools (Waters, Marzano, & McNulty, 2003). Principals in high achieving schools serve as developers of a school culture that is caring, risk taking, open, and supportive (Waters, Marzano, & McNulty, 2003; Blasé & Blasé, 2000; Deal & Peterson, 1999). It is important to have schools with this type of culture in order to increase the capacity for improved student achievement.

Ultimately, educational leaders are accountable for the success of schools, but what makes one leader more effective than another? What qualities in administrators help nurture a culture that leads to high student achievement? An ability to create this type of culture can be linked to a principal's level of EI, which includes being empathetic, being aware of one's own and other's emotions, and knowing when and how to act on these emotions (Goleman, 1998). Donaldson (2001) recognizes that as principals build more

effective relationships through empathy and awareness of their own emotions, the school develops a greater capacity for improvement. “The litmus test for leadership is whether working relationships are sufficiently strong to support commitments to a common purpose that lead to action-in-common” (Donaldson, 2001, p. 72). This contention is supported by Bennis and Nanus (1985) who described effective leaders as having a willingness to risk, self-knowledge, openness, and persistence.

These characteristics, e.g., the ability to be self-aware, perceive emotions, empathize, and manage emotions, have been defined as emotional intelligence (EI) that is broadly defined as a group of skills needed for any leadership role. Cherniss and Goleman, (2001) describe EI as having the ability to manage one’s emotions, express emotions and perceive others’ emotions. These abilities have been strongly linked to exemplary performance in leadership roles (Donaldson, 2001; Cherniss & Goleman, 2001; Church, 1997; Atwater & Yammarino, 1992).

Emotional Intelligence in Leaders

Goleman, Boyatzis, and McKee (2002) aver that it does not matter *what* tasks leaders do; their success relies on *how* they perform the tasks; this is EI. In this context, EI is defined as “how leaders handle themselves and their relationships” (p. 6). Weisinger (1998) defines EI as:

1. The ability to accurately perceive, appraise, and express emotion
2. The ability to access or generate feelings on demand when they can facilitate understanding of yourself or another person

3. The ability to understand emotions and the knowledge that derives from them
4. The ability to regulate emotions to promote emotional and intellectual growth

The use of EI in the workplace is becoming more common. Mary Leiker, a superintendent from Kentwood, Michigan, used the concepts of EI to train all of her district and building leaders, including the school board (Senge, et al., 2000). She stated: "When students came back from being suspended, we began to 'go that extra step' and discuss with them the reason for their emotional state—to make the suspension a learning opportunity. I also use EI as an opening point in our programs on parenting skills" (p. 147).

The US Air Force used an EI scale to select recruiters and discovered those that had the greatest success scored higher in numerous categories of EI including empathy, self-awareness, and personal happiness. The gains in recruitment increased the Air Force's ability to predict who would be successful as recruiters by three-fold. Although the gains can be partially attributed to the recruiters' levels of EI, this finding led to all branches of the military using EI indicators in their hiring of recruiters (Cherniss, 2003). A leading beauty and cosmetic company, L'Oreal, hired sales agents for their higher levels of EI, and these agents outperformed their peers in several areas. Compared to the control group, those with high levels of EI had 63 percent less turnover in the first year alone. They also had significantly more sales than their colleagues (Cherniss, 2003).

EI qualities in leaders also have a significant effect on the culture (Goleman, Boyatzis, & McKee, 2002). In order to create a positive collective culture, a leader needs

to be aware of the emotional current of the organization and pay attention to its effects on the culture. One example of a success story is that of an Asian nongovernmental organization (NGO) led by Lang Chen [the name is the not the actual leader's name but one used by Goleman, Boyatzis, and McKee to refer to a specific leader]. The NGO's role was to improve the health and wellbeing of children and women on an international scale. Lang Chen noted that although the mission was inspiring, the culture of the organization suffered because of the daily stresses including tremendous paperwork, lack of communication, and regulations. To improve the culture and create a renewed vision, Lang Chen used her EI skills to identify others' emotions through effective listening, understand their feelings, and finally, motivate them toward a common vision. Goleman, Boyatzis, and McKee (2002) referred to Lang Chen's abilities as EI: "using emotional intelligence to observe and interpret the subtle clues about what's really going on, and it offers leaders a perspective that goes beyond other kinds of data about the company" (p. 205).

Another example of the emotional intelligence of leaders and its relation to improving the culture includes Monica Sharma, the Chief of Health for UNICEF. In a project in India where the overseers were assuring immunization for children in impoverished villages, the 400 staff members were becoming complacent. Monica used her EI to bring back the energy by moving key staff back to the "real work" of immunizing children. This shift bonded the staff members toward the common purpose. "For the first time they were able to feel the raw emotions that underlay their daily work; excitement and hope, alongside the doubts and fears of the mothers, who themselves were scared by the syringes and were frightened for their children" (p. 213). The staff

members at UNICEF came to see that each of their roles was a significant contribution to their cause. Encouraging people to align passionately requires attunement, "alignment with the kind of resonance that moves people emotionally as well as intellectually" (p. 208). Leaders with high levels of EI know that this requires motivating people through emotions toward a common vision.

The research and work by Goleman, Boyatzis, and McKee (2002) offer rules for leaders to help them create an emotionally intelligent culture: (1) "knowing what the sacred center actually is" (p. 219), what people in the organization truly value, (2) taking time to communicate effectively, which requires slowing down, (3) using both a top-down and a bottom-up strategy of informal and formal leadership, (4) paying attention to one's own feelings, (5) allowing people to "see, feel, and touch the values and the vision of the organization to make these abstractions meaningful" (p. 220), (6) focusing on people first, (7) showing what the vision is and what it looks like, (8) developing systems that support EI in others, and (9) using the symbolic power for leverage toward a vision. The responsibility of creating an emotionally intelligent culture lies with the leader's ability to pull together the collective emotional intelligence.

Need for Research in Area of Study

Although EI research is becoming widespread in regard to leadership, culture, and job effectiveness, little links levels of EI directly to school leaders and the relationship of EI to school culture. Studies of successful leaders suggest, however, that leaders benefit from self-knowledge provided by understanding EI and learning how to create an

inviting, respectful school culture (Sala, 2003; Salovey & Mayer, 1990; Deal & Peterson, 1999).

Problem Statement

School leaders' levels of EI may not be in the forefront in most districts, but never in the history of education has the need for administrators' emotional competency been greater. The *No Child Left Behind Act of 2002* requires major changes in the area of assessment and accountability, which will require principals to learn skills used by leaders in academically successful schools including building interpersonal relationships, helping teachers manage the stress of higher levels of accountability, and self-knowledge. In order to create an optimal learning environment in which students are able to meet the rigor required by NCLB, administrators may benefit from developing skills in the four components of EI: perceiving emotions, using emotions, understanding emotions, and managing emotions. However, little research has been conducted in schools documenting the effects of principals' emotional intelligence to the creation of school culture. This study seeks to explore what assumptions can be made about the ratings of principals' emotional intelligence and the influence on school culture as perceived by teachers.

Purpose Statement

Context of the Problem

The purpose of this study was to identify which components of principals' EI have the greatest influence on creating a school culture. The areas of school culture being examined include: (1) having a shared vision, (2) facilitative leadership, (3) teamwork

and cooperation of staff, and (4) nurturing a learning community as measured by the School Culture Quality Survey (SCQS). The four areas of principals' EI being examined are: (1) Perceiving Emotions, (2) Using Emotions, (3) Understanding Emotions and (4) Managing Emotions.

Research Questions

The following research questions were addressed in this study:

1. What is the relationship between principals' emotional intelligence scores as assessed by the Mayer-Salovey-Caruso Emotional Intelligence Test and school culture as perceived by teachers?
2. What is the relationship between principals' scores on the Mayer-Salovey-Caruso Emotional Intelligence Test and the sub-scale of facilitative leadership as perceived by teachers?
3. What is the relationship between principals' scores on the Mayer-Salovey-Caruso Emotional Intelligence Test and the sub-scale of teamwork as perceived by teachers?
4. What is the relationship between principals' scores on the Mayer-Salovey-Caruso Emotional Intelligence Test and the sub-scale of shared vision as perceived by teachers?
5. What is the relationship between principals' scores on the Mayer-Salovey-Caruso Emotional Intelligence Test and the sub-scale of learning communities as perceived by teachers?

Theoretical Framework

Basis for Current Study

The foundations of EI in leaders and creating a supportive culture will frame this study. The EI theoretical framework will be based on primal leadership (Goleman, Boyatzis, & McKee, 2002) and Hay/McBer's study (2000). In the primal leadership theory, Goleman, Boyatzis, and McKee describe leading in the area of emotions as the key role of leadership, which is "driving the collective emotions in a positive direction and clearing the smog created by toxic emotions" (p. 5). Resonance is the term used to describe the effect of positive emotions led by a leader, and dissonance is the term used when leaders weaken emotions that lead to people feeling successful in their careers (Goleman, Boyatzis, & McKee, 2002). Most leaders described as dissonant are not purposely trying to be negative; rather they do not have the EI to behave in a positive manner to intentionally influence the collective emotions. Leaders described as resonant motivate others toward a common vision. All four components of EI, self-awareness, social awareness, empathy, and self-management, are essential for resonance and are interdependent (Goleman, Boyatzis, & McKee, 2002). Empathy requires self- awareness since knowing one's feelings adds to understanding of other's feelings. Understanding the feelings of the entire group builds resonance. In short, EI competencies are the foundation for creating resonance. Strong leadership requires both EI and cognitive intelligence. "Gifted leadership occurs where heart and head—feeling and thought—meet" (p. 26). An intelligent leader, coupled with EI, has the ability to assess the working environment and transform it to a shared vision.

The Hay/McBer study suggests EI in leaders is critical to creating and maintaining a work environment that supports and motivates staff members. The Hay/McBer study analyzed numerous employees' climate surveys. A correlation was conducted on the EI of 3,781 leaders of the companies. The study reveals that 50 to 70 percent of the answers to the climate surveys were linked to the EI of the companies' executives. Using the same information, research also linked the six unique EI styles of the executives with its relationship to the work climate. The styles of visionary, coaching, democratic, and affiliative seem to improve climate, whereas pace-setting and coercive had the opposite effect.

This study was also based on the theoretical framework of Donaldson (2001) who asserts that students learn most effectively when strong relationships exist between the adults in the learning community. If the climate is warm, motivating, open and trusting between teachers, with parents and with the leadership, students' achievement increases. Moving a staff from working in isolation toward unity is difficult for principals because their leadership role separates them from the staff. Donaldson discusses how new school leaders are left to handle existing relationships, and the high level of interpersonal skills this requires.

Definitions of Terms

The following definitions of terms will apply throughout the text. Other terms and concepts will be defined within the text of this study.

Emotional Intelligence (EI): For the purpose of this study, Salovey and Mayer's (1990) definition of EI will be used. They define EI as the "ability to monitor one's own

and other's feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action" (p. 189).

Culture: Culture is defined as "the values, beliefs, and norms" of an organization (Brown & Moffett, 1999).

Limitations

Limitations include but were not limited to the remoteness of Wyoming and the familiarity of the population with the researcher. Specifically, the limitations of the study included:

1. The participants were randomly selected from 48 school districts in Wyoming, comprised of 336 schools.
2. The population included 15 Wyoming principals who were willing to participate from randomly selected school districts.
3. Not all principals were administered the EI test at the same time or in the same location. Some were given the EI test from the researcher at a time convenient for their district; others received the EI test and the culture survey in the mail.
4. Principals with lower levels of EI did not always volunteer to participate in the survey possibly due to insecurity of what the scores might have revealed; principals volunteering to participate in this survey may have had higher levels of EI than principals who did not choose to participate because they could be more confident that they would have a high score.
5. The researcher has an existing relationship with the population, varying from acquaintances to friendships. This is a limitation because some principals may

choose to participate because of an existing relationship. Others may decline since no strong relationship or a negative relationship exists.

Delimitations

The researcher set delimitations of the study regarding what was possible to include in this study given the timeframe. Delimitations of this study included:

1. This study was narrowed in scope to 13 school districts in Wyoming.
2. Only the teachers that attended a pre-determined staff meeting took part in the culture survey.
3. The period of the study lasted four weeks in the late winter of 2004-2005.

Significance of the Study

This study demonstrated if any category of principals' EI could be assumed to influence the schools' culture. This information may be useful for hiring committees when searching for a principal who can affect the culture to maximize student achievement. Results of this study will provide areas of emphasis for principal preparatory programs and for professional growth of practicing principals. According to Salovey and Mayer (1990), EI can be taught and practiced to improve results of executives. Further, Cherniss and Goleman (2001) assert EI information adds to the area of placing star performers, those better matched in one role over another, and dismissing those performers who are in the bottom 15 percent of EI. Results of this study also add to the body of knowledge in the areas of school culture and EI. Ultimately, this study adds to the research base about the effects of a principal's EI on the culture of a school.

Summary

Emotional Intelligence in leaders has been proven to make a difference in both the profit margin and the culture of organizations. National organizations use emotional intelligence research to improve effectiveness, i.e., the US Air Force uses instruments that measure emotional intelligence to improve the effectiveness of the organization's recruiters. Internationally, UNICEF is one example of a corporation that has improved their work culture through understanding the link to emotional intelligence. Schools throughout the world are beginning to include emotional intelligence training in their curriculum. In spite of these multi-faceted uses for emotional intelligence, little research exists to connect the EI of principals to the effects it can have on school culture.

With the renewed era of accountability of public schools, a culture that is supportive of students and teachers while keeping a focus on improving student achievement is necessary. Many teachers for the first time in their careers are feeling the stress of the new age of accountability. A stressful, "fear laden" school is not the type of culture that will bring about effective changes. Since the principal is the critical leader in bringing about changes in a school's culture, having strengths in EI including the ability to understand one's own and other's emotions, have empathy for others, and manage emotions could be essential assets for building leadership.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

Emotional Intelligence as a component of leadership is new, and its meaning for principals of schools is even more recent. EI is another stage in the evolution of knowledge about leadership in general and the leadership of a school principal in creating and supporting a culture. This review of leadership here will include the (1) concept of EI, (2) history of EI, (3) criticism of EI , (4) current understanding of the problem of EI, (5) competing measures of EI, (6) previous research in the neuroanatomy of EI, (7) previous research in the EI of business executives, (8) previous research related to schools, (9) history of organizational theory and its connections to EI, (10) leadership theory in education, (11) context of the problem of culture in school, (12) measurement of culture in school, (13) concept of culture that maximizes student achievement, (14) previous research and findings related to culture including the principals' role in shaping school culture and teachers' perceptions of principals' leadership, and (15) value of this study in the relationship between EI and school culture.

Context of the Problem

The Concept of Emotional Intelligence

Emotional Intelligence (EI) definitions and theories are as diverse as the researchers and writers. The premise of EI is that people are able to think and make

choices; therefore, they want to act in a way that will benefit them and others (Bar-On and Parker, 2000). Cooper and Sawaf (1996) view EI as "workings of the human heart," (p. xiii) as having "movement" of emotions. They define the difference between EI and manipulation. EI is not trying to control others or wearing a smile when one is depressed; rather it is the ability to perceive feelings in ourselves and in others, to value feelings, and to apply them in our interactions at home and at work.

Three models are the most well known: Goleman's (1998), Mayer and Salovey's (1995), and Bar-On's (1997). Goleman (1998) defines EI as "a learned capability based on EI resulting in outstanding performance at work." He includes four emotional and social competencies in his definition: (1) self-awareness: knowing what we are feeling and using this understanding to make decisions, (2) self-regulation: controlling our emotions so that they add to our well-being, (3) empathy: understanding how others are feeling and having rapport with diverse people, and (4) social skills: being able to understand social situations and to interact smoothly. In addition, he includes other traits including self-control, persistence, and motivation. Salovey and Mayer (1990) define EI as a social intelligence which allows us the "ability to monitor one's own and other's feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action" (p. 189). Their research refers to emotional intelligence as a true intelligence like other intelligences. They divided this intelligence into four distinct areas: (1) perceiving and expressing emotions: identifying and expressing emotions and feelings and identifying and expressing emotions and feelings in other people or in artwork or music; (2) assimilating emotion in one's thinking: emotions can guide one's priorities and be used to aid memory; (3) understand and analyze emotions: labeling

emotions, including those that are multifaceted and understanding the intricacies of emotions; and (4) regulating emotion through reflection: staying open to feelings and monitoring emotions for emotional growth. Bar-On's (1997) definition of EI is: "an array of noncognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures" (p. 14). He divides EI into five skill areas: (1) mood: optimism and joy; (2) stress management: impulse control and tolerance; (3) intrapersonal skills: self-actualization, self-esteem, independence, self-awareness; (4) interpersonal skills: relationships, empathy; and (5) adaptability: flexibility and problem solving.

No matter whose definition is used, EI is seen as similar yet distinct from the term "emotional competency." EI is a person's ability level to perceive and apply knowledge of emotions (Mayer, Salovey, & Caurso, 2000b). Boyatzis (1982) defines emotional competency as "an underlying characteristic of an individual which is causally related to effective or superior (one standard deviation above the mean) performance in a job." This means an EI competency could be a reliable measure that distinguishes star performers from above average performers.

What is the profile of people with high EI? According to Mayer, Salovey, & Caruso, (2000b) they are more likely to be able to solve emotional problems with less effort than a person with lower EI, which could be linked to their job performance. Further, they can perceive and understand their own and others' emotions, which can give them the ability to behave in a manner deemed appropriate for a specific career. People with high EI generally score higher in other areas of intelligence such as verbal and social because a correlation exists between the varied types of intelligence. People

with high EI often choose jobs with more social interactions and are more goal-oriented than those with lower EI abilities. Those with high EI often avoid negative behaviors such as excessive smoking, drinking, or violence.

History of Emotional Intelligence

Emotional Intelligence is not new to this decade. From 1900-1969 research related to emotions began (Mayer, 2001). In fact, the link between EI and social intelligence may have begun with Robert Thorndike (1905), who wrote about the "law of effect," which is the study of what effect a behavior was likely to produce. Several decades later in the 1940s, Ohio State leadership studies showed that consideration for others is linked to a leader's effectiveness (Cherniss, 2000). To improve their hiring of management positions, AT&T relied on the assessment center in 1956. The aspects measured by the assessment center are similar to the emotional competencies of having interpersonal and communication skills (Cherniss, 2000). Kelly (1955) established the "theory of personality," describing how a person's expectations and anticipations affect behavior.

The 1970s and 1980s could be viewed as the forerunners to EI. Ekman (1973) averred that certain basic emotions are common among mankind. For example, joy is evident on facial expressions in all human beings. Like all intelligences, EI is based on the fact that intelligence involves the ability to discern abstractions. McClelland (1975) proposed using EI abilities to determine what differentiates average employees from great employees. He found a variety of EI traits including self-confidence, leadership skills, flexibility, and motivation to achieve to link with outstanding employees. He found

that IQ made little difference. McClelland's research was supported for the next three decades. Self-awareness, the ability to know one's own feelings and their effects on varied situations, was found by Boyatzis (1982) to be a key to becoming a superior performer. He studied hundreds of managers in 12 companies. Self-management, the EI competency of controlling disruptive emotions, is a strength of superior performers in counselors, psychologists, small business owners, and flight attendants (Boyatzis, 1982). EI concepts continued to develop when Howard Gardner (1983) coined the term "multiple intelligences." He argued that having interpersonal and intrapersonal intelligences were as important as the intelligences measured by IQ. Intrapersonal intelligence, according to Gardner, includes having the ability to understand and differentiate among emotions. He defined interpersonal intelligence as the ability to assess other's emotions or moods and act on that information, and intrapersonal intelligences as assessing one's own feelings.

The first few years of the 1990s could be referred to as the birth of the concept of EI. EI, though referred to sporadically before 1990, was defined by Mayer, DiPaolo, and Salovey (1990) as:

> A type of emotional information processing that includes accurate appraisal of emotions in oneself and others, appropriate expression of emotion, and adaptive regulation of emotion in such ways as to enhance living (p. 773).

Mayer, DiPaolo, and Salovey defined EI as a mental ability model. They argued that thinking about feeling is a cognitive skill that can be developed with practice and over time. From 1990 to 1994, Salovey and Mayer wrote numerous articles on the topic of EI. They argued that EI was a true intelligence which included the ability to identify

emotions, understand them, make decisions based on others' emotions, and manage one's own emotions (Mayer, 2001). To be demarcated as an intelligence, EI needed to measure traits diverse from tests that measure personality traits. Links to personality and its effects were made by many theorists who studied what people were trying to achieve and the behaviors that were most likely to bring about the desired effects (Bar-On & Parker, 2000). As personality psychology was developing, it was being linked to leadership.

From 1993 to 2000, EI began to become popular in the business world. Spencer and Spencer (1993) viewed skill in perceiving others' emotions as highly evident in successful managers and sales people. The ability to use one's emotions to motivate others toward a common goal was also high in effective managers, executives and supervisors. Goleman (1995b) tailored EI studies to leadership and effective management skills. He referred to EI as one of the top predictors of life success, which he considered reachable by anyone. Salovey, DiPaolo, and Mayer's definition was being overlooked by business executives for a more popular version: having the skills of self-awareness, self-management, social awareness, and relationship management, and Goleman (1998) attested that these skills were linked with achievement in employment. In fact, Goleman attested that EI was twice as important as cognitive intelligence. His books and those by many other authors relating EI to work success make the term "EI" well known in society (Cherniss & Goleman, 2001). During the same time period, Seligman coined a similar construct called "learned optimism" (Schulman, 1999). He found that optimists tend to attribute setbacks to temporary causes, while pessimists see the causes as permanent and internal. His research of the insurance company, Met Life, shows that optimists outperformed pessimists by 37 percent in 2 years. The company then hired people who

were optimists, and they also out-performed their co-workers by 21 percent in one year and by 57 percent in the following year. In spite of this, Mayer, Salovey, & Caruso (2000b) caution using emotional competencies as a basis for hiring; they see EI as a "bedrock" for competencies that lead to strong job performance. It can be argued that EI adds to the quality of life at work and at home, but should be viewed as only one component of what traits help create quality life. Two types of definitions exist: the original definition by Salovey, DiPaolo, and Mayer (1990) which viewed EI as a true intelligence and Goleman's (1995a) popular definition, which blended EI with motivation and quality relationships.

Updated in 1997, Salovey and Mayer's theory, the ability theory, looks at EI as a cognitive ability. It divides EI into four areas: (1) ability to perceive emotions, (2) ability to use one's emotions to plan one's actions, (3) understanding others' and one's own emotions, and (4) managing one's own feelings and those of others. Goleman's areas were updated in 1998 to include five areas: (1) self-awareness, including self-confidence, (2) interpersonal skills, (3) adaptability, (4) stress management, and (5) mood, such as joy. In relation to the diverse views of EI, some theories discuss intelligence and emotions; others discuss much more. Emotion is viewed by Mayer (1995) as one of three mental constructs: cognition, emotion, and motivation. Emotions are believed to have evolved over time in mammals in response to the environment. For example, when people are in danger, they feel afraid. In addition, behaviors correspond with the emotion. When people are afraid, they fight of flee. Another of the three constructs is motivation, which includes fulfilling basic desires, i.e., food, drink, and interaction with others. Motivation follows a basic form, such as finding water when one is thirsty. Mental

cognition is the third of the constructs. This allows the mammal to solve problems, memorize information, and learning. Generally, these three items are viewed together as personality. The term EI involves the connection of emotion and mental cognition.

Mayer, Salovey, and Caruso's ability model (2000b) theory states that it is intelligence like other intelligences. Like cognitive problems which have correct and incorrect answers, EI can be measured by correct responses. Also, the measures of EI correlate with other intelligences, which is similar to the correlation of cognitive intelligence. Finally, EI is said to improve with age, like cognitive intelligence. Mayer and Salovey (1995) found that the ability model of EI can make predictions about those who score high in EI including: (1) are able to reframe situations, (2) select strong role models, (3) can communicate regarding feelings, (4) are non-defensive, (5) develop expertise in emotional areas such as problem solving, leadership, or spirituality.

Mixed models of emotionally intelligence theory, i.e. Goleman, are very different than that of Mayer, Salovey, and Caruso. Mixed models include some of the same concepts of a mental ability model such as management of emotions, but include personality traits such as optimism and positivity. Another example of a mixed model is Bar-On (1997). Bar-On based EI on personality literature for life success. These include: (1) stress management, (2) mood, and (3) interpersonal and intrapersonal skills. The cognitive abilities of his model are include self-awareness, and the personality traits are such traits as mood and self-regard. He used the term EI because it represented a "collection of knowledge used to cope with life effectively" (Bar-On, 1997, p. 15).

Criticism of EI

The criticism for EI comes from the premise that there is very little reliable and valid data. The basis of criticism toward the mixed model method has been that other constructs are closely related to the mixed models of EI. For example, literature exists on each of the areas of mixed models, i.e., self-esteem (e.g., Blascovich & Tomaka, 1991) and optimism (e.g., Scheier & Carver, 1985). In addition, the mixed models overlap with personality constructs including the Big Five personality subscales (McCraem & Costa, 1985), i.e., self-control, warmth, and assertiveness. Due to the overlap, mixed models have been scrutinized by researchers (i.e., Mayer, Salovey, & Caruso, 2000b) because of using the one label of EI to measure varying attributes that are related to but not actual components of EI. The study would be deemed more scientific if the variables were studied together to make predictions about a given aspect. Further, to suggest these traits can be learned as a whole is also criticized because they are separate qualities.

Related criticism of the mixed models of EI stems from the broad claims of the influence of EI. One claim by Goleman (1995a) that has been disputed by Kelley and Caplan (1993) is that engineers from Bell Laboratory with high levels of EI outperformed their peers. In reality, the engineers were not given a test that specifically measured EI, either an ability model or a mixed model. Further, research (Barrick & Mount, 1991) showed that broad claims of the effects of personality, which correlate with the components of mixed models, could not predict success beyond two percent of the variance. Some of the overlapping components included what Bar-On and Goleman refer to as EI, such as being trusting, agreeable, and compliant. Barrett (2000) claims EI is a "slickly packaged junk science."

In addition to the criticism from the field of science, EI has been criticized in society. It has been viewed as a "kinder, gentler" intelligence that anyone can have, even those who have been judged to have a low IQ (Bar-On & Parker, 2000). EI even made the comic strip Dilbert, where Dilbert makes a statement about people's intelligence: "It's not so simple. You also have to consider my 'EI, which is defined in a book I haven't read'" (United Features Syndicate, 1997). Goleman (1995b) produced a satire of an EI quiz that was misconstrued by Australian psychologists. The quiz labeled one as "Newt" for low levels of EI and "Gandhi" for high levels of EI. The psychologists, despite the satirical format, erringly labeled Goleman's "quiz" as valid and reliable. A further critique of EI is its vague relation to personality. Although Goleman (1995b) claims it can be learned, critics see it related to environment, making it very difficult to change (Mayer, Salovey, & Caruso, 2000; Emerling & Goleman, 2003).

Another criticism of EI is that it is often linked to ethical behavior, though no proven link exists. Scholars including Salovey and Mayer (1990) assume that a person with high levels of EI is kinder and gentler. However, a person can have high levels of EI and still be unethical (Dougherty & Krone, 2001). Further criticism arises in looking at EI as a pure construct. Instead of being absolutes, some view them as "fuzzy lines" (Dougherty & Krone, 2001). Another example of a construct that lacks validity is research in the area of empathy shows support that there is not a correlation between the EI of empathy and being able to identify emotions in others (Davies, Stankov, & Roberts, 1998).

Current Understanding of the Problem of Emotional Intelligence

With all of the criticism regarding EI, is there something worthwhile to be studied? Goleman (1998) strongly believes in the power of EI to influence others' behavior, to develop teamwork, and to manage others' emotions. Emotions are contagious, and he refers to the emotional economy as "the sum total of the exchanges of feeling among us" (p. 165). Goleman believes every emotion can be placed on a continuum of beneficial to damaging. The strongest employees use their EI automatically to sense damaging emotions and redirect co-workers toward more beneficial feelings. Leadership positions in the future will require even higher levels of EI. "Competencies like change catalyst, adaptability, leveraging diversity, and team capabilities weren't on the radar a decade ago" (p. 313).

Cherniss and Goleman (2001) assert that the most effective leaders "are those that have the ability to sense how their employees feel about their work situation and to intervene effectively when those employees begin to feel discouraged or dissatisfied" (p. 4). Self-awareness was what differentiated superior performance in leaders. Boyatzis (1982) studied hundreds of leaders from twelve organizations and those that excelled were aware of their strengths and weaknesses, and knew when and how to compensate for areas in which they were lacking. Another study (Lusch & Serkenci, 1990) suggests that leaders with emotional self-control have the most profitable businesses. Store managers who were able to manage their own stress and not be affected by disgruntled customers made the most profit. The ability to develop other's strengths, another

competency in emotional intelligence, has been shown to be a strength in the most outstanding leaders (Spencer & Spencer, 1993).

Leaders are not the only ones that need high levels of emotional intelligence; an organization can improve with the combined emotional intelligence of its employees (Cherniss & Goleman, 2001). They state that social competence, e.g. social awareness and social skills, improves group emotional intelligence, which in turn improves the culture, output, and effectiveness of the corporation. Group emotional intelligence is defined as "the ability of a group to generate a shared set of norms that manage the emotional process in a way that builds trust, group identity, and group efficacy" (p. 138). Group emotions can have either a positive or negative effect on the corporation. Theory suggests two norms of group emotional intelligence, perspective taking and interpersonal understanding. Perspective taking, considering other points of view, increases effective communication of important information and builds trust. Interpersonal understanding, which is accurately understanding other's concerns and feelings, also adds to high performing groups.

Mayer, Salovey, and Caruso (2000b) also see EI as highly valuable. They assert that ability based EI scores can be used to help people find the best match in careers and compensate for any lacking areas. For example, counselors and nurses need empathy to be effective in their career. Leaders need self-awareness, managing emotions, and the ability to perceive emotions to be successful. Without the ability of EI, many employees could be very unsatisfied with their career choice. Having an awareness of the levels of EI allows employees the ability to compensate for deficiencies. An example of

compensating in a lacking ability of EI would be allowing someone with higher levels of empathy to give bad news to a co-worker.

The idea of emotional intelligence is beginning to strengthen in the corporate world. Businesses throughout the world including GE, Abbott Laboratories, Swatch, the Swiss watchmaker, and Canon, the producer of cameras, printers, copiers, and fax machines, consider the study of EI as worthwhile. They are relying on EI to improve their employees' performance (Cooper & Sawaf, 1996). These businesses and others realize that being successful has to do with people. Emotionally intelligent staff members make a difference in the revenue of companies. "For every 1 percent improvement in the service climate, there's a 2 percent increase in revenue" (Spencer, 2001). Considering EI competencies in hiring, staffing, and training helps companies become and stay healthy (Goleman, 1998).

Hay-McBer's (1999) Executive Survey of Leadership Effectiveness shows that the Fortune 500 companies that were most admired had a large percentage of leaders who demonstrated EI including self-awareness, self-management, social awareness, and social skill. From their survey, they determined that EI is much more important than intelligence; they attribute 85 percent of performance of top leaders to be linked to EI. In technology careers such as technology support, network administration and programming, EI is also playing a factor. Multi-Heath Systems, a leading test publishing company, administered an EI test to 104 people in technology careers. The results showed programmers as having the lowest level of EI and those providing technology support as having the highest (Multi-Health Systems, 1998).

Competing Measures of Emotional Intelligence

In spite of the questions related to the validity of EI constructs, Mayer, Salovey, and Caruso (2000b) find that EI meets the guidelines for being classified as having six distinct but interrelated constructs: (1) managing self-experienced emotions, (2) managing self-expressed emotions, (3) reading and managing others' experienced emotions, (4) managing others' expressed emotions, (5) constructive EI, and (6) destructive EI. In addition, the varied measures for EI are now considered valid and reliable (Cherniss and Goleman, 2001). Further, businesses are using EI trainings to improve their outcome (Boyatzis, 1999) since employers are concerned about the lack of EI in workers. Forty percent of workers lack teamwork skills and 80 percent lack discipline related to work including being on time and giving one's best effort. The skills employers want from employees, including communication skills, empathy, personal management, teamwork, desire to contribute, are very similar to the attributes classified in EI.

Numerous scales have been developed to measure EI. They can be categorized into three groups: (1) ability, (2) self-report, and (3) observer-rating measures (Bar-On and Parker, 2000). One example of the ability scale is the Multifactor EI Scale (MEIS). The MEIS measures EI based on the theory of EI as a cognitive intelligence that includes processing information (Mayer & Salovey, 1997). This test has four components: (1) emotional perception, which involves the ability to identify emotions in pictures, stories and music; (2) emotional facilitation of thought, which includes using EI in problem solving and the relation to other sensations used in art; (3) emotional understanding,

which includes solving emotional problems; and (4) emotional management, which is the ability to control emotions and gauge it in self and others. An improvement upon the MEIS is the Mayer-Salovey-Caruso EI Test (MSCEIT), which also measures four categories of EI: (1) Managing Emotions, assessed using the Emotional Management task and the Social Management task, (2) Understanding Emotions, assessed using the Blends task and the Changes task, (3) Using Emotions, assessed using the Sensations task and the Facilitation task, and (4) Perceiving Emotions, assessed using the Faces task and the Pictures task. This test is based on an ability model of EI, as opposed to a self-report or a combined observer and self-report. Self-report scales include the Bar-On EI-i. It is used to measure a range of non-cognitive abilities including intrapersonal awareness, interpersonal skills, stress management, adaptability, and overall mood (Bar-On and Parker, 2000). Self-report scales ask people to assess the extent a description fits their view of self. The advantage of using an ability measure of EI, which is found in the MSCEIT, is the inability of a participant to fake or out-guess the instrument (Mayer, Salovey, & Caruso, 2000c). Another benefit of an ability measure is that it operationalizes the concept of EI, making it like other intelligence measures. The MSCEIT is not a personality scale (Mayer, Salovey, & Caruso, 2000c).

Previous Research and Findings on EI

Neuroanatomy of EI

Research in the area of affective neuroscience supports EI competencies (Davidson, Jackson, & Kalin, 2000). EI is centered in the amygdale and moves upward into the prefrontal cortex. The circuitry of the prefrontal cortex includes the orbit frontal,

ventromedial, and dorsolateral sectors, which are necessary for the development of EI. Any lesions in these areas of the brain's circuitry have an impact in EI abilities (Damasio, 1994; Davidson, Jackson, & Kalin, 2000). In the EI competence of self-awareness, Damasio (1994) proposes that the ability to be aware of one's EI is directly affected by the brain's circuitry. He has studied patients with lesions that disconnect the amygdale from the prefrontal cortex. These patients struggle with being able to name or categorize their feelings. Another area of EI, self-management, also relates to the amygdale. Metabolic activity in the amygdale, as measured by a PET (positron-emission tomography) scan shows the greater the activity the less able the patient is to manage emotions (Davidson, Jackson, & Kalin, 2000). Social awareness, a third area of EI, includes the ability to be empathetic. Again, studies show that damage to the amygdale causes problems in a patient's ability to understand other's feelings especially in the area of negative emotions (Davidson, Jackson, & Kalin, 2000). What is surprising is that brain lesions in the area of the amygdale do not affect cognitive abilities. Damasio (1994) measured the IQ and EI (EI) of a patient with lesions in the amygdale. Although the patient maintained an IQ of 140, his ability to manage emotions and feel empathy for others was significantly lower than what would be deemed average. Brothers (1989) did a similar study using monkeys. Monkeys with a damaged amygdale were able to gather food but unable to bond with other monkeys. If the area of the brain that affects EI is damaged, it is clear that the quality of one's life is diminished.

Emotional Intelligence in Executives

No matter which measure is used, research studies of EI show that high levels of EI are critical for the success of management positions. A Hay/McBer study of 3,781 managers link 50 to 70 percent of employees' perceptions of the working environment to their managers' emotional competencies (Hay/McBer, 2000). A consulting firm in numerous nations assessed their partners' levels of emotional competencies. Those who scored above the median on at least 9 of the 20 competencies outperformed their partners by delivering $1.2 million greater profit than their peers (Boyatzis, 1999).

Claudio Fernandez-Aaroz (1999) classified 200 executives in Latin America as being either successes or failures. For each executive, he studied three areas: (1) previous job experience, (2) level of EI, and (3) level of IQ. He used subjective assessments based on structured interviews and checking of references. He found many of the successes were strong in all three areas. Fernandez-Aaroz took the one to two strongest of the three areas into consideration of each executive's success or failure.

For the successful executives, EI was the strongest characteristic for their success, with job experiences in second. For the executives considered as failures, their strongest characteristic was their job experience, with their IQ in second. Further, those labeled as failures demonstrated a weakness in an area of emotional competence. Fernandez-Aaroz shared his findings with Daniel Goleman, who extended the study to include 315 top executives in Germany and Japan. The findings were much the same. The difference between success and failures was EI (Cherniss & Goleman, 2001). The Center for Creative Leadership found lack of competencies in EI including inability to work in teams, poor relationships, and problems handling change as the main cause for leadership

failure (Cherniss & Goleman, 2001). Another leadership study linked to EI was conducted by the Catholic Health Association (1994). For this study, 1200 employees ranked leaders in emotional competencies including ability to persuade, integrity, change and empathy. Those rated the most effective in health care had high levels of emotional competencies.

The need for EI in leadership positions also ties in with successful principals. A study of 42 principals in the United Kingdom shows the relationship between leadership style and school climate (Hay/McBer, 2000). A principal's competencies in EI including flexibility and communication showed an increase in teachers' attitudes toward work, which was reflected in students' grades. A principal with fewer emotional competencies had teachers who demonstrated apathy and this had a negative reflection on students' achievement.

The necessity for leaders to exhibit traits of EI is well supported by research. Public Allies (1998), a non-profit organization that develops leaders, asked what qualities are important in leaders. "Being able to see a situation from someone else's point of view" was by far the number one response, which Public Allies refers to as empathy, a trait of EI. The Center for Creative Leadership also cites the number one leadership success factor as being able to build relationships with employees, which is a combination of the EI traits of empathy and social skills (Wilcox & Rush, 2004).

Emotional Intelligence and Schools

The EI leadership traits required in businesses are also critical for principals. The relationship between leadership and school climate is shown in a Hay/McBer (2000)

study of 42 principals. Principals' strengths in EI showed an increase in teachers' positive attitudes and students' grades. School leaders around the world are seeing the need for emotional literacy learning for students. The Collaborative for Social and Emotional Learning at the University of Illinois state that thousands of schools are using emotional literacy programs (Goleman, 1998). Rhode Island is also promoting the teachings of EI in prisons, schools, hospitals, and clinics (Goleman, 1998). A web-based curriculum, *6 Seconds: EI Network*, provides resources to educators to assist them in teaching social and emotional skills. They provide a climate assessment, on-line training to staff in the area of EI, and a web-based curriculum to help sustain the positive changes (2004). Many researchers agree that EI is comprised of skills that can be developed and improved (Boyatzis, 1999; Mayer, Salovey, & Caruso, 2000b; Emmerling & Goleman, 2003). Learning emotional skills is not limited to the youth. With wide-reaching and continued learning opportunities, adult brains can be retrained to add skills (Bransford, Brown, & Cocking, 2000). In a dialogue with Daniel Goleman, John O'Neil (1996) shares Goleman's assertion that teaching EI is a crucial role for schools. Goleman refers to Stanford's "Marshmallow Study," where pre-school students are given a marshmallow and told if they wait until the tester returns from an errand, they can have an additional marshmallow (Goleman, 1998). Fourteen years later, the same students were studied by psychologist Philip Peake who shared his findings with Goleman (Goleman, 1998). Those students who had shown the ability to control the impulse to eat the marshmallow immediately scored a statistically significant 210 points higher on the SAT college entrance exam.

Boys who show impulsive tendencies in second grade are six to eight times more likely to be violent and at-risk in high school. Girls who cannot differentiate their feelings of anxiety from anger or boredom from hunger are more likely to suffer from eating disorders in their teens. Goleman (1998) claim IQ contributes to 20 percent of future success and the other 80 percent can be attributed to numerous other variables including environment and EI. Goleman believes EI should be taught in schools since childhood is harder than years past (O'Neil, 1996). A study of two random samples of American youth over a ten year period showed a decline in children's levels of EI. This was true for all sub-groups including affluent and low socioeconomic status (Achenbach & Howell, 1989).

History of Organizational Theory and its Connections to EI

Leaders have varying styles for managing and motivating people in their organizations, which have been categorized by researchers and psychologists for the last century (Senge, et al, 1994; Dickman & Stanford-Blair, 2002). Numerous traits such as cognitive intelligence and socio-economic status were studied in relation to leadership style. Henry Ford's leadership style of making a profit and minimizing waste was studied by personality theorists. In the early 1900s leadership was viewed as managing the worker (Dickman & Stanford-Blair, 2002). This led to bureaucratic control, rife with regulations and rules for the worker. Bureaucracy and its effects were first studied by Max Weber, a German sociologist (Hersey, Blanchard, & Johnson, 1969). Weber (1946) viewed bureaucracy as a model for all managers to follow. Every organization begins with a "patriarchal contract," with a bureaucratic level of control between the employees

and the company (McClelland, 1975). This contract insists on a top-down hierarchy, which has worked in numerous institutions including churches and the military. Mayo's (1933) theories contrasted with the bureaucratic model; he started what was to be known as the human relations movement. He averred that it was very beneficial for companies to take care of their employees and care about their interpersonal relationships. The leaders' role was to increase cooperation among employees and increase development of each individual.

Situational leadership was introduced in the 1960s, where leaders vary their styles according to the readiness of the followers. Theorists were beginning to see leadership as multifaceted. For example, the XY Theory was proposed by Douglas McGregor, a social psychologist. Theory X, referred to as authoritarian management, is based on the bureaucratic idea that managers assume average people avoid work and must be coerced by threats of negative treatment. Theory Y, referred to as participative management, is based on the opposite idea. These types of managers view most people as enjoying work, being creative, and having untapped talents (McGregor, 1960). Ouchi (1981) expanded on McGregor's ideas by developing Theory Z, often called Japanese management. This concept combines parts of Theory Y and ideas of trust building, teamwork, and freedom. Theory Z also emphasizes employees' responsibilities, with less emphasis given to leaders' abilities to motivate and persuade. Theory Z represented a major shift in managerial thinking.

Trait research was first developed by Fred Fiedler (1967) in his Leadership Contingency model, which suggested three components of leadership success: (1) interpersonal relationships with group members, (2) structure in the duty, and (3)

positional power. According to Fiedler, leadership styles should be assessed on two continuums: task-oriented and relationship-oriented. He found that task-oriented leaders perform at their best when the group feelings are either very strong or very poor toward the leader. Relationship-oriented leaders perform at their highest when the group feelings are in the medium range. McClelland (1975) built on these ideas by linking them to emotional intelligence. He suggested that EI abilities can determine what differentiates average employees from great employees. He found a variety of EI traits including self-confidence, leadership skills, flexibility, and motivation to achieve to link with outstanding employees. McClelland's research was supported for the next three decades by others in the field of EI and in the field of leadership.

By the 1980s, transformational leadership was beginning. Leadership was viewed as something for everyone, not just the managers. Roles were viewed as overlapping. Critics wanted to know what specific traits would lead to transformational reform. Argyris (1990) discussed patterns of attitude and behavior of leadership. Pattern A is a personality type that is linked to Theory X, including being closed, denying feelings, and shunning experimentation. Pattern B is a personality type linked with Theory Y, including being trusting, open, and concerned with other's opinions and values. Theory X/Pattern A leaders create a mistrusting bureaucracy that decreases group competence and individual competence (Argyris, 1990). In contrast, Theory Y/Pattern B leaders increase both individual and group competence, thus improving the overall work environment. He challenges all managers to create a work culture that allows each employee to grow and be challenged.

Over the past two decades theorists viewed leaders as systems thinkers, requiring specific traits, including emotional intelligence, to respond to the numerous changes in the information age. Yukl (1992) showed that certain personality traits and skills lead to success in leadership. The traits include being flexible, self-confident, energetic, and aware of social situations; skills include creativity, communication skills, and social skills. One study that linked EI specifically to the field of leadership was of Johnson & Johnson Consumer Personal Care Group's (J & J) 358 managers (Cavallo & Brienza, 2001). Based on assertions by Goleman (1998), J & J wanted to sponsor a study to determine the value of EI to the success of leaders. A multi-rater survey was created from J & J's leadership competency model, the Standards of Leadership (SOL) and the Emotional Competency Inventory (ECI) (Boyatzis, Goleman, & Hay/McBer, 1999). J & J's leadership competency model included basic leadership competencies. The SOL was based on core values of J & J, i.e., customer focus, develops others, and fosters change. The ECI was based on four clusters: self-management, self-awareness, social skills, and social awareness. Over 1400 employees were given Likert scale surveys to score their leader on behavioral statements. The study concluded a strong relationship between high levels of emotional intelligence and superior leadership abilities. Superior leaders were ranked higher on thirteen of the twenty competencies, including self-management, social skills, organizational intelligence, and self-awareness. The mean ratings of groups, e.g., gender, potential, function, and performance, were compared using an independent sample T test. The study then led to J & J improving their hiring and management practices. For example, trainings in EI and social competencies started for all employees and board members. J & J's leadership team added to the Standards of Leadership from

the information gleaned about emotional competencies. In addition, a new 360 degree feedback survey was created to help employees improve their job performance.

Leadership theory has evolved throughout the twentieth century from a bureaucratic, controlling style to a more broad view of leadership. Competencies such as social skills, relationship abilities, trust building, and emotional intelligence are being studied by theorists in an effort to address the broader need of leadership, to serve "within and outside the organization to make a difference in the world" (Dickman & Stanford-Blair, 2002, p. 130).

Leadership Theory in Education

Varying styles of leadership are emerging in the field of education, as well. Senge et al. (2000) have worked with school superintendents to help them have a focus on the leadership competencies that will allow a Theory Z style in schools and school districts. One of these competencies is engagement, having the "ability to mobilize people to tackle tough problems" and "convening the appropriate people in the system and facilitating their conversations and learning" (p. 414). The second competency is systems thinking, which is related to engagement. It is described as the act of being able to uncover systems dynamics. A necessary question in systems thinking is "Where are the boundaries of this situation?" (p. 14). Being learner centered, not "authority centered" is the third competency in educational leadership. Uncertainty of learning is ingrained in a learning centered environment. All stakeholders are co-learners in a learning environment. In a learning environment "leaders expect themselves and others to be uncertain, inquiring, expectant of surprise, and perhaps a bit joyful about confronting the

unknown" (p. 417). The strongest competency is self-awareness, which is one of the components of EI. This includes leaders' awareness of the effect they have on systems. "Self-awareness is a position of strength" (p. 417).

Fullan (2003) agrees that self-awareness and building trust are necessary for creating effective school leadership. He views school leadership as a "moral purpose of the highest order" (p. 29). He defines the moral purpose as "having a system where all students learn, the gap between high and low performance becomes greatly reduced, and what people learn enables them to be successful citizens and workers in a morally based knowledge society" (p. 29). This type of transformation becomes possible in schools with a trusting relationship between the leaders and teachers (Bryk & Schneider, 2002). Bryk and Schneider studied 100 of the highest performing elementary schools in Chicago and 100 of the lowest performing. They correlated the level of trust with the gains in academics. Trust was measured in four areas: competence of the leadership, the degree of respect felt for the leader, integrity of the leader, and the leader's personal regard for others. Their findings revealed that schools with positive trust levels between the administrator and teachers were three times more likely to make academic gains than those with weak trust. In addition, the chance of improving academics in schools with weak trust was one in seven. They found the school principal's style of leadership to be the most important element in building trust. Principals who were open, strong in communicating, and had positive relationships were more able to build trust in schools. A trusting relationship is critical to creating a strong school culture that leads to student achievement (Fullan, 2003).

Context of Culture in Schools

Culture as Related to Schools

School culture, although lacking a specific definition, is composed of five components: achievement in comparison to other schools, academics, school community, school goals, and recognition. The term "school culture" has roots stemming from the business realm (Fyans & Maehr, 1990). Schein (1985) defines culture as "the deeper level of basic assumptions and beliefs that 'take for granted' an organization's view of itself and its environment" (p. 6). An ideal culture in schools can be defined as " . . . when parents, teachers, and other significant adults are in synch—when the relationship among them is open and trusting, communication is clear, and the goals [for students] are shared" (Donaldson, 2001). Deal and Peterson (1991) refer to culture as "deep patterns of values, beliefs, and traditions that have formed over the course of [the school's] history." This type of culture relies on strong relationships between the varied stakeholders. One teacher put it this way: "If we could just cut through all these words and all these mandates and agree that we're here for the kids, the parents and we [teachers] would do fine" (Donaldson, 2001). Brown and Moffett (1999) describe culture as the "values, beliefs and norms" of an organization. The age of a school can have an effect on the culture (Fink, 1999). When a school is newly organized, the leaders spend time making the values well known to all. Hiring, staff development, celebrations, and achievements are centered on the values. In the school's "midlife," many of the aforementioned are forgotten or go unnoticed. This makes changing the culture much more challenging. If a

school matures and stops improving, stagnation will set in causing a negative culture to permeate (Fink, 1999).

It is the principals' major role and responsibility to create and maintain an ideal culture for learning (Fullan, 1992; Schein, 1985). Principals have the power and to build an environment that creates a warm, caring, rewarding environment for both students and teachers but first they must persuade the stakeholders that this type of environment is desirable (Maehr & Fyans, 1989). The principal-teacher relationship is a critical component of an effective school culture (Barth, 1990). Krueger and Parish (1982) referred to this relationship as an informal covenant. Although principals have controls over policies and procedures, "Teachers control what is actually going to be implemented, if anything" (p. 138). In a school Krueger and Parish studied, the covenant led to the downfall of implementations. The principal's relationship with parents, other administrators, and community members also affects a school's culture (Barth, 1990). "Principals are judged on the basis of how effectively they can muster teachers to the drumbeats of these others, by how well they monitor minimum competency measures, enforce compliance with district-wide curricula, account for the expenditure of funds, and implement the various policies of the school board" (p. 27). In addition, a school's culture is already in place when the principal arrives, so a principal must not only build an ideal culture but work with the "cultural tapestry that is already woven" (Deal & Peterson, 1991). Learning to mend the torn tapestry and shape it is a balancing act of honoring the past and envisioning the future. Principals' interactions with teachers, parents, students, and community set the tone for creating an ideal culture in the entire learning community (Barth, 2000). Supportive stakeholders are critical in creating a

positive change in school culture. These include teachers, administrators, business leaders, and school boards (Cole & Griffin, 1987; Deal & Peterson, 1991; Barth, 2000).

A school's culture becomes known to visitors through observing the celebrations, behavior, events, and communication (Stoll, 1999). Celebrations refer to what receives recognition in a school. For example, does scholarly achievement receive the recognition that a state championship in football receives? Behavior is the level of respect staff members show students and one another, students show each other and the staff, and how parents and community members are treated when they visit the school. The annual areas of focus are the events that reveal a school's culture. Communication includes the stories that are told, the shared sayings, things that are not said, how information is shared either positively or negatively, and the channels of communication in a school (Stoll, 1999).

A culture can be viewed as positive or negative. Although each school's culture is unique, negative cultures damage professional development efforts (Deal & Peterson, 1999). In negative cultures learning and growth is ridiculed to protect the cultural norm (Deal & Peterson, 1999). Research has found several traits that promote a healthy culture including shared purpose, continuous learning for students and staff, commitment to student learning, collaboration, and time for sharing (Fullan, 2003; Stein, 1998). A strong correlation exists between a warm, caring school culture and student achievement (Purkey & Smith, 1983; Mackenzie, 1983.) An effective culture is the solidity toward the school's goals (Patterson, Purkey, & Parker, 1986). A school that is strong in academics is likely to have a culture with clear goals, a strong relationship between teachers, parents, and students, and a climate that fosters learning.

To change the school culture in Cherry Creek High School, the new principal, Hank Cotton, established several structural changes including hiring teachers who valued achievement for all students, started traditions, created posters and bumper stickers with catchy phrases such as “Beyond Excellence to Greatness” (Deal & Peterson, 1999). Most of the changes were initiated by the principal, but soon the teachers demonstrated their support for the cultural improvements and helped to maintain them. An example of a strong school culture is in Arizona, Ganado Primary School (Deal & Peterson, 1999). This school sees everyone from teachers to students to community members as lifelong learners. Teachers attend book studies and have access in their building to 4,000 professional books and 400 videotapes related to professional issues and curriculum. Their dedication to learning is evident through their collaboration and sharing (Deal & Peterson, 1999). Another example of a strong culture is Wisconsin Hills Middle School. The staff set aside each Thursday to focus on professional development. Part of their sharing included varied departments providing food for the meetings. Their connectedness was evident through their laughter and joking with one another (Deal & Peterson, 1999). In each of these examples of schools with healthy cultures, the principals had the lead role of shaping the culture. As stated by Patterson, Purkey, and Parker (1986), “School culture does not fall from the sky; it is created and thus can be manipulated by people within the school” (p. 72).

Climate is similar to culture; it is the “visible expression of a school’s culture . . . and how satisfied they are with it” (Umphrey, 2000). It can be defined as the “feel” of a school (Halpin & Croft, 1963). Goodlad (1984) asserts that “a bond of trust and mutual support between principals and teachers . . . appears to be basic to school improvement”

(p. 9). Each school has its own unique culture which is created over time (Patterson, Purkey, & Parker, 1986; Goodlad, 1984). Research in the area of school climate shows that the more satisfied students are with the school, the higher their academic achievements. Students who are less satisfied with the school are five times more likely to achieve below average (Samdal, Wold, & Bronis, 1999). When principals focus on creating a caring climate from day-to-day, this can ultimately affect the overall culture, which can lead to achievement for all students.

Measurement of Culture in Schools

Many of the instruments available that measure culture are staff, administrators, parent, and student surveys (Roach & Kratochwill, 2004). One measure is the CASE School Climate Survey, which assesses 34 variables in a school's climate. The reliability of the CASE Survey is strong, ranging from .63 to .92. Construct validity studies at this time have not been completed. Two other climate surveys, the Organization Health Inventory (OHI) and Organizational Climate Descriptive Questionnaire (OCDQ), measure teachers' and administrators' perceptions of the school climate. Reliability for the OHI ranges from .87 to .95. The OHI does not measure students' perceptions. The OCDQ measures high school climates differently than middle and elementary schools. Another survey that measures teachers' perceptions is the School Culture Quality Survey (SCQS). The SCQS scoring summarizes the teachers' responses in each of the four scales measured on a Likert scale with responses including never, rarely, sometimes, often, and always. It then compares the overall culture of the respondent's school to a reference group, which was based on 666 responses from the SCQS normative population r(666) =

.90 for shared vision, .93 for facilitative leadership, .91 for teamwork, and .93 for learning community (Roach & Kratochwill, 2004). There are so many measurements to choose from that administrators need to be aware of what constructs they want to measure. Reading user manuals and surveys carefully will help administrators in making this decision. Further, information gleaned from surveys can be enhanced with follow-up observations, discussions, and surveys (Roach & Kratochwill, 2004).

The Concept of Culture that Maximizes Student Achievement

Glasser (1990) believes that to create a learning culture that is ideal for students to learn and teachers to teach, principals and other administrators need to become "lead-managers" as opposed to "boss-managers." Lead managers are the leaders of a system that has a common purpose and dedication. Boss managers tell others what is expected of them, but do not model the expectations. At the center of the lead manager theory is a caring leader. This modeling of caring, principle centered leadership is then reflected and modeled by the teachers in the classroom (Ornish, 1997; Bryk and Schneider, 2002).

Building a culture that improves student achievement involves four steps (Donaldson, 2001). One is giving the staff the responsibility and the freedom to do what they believe is best for the students. When all staff members, counselors, teachers and coaches know they have the power to make a positive difference for students, academic achievement increases. Another attribute is based on the belief that teachers thrive when relationships are strong and caring; this is especially true since schools can be isolating for the adults. Yet another component of an ideal culture is having a common vision and sense of purpose. This vision provides the groundwork for trusting relationships and teamwork

(Donaldson, 2001). Finally, sharing of the challenges of the profession helps to create a strong culture where the adults work together for a common purpose. Hammond (1998) encourages leaders and educators to focus on culture to bring about the needed changes in student achievement.

Previous Research and Findings

Literature Focusing on the Principal's Role in Shaping Culture

A vision of the school leader's role in establishing a strong culture is supported in numerous published standards. One set of standards was created by the Interstate School Leaders Licensure Consortium (ISLLC). The consortium has six standards: (1) facilitating shared vision, (2) creating and maintaining a school culture that focuses on academic achievement, (3) managing a safe, effective learning environment, (4) working with community members and families, (5) acting with integrity and fairness, and (6) influencing politically and socially (Council of Chief State School Officers, 1996). The National Association of Elementary School Principals (NAESP) (2001) also created a guide to help shape the principal's role, which has one strand developed solely to culture. The NAESP guide also included working with the community, and putting learning of students and adults as a top priority.

Sergiovanni (2000) asserts that the principal must protect and develop the "life world" of schools, which includes the culture, values, purpose, and vision of the school. The principal must also oversee the "systems world," which Sergiovanni describes as the ways the vision is carried out in day-to-day practice. Healthy schools have a leader who can manage both roles. To influence a school's culture, leaders should study the current

culture (Furtwengler & Micich, 1991). Principals' actions set the culture, as well. A principal who is highly visible in the classroom and celebrates students' academic achievements sets the tone for what is valued in the school (Deal & Peterson, 1999). Janke Arkes, a principal, gives the following advice to principals for influencing culture: "work on team-building; put your agenda second; know that you don't have all the answers—everyone has limitations; learn from students and staff; put people before paper" (Stolp, 1994).

In a review of literature, Leithwood and Riehl (2003) identified best practices which reflect both the ISLLC and NAESP standards. These include direction setting, developing people, and redesigning the school structure with collaborative processes. In addition, roles more like those in typical business management were noted including being competitive, having accountability, decentralizing the management, and providing instructional leadership. Gross and Shapiro (2002) echo this by arguing school leaders need a continual balance between concern for people and accountability.

Research in the area of instructional leadership found a link between school climate and principals' style. John and Taylor (1999) concluded that in order to improve teachers' perception of climate and their commitment to work, principals needed to exhibit traits of high relationships with teachers and high task-orientation. They studied Seventh-Day Adventist schools including 5 colleges, 22 high schools, and 307 elementary schools. It was shown that the Seventh-Day Adventist teachers have a high level of job commitment, and 75 percent of the schools were ranked as having a high or very high openness in the area of school climate. The schools ranked as high or very high in openness showed a positive relationship between teachers' commitment and principals' level of

consideration and structure. Improvement in teacher motivation has been shown to have a strong link to student achievement, (Cheng, 1993). The improved motivation was linked to a caring, charismatic leader who involved staff members in the decision making. To improve academic achievement, Thacker and McInerney (1992) looked at creating goals and a mission which corresponded with students' achievement and shared leadership. The results were an improvement of 10 percent fewer students failing the state achievement test. Maehr and Fyans (1990) surveyed 16,130 students in Illinois public schools and found a strong link between school culture and student motivation to learn.

Teachers' Perceptions of Principals' Leadership

Educational researchers have made a strong case that the principal is the critical component of school success (Bauer, 1992; Keller, 1998; and Strange, 1993). Kouzes and Posner (1987) studied twenty traits believed to be critical in business leadership. In a similar study of characteristics of effective principals as defined by teachers, Richardson, Lane, and Flanigan (1996) found that teachers ranked "inspiring" as the fourth most important attribute and "caring" as fifth, and "supportive" as sixth. Teachers believed this attributes influenced their behaviors, thus attributing to student success. Their findings were similar to those traits deemed critical in business. The first five rankings named four of the same qualities, although in a different order. Their conclusion was that a principal needed to understand the teachers in order to lead them toward student achievement. Maehr and Fyans (1992) assert that principals have significant effect on not only the school environment as a whole, but also on the individual classroom's environment. The concepts that influence the motivation of students and thus the culture of the environment

and school include accomplishment, saliency, affiliation, power, and recognition. Maehr studied students in 800 schools in Illinois. He wanted to discover what variables influenced student achievement. He found leadership to significantly impact the school's culture and motivation of teachers and students. He reported that the culture of a school is "measurable . . . a variable of some importance in prediction motivation and achievement of students" (p. 52).

Value of this Study

Principals are the most important factor in creating an effective school culture, which influences student achievement (Keller, 1998; Maehr & Fyans, 1989). Establishing a culture that is positive and warm for both students and staff was ranked as a first priority of principals (Whitaker & Turner, 2000). "Effective school leaders understand that their primary objective is to motivate people by creating conditions under which people want to do what needs to be done" (Whitaker & Turner, p. 433). Possessing the ability to influence in the areas of relationships, vision, motivation and conflicts requires tremendous amounts of EI (Goleman, 1998).

Hausman, Crow, and Sperry (2000) link EI to the principalship. Principals need several intrapersonal skills including self-awareness to align their values and beliefs with their actions. If there is a gap between a principal's morals and the culture, an effective principal can mold the culture into one that aligns with what is best for students. Another area of EI is the ability to control one's emotions before acting. This strength aids the principals in building the trust that is needed with teachers, students, parents and community. The third area of EI is being self-motivated. All truly great leaders, including

principals, are passionate and driven people who are motivated by a purpose. Other areas of EI needed by principals are interpersonal. These include possessing social skills and empathy. Truly great principals not only understand other's emotions, but can use their knowledge in this area to assess the readiness of the school to implement changes. They must have social skills in the area of local and state politics, handling conflicts and adjust their leadership style when appropriate (Hausman, Crow, & Sperry, 2000).

This study will show if any category of principals' EI can be assumed to influence the schools' culture. This information can be helpful when planning the professional development for principals. Although EI is difficult to teach adults, it can help principals hone their interpersonal and intra-personal skills. Further, research in this area can help hiring committees in the selection process of a new principal. If a school's culture is in need of improvement, hiring a principal with high levels of EI would be critical. With the continued stresses in the area of education, including the *No Child Left Behind Act of 2002*, schools need leaders who can unify the stakeholders toward a common vision. Now more than ever, EI is a crucial role in educational leadership.

CHAPTER 3

METHODOLOGY

Background

There is a need for additional examination of emotional intelligence (EI) in schools. For the reasons previously cited, the role of the principal is no longer that of a manger but one of a leader. While leadership has been studied, much is to be learned about the relationship or influence of educational leaders and their EI influence on the climate and culture of schools. This chapter details the methodology used in studying the relationship between the EI of a school principal in creating a supportive culture. The review will include the (1) problem and purpose of the study, (2) research design, (3) analysis of results, and (4) conclusion.

The Problem and Purpose of the Study

This study sought to explore what assumptions can be made about the ratings of principals' emotional intelligence and the effects on school culture. The purpose of this study was to identify which components, if any, of principals' EI can be assumed to have the greatest influence on creating a school culture. The areas of school culture being examined included: (1) having a shared vision, (2) facilitative leadership, (3) teamwork and cooperation of staff, and (4) nurturing a learning community as measured by the School Culture Quality Survey (SCQS) (Anchin, 1994). This instrument is designed specifically to measure the work culture of teachers.

The four areas of principals' EI being examined were: (1) Perceiving Emotions, (2) Using Emotions, (3) Understanding Emotions, and (4) Managing Emotions as measured by the Mayer-Salovey-Caruso EI Test (MSCEIT) (2000). Mayer, Salovey and Caruso base their model on three criteria. To be classified as an area of EI it must be developmental, meaning it can improve with experiences. It also must be correlational, which means a strong relationship to and yet separate from other variables such as intelligences. As the strength in one rises, so does the strength in another. For example, the ability scale can measure traits related to the ability to reason. Generally, if people are high in an emotional intelligence ability, they are also high in reasoning ability. The final criterion is that the area of EI must be conceptual. This means that it is an aptitude not a behavior (Mayer, Salovey, & Caruso, 2000b).

Design of the Study

This hierarchical linear model study measured the EI of 15 principals willing to participate from randomly selected school districts in Wyoming and the teachers' in those school districts perception of the school's culture. The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) was used to operationalize EI, and the David Anchin School Culture Quality Survey (SCQS) was used to operationalize the construct of school culture. A delimitation of this study is that it was limited to 15 principals and the certified teachers in their schools. Another delimitation is that it was limited to those schools with a survey response from at least 13 certified teachers, which was recommended by the SCQS researchers from the University of Florida due to the possibility of sample size errors. Each of Wyoming's 48 school districts was entered into an Excel spreadsheet

formula for random selection using RAND. The first 13 school districts were then chosen for the study, which would yield a large enough teacher population as recommended by Bryk and Randenbush (2002) entered as level one data in the research model.

The superintendents of the 13 randomly selected school districts were then contacted by the researcher via telephone requesting permission to administer an EI test to any willing head principals and a culture survey to all members of the teaching staff in each building. If a superintendent declined, the next district was selected randomly. Two district superintendents declined, leaving 11 remaining districts. Of those superintendents who declined, one gave no reason and the other did not like the survey questions. Upon confirmation from the superintendent, the first contact was made with the building principals electronically via e-mail [Appendix B]. From the 11 remaining districts, 4 districts had no responses to the e-mail inviting principal participation. Thirty principals from 7 districts with respondents were willing to participate. They were provided guidelines for taking the MSCEIT [Appendix C] and were asked to sign a Participant Information Statement and Consent Form [Appendix D]. Principals were assured through the initial e-mail and through the consent form that no principals', teachers', or schools' names would be used or identifiable. Teachers were assured through the directions in administration of the SCQS that their names and responses would remain confidential [Appendix E]. The coding, MSCEIT scores, and SCQS scores were kept locked in a filing cabinet until the research was completed. Upon receiving the scores, the researcher sent a copy of them to all participating principals, so they would know their ability EI score and so they could use the data from the culture survey scores in their school improvement plans.

Data for this study was collected in two ways. The participating principals chose either to have the MSCEIT and SCQS administered by the researcher or they elected to have the MSCEIT and SCQS mailed to them with directions for administration (Appendices C and D). Two of the fifteen schools elected to have the MSCEIT administered by the researcher. The researcher standardized the procedure by reading the guidelines for administering the MSCEIT verbatim, and then leaving the principal alone for the time it took to complete the instrument. All of the schools elected to have a lead teacher administer the SCQS. When the researcher received the completed MSCEIT and SCQS from each school, the MSCEIT was sent to Multi-Health Systems in Toronto, Ontario, for scoring and the SCQS was sent to the David Anchin Center at the College of Education, University of South Florida. Multi-Health Systems and the David Anchin Center sent the researcher the results of the instruments within ten working days. From each principal's school, all willing teachers were surveyed using the David C. Anchin School Culture Quality Survey (SCQS).

Instruments

Mayer-Salovey-Caruso Emotional Intelligence Test

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), measures four categories of EI: (1) Managing Emotions, assessed using the Emotional Management task and the Social Management task, (2) Understanding Emotions, assessed using the Blends task and the Changes task, (3) Using Emotions, assessed using the Sensations task and the Facilitation task, and (4) Perceiving Emotions, assessed using the Faces task and the Pictures task. This test was selected because it is based on an ability model of EI, as

opposed to a self-report or a combined observer and self-report. The MSCEIT consists of 141 items that give standardized scores and percentile scores in the following areas: overall EI score, two area scores, and four branch scores. The two area scores of the MSCEIT include Experiential EI (EEIQ), which include the branch scores of Perceiving Emotions (PEIQ) and Facilitating Thought (FEIQ); and Strategic EId (SEIQ), which includes Understanding Emotions (UEIQ) and Managing Emotions (MEIQ) (Mayer, Salovey, & Caruso, 2000c). The branch scores are based on Salovey and Mayer's (1990) ability model of EI, which measure one's capacity to reason about emotions, and to use emotions to guide one's thinking. The four-branch model of EI involved empirical testing (Mayer, Salovey, & Caruso, 2000c). The MEIS findings indicated that EI had three factors: emotional understanding, emotional perception, and emotional management. Further statistical analyses revealed that facilitating thought was a fourth component.

The MSCEIT directs test takers to do the following: (1) select the appropriate emotion that is shown in a face or in a design, (2) create a given mood and then solve problems while in that generated mood, (3) ascertain the causes of varied emotions and the influencing of mood development, and (4) establish ways to include emotion in our interactions with others. With the Faces task, participants are shown 4 faces and are given 5 subsequent choices about each face's different emotions. The Pictures task is similar with abstractions and landscapes with which the respondent identifies the emotion in five subsequent questions. The Sensation task has 5 situational items, with 3 subsequent descriptors directing the respondent to rank as not alike to very much alike a given descriptor, such as challenged or jealous. The Facilitations task also has 5 questions about moods with 3 descriptors each directing the respondent to rank as not useful moods to

useful moods for the given situation. The respondents match the mood that best corresponds with an activity. In the Blends task there are 12 items that ask the respondent to combine emotions to create other emotions. In the Changes task of 20 items, respondents will choose an emotion that stems from a feeling. For example, depression could stem from being tired. The Emotions Management task has 5 situational items with 4 responses for each, and the respondents choose the outcome that would best lead to a specific emotion. For example, one situation asks which actions would help Mara preserve her well rested and happy mood. One action is that Mara decides to ignore the feeling and hope it goes away. The respondent then rates Mara's action on a Likert scale ranging from very ineffective to very effective.

The method for the MSCEIT scoring was derived two ways: by expert scoring and consensus scoring. Two scoring methods were used to discriminate between excellent and poor responses. The first method involves expert scores determining strengths of varied responses. The MSCEIT's expert scorers are 21 trained members of the International Society for Research on Emotions. Their training includes intensive studies in EI. Members are generally psychologists or professionals in similar fields. Expert scoring involves asking emotions experts to determine which answers are correct, and using their averaged response as one of the scoring methods and then comparing the expert scoring to the consensus scoring. The second method for scoring the MSCEIT is consensus scoring. Researchers for MSCEIT had 2,112 participants take the test. If a respondent's answer was the same as 45 percent of the sample, an individual's score would be incremented by the proportion .45. The correlation between the expert scoring

and consensus scoring was r = .98. This correlation supports that both expert scoring and consensus scoring come together on correct answers.

The MSCEIT has two reliabilities scores, one for the general scoring and another for the expert scoring. The full-test reliabilities (test-retest) are r = .93 for general and r = .91 for consensus scoring (Mayer, Salovey, & Caruso, 2002). The MSCEIT has discriminant validity as shown by low correlations with the WAIS-III (r = .15) intelligence test; an emotionality instrument (r = .08); the BarOn EIi, which is a self-report EI instrument (r = .13); the Trait Meta-Mood Scale, which is a scale of meta-experiences and moods (r = .01 to .016). The MSCEIT's construct validity was studied by Pusey (2000) in a work setting. Participants took the MSCEIT RV1.1 and their thoughts and reactions to the instrument were recorded and coded by two independent raters. Interrater reliability was r =.83. The highest validity of the test was found to be in the Faces section, where respondents matched the emotion to the picture of a facial expression. Some concerns were that the test might be biased toward English as second language speakers. Overall, Pusey concluded that the MSCEIT has good construct validity. Readability was tested using the Dale and Chall (1948) readability measure, placing the MSCEIT at the level of the average fourth grade readability.

When scoring, a respondent's score is based on the proportion of the consensus sample. Respondents receive a standardized emotional intelligence score with a 90 percent confidence interval, which compares the respondent to the normative sample. Then the respondent receives two area scores: experiential and strategic. Experiential focuses on the identification of emotion and its use in thought. It is a more basic level of processing emotion. It relies on how feelings feel and how the individual responds and

classifies such feelings. Strategic involves the higher- level use of emotions. This requires reasoning about emotions, such as how to manage them. These area scores are divided into four branch area scores: perceiving emotion, facilitating thought, understanding emotion, and managing emotions. Finally, the respondent is given individual task scores, which are to be interpreted with caution, since they are not found to be as reliable as the area and branch scores. Percentile scores are also offered to the respondent, where a 1 would mean that the respondent would have the lowest score and a 99 would have the highest score, when compared to the standardization sample.

The School Culture Quality Survey

From each principal's school, all willing teachers were surveyed using the David C. Anchin School Culture Quality Survey (SCQS). The SCQS measured teachers' perceptions of (1) having a shared vision, (2) facilitative leadership, (3) teamwork and cooperation of staff, and (4) nurturing a learning community. This instrument was selected because it is designed specifically to measure the work culture of teachers. The survey includes 36 items that measure elements in the school environment. These elements are divided into four sub-scales: (1) Shared Vision, the way the faculty views their school as having a shared vision; (2) Facilitative Leadership, which is the way they view the administrator as working with them toward the vision; (3) Teamwork, the perception the stakeholders have of an atmosphere of cooperation and respect; and (4) Learning Community, which is the way they perceive the stakeholders working together to achieve the vision.

The SCQS scoring summarized the teachers' responses in each of the four scales measured on a Likert scale with responses including never, rarely, sometimes, often, and always. The scoring then compared the overall culture of the respondent's school to a reference group, which was based on 666 responses from the SCQS normative population r(666) = .90 for shared vision, .93 for facilitative leadership, .91 for teamwork, and .93 for learning community. These reliabilities, which used the average of all split half reliabilities, suggest that the scales of the SCQS are reliable. The findings of the high reliability coefficients (average of .92) indicate divergent validity based on 666 responses, e.g. the average reliability shows that approximately 85% of the variance is reliable. No other research on the validity of the SCQS was available to the researcher. Bar graphs are shown of the six items with the least favorable ratings by the teachers and are described as "Opportunities for Change." The six items that were most favorably rated by the teachers were shown and described as "Areas to Build On." The scoring gave the percentage of responses for each of the 36 questions. Inter-scale correlations were conducted.

Procedures

The researcher telephoned the superintendents of the first 13 of the total 48 Wyoming school districts ordered randomly using RAND asking for permission to invite their principals and teachers to take part in the study. Eleven superintendents agreed via the telephone conversation to have their principals and teachers participate; however, two superintendents declined to allow their principals and teachers to partake in the study. In the remaining 11 school districts, 79 principals were sent an e-mail inviting them to

participate in the study (Appendix A). Four districts had no respondents to the e-mail. Thus, the study was initially conducted with 35 willing principals from 7 Wyoming school districts who were mailed the MSCEIT, SCQS, Participant Information and Consent Form (Appendix B) and guidelines for administering the survey and MSCEIT (Appendices C & D). Of those 35 principals, 20 of them returned completed MSCEIT answers and the SCQS surveys. Those principals with fewer than 13 teachers' surveys were eliminated due to the potential of error from such a small number. The 15 principals not returning the MSCEIT or survey results were contacted via telephone. Of those 15, one stated the teachers refused to take another survey, 5 could not be reached, 4 stated that they did not have time, and the other 5 had plans to administer the test at a later date if they had the time. With the school year in the final quarter, the researcher decided to use the data that had been collected up to that point. The researcher photocopies all data collected, and the original data was sent to the building principal with a hand written thank you note.

Hierarchical Linear Model

For the study, hierarchical linear modeling was selected because education occurs in nested units of analysis, i.e., students and teachers are nested in classrooms, which are nested within a school building, which is nested within a district, which is nested within a state department of education. Hierarchical linear modeling provides linear equations that predict the characteristics of members who are nested within a group, which is nested with other groups, which is nested in a larger group. "Accurately predicting outcomes for members of groups while taking into account the characteristics of both groups is a

complex statistical task that has been made much easier by the advent of hierarchical linear models" (Arnold, 1992, p. 748). A hierarchical linear model was conducted to determine if relationships exist between principals' global EI and teachers' global perceived culture. A hierarchical linear model was also conducted between principals' sub-area emotional intelligence scores and teachers' scores from each of the four SCQS sub-areas to answer research questions 1-5.

Conclusion

In conclusion, this study was conducted since administrators are under more pressure to increase student achievement due to the numerous demands being placed on our school leaders by the federal government and by the public. Administrators are focusing on what it takes to create and maintain a supportive, nurturing culture where students are able to achieve at high levels. Numerous leadership studies in the business world have been conducted that may give answers to helping principals improve their craft, and EI may be one answer to what is required of administrators in this era of high accountability. Strengths in EI have shown a strong relationship with superior leadership qualities in business (Boyatzis, Goleman, & Hay/McBer, 1999), as well as in school climate (Hay/McBer, 2000). This study sought of 15 principals and 443 teachers sought to explore what assumptions can be made about the EI of principals and their ability to build and preserve a culture that is optimal for learning. Hierarchical linear modeling was the method selected for the study because it enables a researcher to accurately predict what effects principals' emotional intelligence may have relevant to school culture. This model studies the characteristics of Wyoming teachers grouped within schools, grouped

within districts, grouped within the state while simultaneously considering the EI characteristics of the 15 Wyoming principals.

CHAPTER 4

RESULTS

Background

The results of the study that explored what assumptions could be made about the ratings of principals' emotional intelligence and the influence on school culture as perceived by teachers are presented here. These areas of results will be discussed: results of data analysis, including a response summary, teacher respondents, teacher responses to the SCQS, principals' scores on the MSCEIT, hierarchical linear models of principals' emotional intelligence and teachers' perception of school culture; discussion of results, including participation in the study, summary of results, hierarchical linear models data analysis; and summary, including statistical versus practical significance, relationship to prior research, weaknesses in the data, and chapter summary.

Results of Data Analysis

Response Summary

The mean percentage of willing principal participants who returned both the MSCEIT and SCQS surveys was 57%. By type of school, the returns were: 62% elementary schools, 67% of middle schools, 40% of junior high schools, and 100% of high schools (Table 1). Of the final 15 principals, 12 principals (80%) requested that the MSCEIT, SCQS, and consent form be mailed to them with directions for administration. The other 3 principals requested that the instruments be administered by the researcher.

The final 15 schools were comprised of 7 elementary schools (47%), 2 middle schools (13%), 2 junior high schools (13%), and 4 high schools (27%) (Table 2).

Table 1. Percentage of return of the MSCEIT and SCQS.

Type of School	No. of Schools Sent	No. of Schools Returned	Return Rate
Elementary Schools	13	8	61.53
Middle Schools	4	6	66.66
Jr. High Schools	5	2	40.00
High Schools	6	6	100.00

Table 2. Proportion of all Wyoming schools by type which participated in the study.

Type of School	Percentage of Schools Included in Study
Elementary Schools	47.00
Middle Schools	13.00
Jr. High Schools	13.00
High Schools	27.00

Teacher Respondents

The SCQS was administered to a total of 486 teachers from 20 schools. (See Table 3 for percentage of respondents by type of school.) Since five of these schools had teacher populations of fewer than 13, they were eliminated from the final analysis. All teachers who were present at the faculty meeting in which the survey was administered participated in the survey.

Table 3. Number and percentage of teacher respondents by type of school.

Type of School	Number of Teacher Respondents	Percentage of Teacher Respondents
Elementary Schools	169	39.00
Middle Schools	50	11.00
Jr. High Schools	107	24.00
High Schools	117	26.00

Teacher Responses to the School Culture Quality Survey

The SCQS measured the perceptions school culture of 443 teachers in 15 Wyoming schools. The survey, which included 36 items that measure perceptions of the working environment, is divided into four sub-scales: (1) Teamwork, the degree to which the teachers view themselves as working cooperatively with one another; (2) Learning Community, the extent to which the teachers see the administration and staff working toward their goals and vision; (3) Facilitative Leadership, the degree to which the

teachers see the administrator providing ease in working toward common goals; and (4) Shared Vision, the extent to which the teachers view themselves as having a shared vision. Perceptions are measured on a 5 point scale with 1 indicating less positive perceptions and 5 indicating the most positive perceptions of the climate. Table 4 presents the means and standard deviation for the sample for each of the subscales of the SCQS.

Table 4. Number of teacher respondents, mean, range, and standard deviation for the SCQS sub-scales by school type.

Sub-Scale	School Type				
	Elementary	Middle	Junior High	High School	Total
Teamwork					
N	169	50	106	117	442
Mean	4.03	3.94	3.77	3.57	3.84
SD	.50	.54	.65	.53	.58
Learning Community					
N	169	50	107	117	443
Mean	4.74	3.69	3.66	3.66	3.72
SD	.47	.48	.66	.66	.58
Facilitative Leadership					
N	169	50	107	117	443
Mean	4.15	4.11	3.74	3.74	3.90
SD	.52	.56	.70	.70	.66
Shared Vision					
N	169	50	107	117	443
Mean	4.14	3.93	3.73	3.56	3.86
SD	.51	.56	.75	.60	.65

The sub-scale with the highest total mean score was facilitative leadership with a mean of 3.90, and a standard deviation of 1.88 to 5.00. The sub-scale with the lowest total mean score was learning community with a mean of 3.72, and a standard deviation of 2.00 to 5.00. By school type, the highest mean sub-scale was elementary learning community with a mean of 4.74, and a standard deviation of 2.82 to 5.00. By school type, the lowest mean sub-scale was high school shared vision with a mean of 3.56 and a standard deviation of .60. By the total sub-scales, teamwork ranged from 2.00 to 5.00; learning community ranged from 2.00 to 5.00; facilitative leadership ranged from 1.88 to 5.00; and shared vision had the greatest range of 1.50 to 5.00.

Principals' Scores on the Mayer-Salovey-Caruso Emotional Intelligence Test

Of the 20 principals who returned the completed MSCEIT, 15 of those were used in this study. Five were omitted due to their small sample size of teachers completing the SCQS. Like the SCQS, the majority of the 15 returns were from the elementary school with 7 elementary principals completing and returning the instrument (47% of the total). Two middle school principals completed and returned the instrument (13% of the principals' total participants). The junior high also had two principals complete and return the instrument (13%). The high school had four principals complete and return the instrument (27%).

The scores are standardized to provide a ranking of scores, with 150 being the highest score, 100 being viewed as competent, and 50 as the lowest score. As shown in Table 5, in the sub-category of Perceiving Emotion, the principals ranged from 70 to 120, with a mean of 93.73 and a standard deviation of 15.25. In the sub-category of

Facilitating Thought, the principals ranged from 84-122 with a mean of 100.20, with a standard deviation of 11.96. The sub-category of Understanding Emotions yielded a range of 80-112, with a mean of 95.46 and a standard deviation of 9.96. In Managing Emotions, the range was 88-110, with a mean of 98.80, and a standard deviation of 6.84. These categories were not included by school type because of the need to maintain confidentiality of the principals. By schools, four were high school principals, 2 were junior high, 2 were middle school, and 7 were elementary principals.

Table 5. Principals taking the MSCEIT, mean, range, and standard deviation.

	Perceiving Emotion	Facilitating Thought	Understanding Emotion	Managing Emotion
Number	15	15	15	15
Mean	93.73	100.20	95.46	98.80
Range	70 – 120	84-122	80-112	88-110
Standard Deviation	15.25	11.96	9.96	6.84

Hierarchical Linear Model Results

Hierarchical regression models were used to test the relationship of the principals' emotional intelligence to the perception of school culture for teachers in their schools. The advantage of using hierarchical models is that it takes advantage of the natural relationship of teachers being nested within schools. For each of the following analyses, intercept models were calculated using the overall school culture scores as well as each subscale of school cultures as the outcome for the first level. No other first-level variables were entered into the equations. For each intercept model, the various MSCEIT scores for

each principal were entered as predicators at the second (or school) level. In addition, in several models, types of school were also entered at the second (or school) level as a predictor of school culture intercept. The intercept of the school culture scale for each school (i.e. principal) can be interpreted as the predicted outcome for an average teacher in that school's sample. This means that the model was used to test what categories of principals' emotional intelligence could predict overall school culture and sub-categories of school culture.

As recommended by Bryk and Raudenbush (2002), the hierarchical models first examined level one (teacher-level) models and then constructing level two (school or principal-level) models. As noted above, the models did not include predictor variables in the level one (teacher) models.

At the second level, the researcher first included all sub-categories of principals' emotional intelligence to determine if which aspects of EI predicted teachers' ratings of overall school culture. The models were then reduced to include only the significant level two predictors. The outcomes of the original models, including all four predictors, are presented below by reduced models when appropriate. Finally, to explore the potential intervening relationship of school type to school culture, several models are also presented which included school type as a level two predictor.

Table 6. Hierarchical linear model of level two predictors (principals' EI scores) of overall school culture.

Fixed Effect	**Coefficient**	**Standard error**	**T-ratio**
Managing emotions (level 2 predictor) intercept of mean-all school culture	-.029080	.009199	-3.161*
Perceiving emotions intercept of mean-all	.006675	.006299	1.060
Using emotions (facilitation) intercept of mean-all	-.003786	.006344	-.0597
Understanding emotions	.008525	.008270	1.030

Variance components random effects	**Variance Component**	**df**	**Chi-Square**
Intercept	.03369	10	47.80112

*p<.05, **p<.01, ***p<.001

Results from the initial analysis of the principals' four EI subscales effect on overall school culture indicates that at level two, managing emotions proved to be the only significant predictor of variation for the 15 schools. The relationship of managing emotions to school culture was negative, suggesting that as principal's level of managing emotions increased, teachers' perceptions of overall school culture decreased.

The next model tests the relationship of principals' EI scores to the SCQS subscale of facilitative leadership. As shown in Table 7, managing emotions was a negative predictor of facilitative leadership, indicating as principals' ability to manage emotions increases, the teachers' perception of facilitative leadership decreases.

Table 7. Hierarchical model of level two predictors (principals' EI score) for SCQS sub-scale facilitative leadership.

Fixed Effect	**Coefficient**	**Standard error**	**T-ratio**
Managing emotions (level 2 predictor) intercept	-.033966	.012860	-2.641*
Perceiving emotions intercept	.013880	.008741	1.588
Using emotions (facilitation) intercept	-.002954	.008815	-.335
Understanding emotions	.008525	.008270	1.030

Variance components random effects	**Variance Component**	**df**	**Chi-Square**
Intercept	.033558	10	78.61227***

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 8. Hierarchical model of level two predictors (principals' EI score) for SCQS sub-scale teamwork.

Fixed Effect	**Coefficient**	**Standard error**	**T-ratio**
Managing emotions (level 2 predictor) intercept	-.017940	.008166	-2.197
Perceiving emotions intercept	.006503	.005639	1.153
Using emotions (facilitation) intercept	-.007610	.005671	-1.342
Understanding emotions	.012767	.008166	-2.197

Variance components random effects	**Variance Component**	**df**	**Chi-Square**
Intercept	.02360	10	33.18647

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 8 presents the results of the hierarchical linear model examining the relationship of principals' EI scores to the SCQS subscale for teamwork. In the original model, none of the principal EI scores were significant predictors of teamwork; however, managing emotions proved to be a near significant predictor of teamwork (p = .055). A reduced model examining only the effects of understanding emotions and managing emotions on school teamwork scores was then viewed to see if a reduced model could predict the sub-category of teamwork.

Table 9. Reduced hierarchical model of level two predictors understanding emotions and managing emotions predicting SCQS subscale team work.

Fixed Effect	**Coefficient**	**Standard error**	**T-ratio**
Managing emotions (level 2 predictor) intercept	-.019662	.007718	-2.548*
Understanding emotions	.016349	.005230	3.126**

Variance components random effects	**Variance Component**	**df**	**Chi-Square**
Intercept	.02397	12	40.24570**

* p<.05, **p<.01, ***p<.001

Managing emotions proved to be a significant predictor of teamwork, although a negative one. Understanding other's emotions proved to be a highly positive predictor of teamwork (p <.01).

Table 10 presents the results for the full model of the level two predictors (principals' EI scores) as predictors of teachers' perception of the level of shared vision. The results indicate managing emotions is a highly significant predictor of the sub-scale

shared vision (p = .009). The relationship is a negative one, indicating that as a principal's ability to manage emotions increases teachers' perception of shared vision decreases. A reduced model examining just the effects of managing emotions and perceiving emotions was then run to determine if these combined factors of principals' emotional intelligence combined could predict shared vision.

Table 10. Hierarchical model of level two predictors (principal's EI) as predictors of sub-scale shared vision.

Fixed Effect	**Coefficient**	**Standard error**	**T-ratio**
Perceiving emotions	.004979	.006828	0.729
Using emotions	-.003579	.006874	-0.521
Understanding emotions	.011789	.008958	1.316
Managing emotions	-.032898	.009945	-3.308***

Variance components random effects	**Variance Component**	**df**	**Chi-Square**
Intercept	.19484	10	42.11445***

* p<.05, **p<.01, ***p<.001

Table 11. Reduced hierarchical model of level two predictors perceiving other's emotions and managing emotions of sub-scale shared vision.

Fixed Effect	**Coefficient**	**Standard error**	**T-ratio**
Managing emotions (level 2 predictor) intercept	-.033466	.009697	-3.979***
Perceiving emotions intercept	.008931	.003422	2.610*

Variance components random effects	**Variance Component**	**df**	**Chi-Square**
Intercept	.03908	12	52.5998**

* $p<.05$, ** $p<.01$, *** $p<.001$

In the reduced model, managing emotions proved to be a highly significant predictor of shared vision, although a negative predictor ($p<.001$). Perceiving others' emotions proved to be a positive predictor of shared vision ($p<.05$).

In the next model, the level two predictors of all the sub-scales of emotional intelligence were run to see if any could predict the SCQS subscale of learning communities (Table 12).

Table 12. Hierarchical model of all level two predictors of sub-scale learning communities.

Fixed Effect	**Coefficient**	**Standard error**	**T-ratio**
Managing emotions (level 2 predictor) intercept	-.032079	.008630	-3.717**
Perceiving emotions intercept	.001730	.005934	.292
Using emotions (facilitation) intercept	-.001315	.005973	-.21.69520
Understanding emotions	.013189	.007781	1.695

Variance components random effects	**Variance Component**	**df**	**Chi-Square**
Intercept	.02799	10	37.45590***

* $p<.05$, ** $p<.01$, *** $p<.001$

Managing emotions proved to be a significant predictor of learning communities, although a negative predictor ($p<.01$).

In the final model, the researcher added a level two predictor indicating the level of each school coded for one of three levels: elementary, middle or junior high, and high school. This model tested the effect of the two EI scores which were the most consistent predictors of the previous models (perceiving emotions and managing emotions) with the level two variable of school level in an intercept model predicting level one outcome of overall school culture (Table 13). The other EI sub-scales were dropped to ascertain if the reduced model using perceiving emotions and managing emotions could predict overall school culture at the various school levels.

Table 13. Hierarchical model of level two predictors perceiving emotions, managing emotions, and school level to predict overall school culture.

Fixed Effect	**Coefficient**	**Standard error**	**T-ratio**
Managing emotions (level 2 predictor) intercept	-.018774	.005209	-3.604*
Perceiving emotions intercept	.004896	.001693	.2892*
Level	-.200701	.032392	-6.196**

Variance components random effects	**Variance Component**	**df**	**Chi-Square**
Intercept	.00820	11	20.59193*

* $p<.05$, ** $p<.01$, *** $p<.001$

Perceiving emotions proved to be a significant positive predictor of school culture when combined with managing emotions. Managing emotions proved to be a significant predictor of school culture, although a negative predictor. The level of the school proved to be a highly significant predictor of school culture, although a negative one. This can be interpreted as elementary grade level teachers' perspective predicted a more negative school culture than middle or high school teachers when combined with principals' level of managing emotions and perceiving emotions.

Hierarchical Linear Models Data Analysis

The number or iterations required to produce a stable model were relatively low in all of the regression models, ranging from four to eleven iterations. This indicates a relative stability of the results. All of the hierarchical regression models tested the intercepts of teachers' perception of school culture as predicted by the principals' levels of emotional intelligence.

Summary of Results

This study explored what assumptions can be made about the ratings of principals' emotional intelligence and the influence on school culture as perceived by teachers. The purpose was to identify which components of principals' emotional intelligence have the greatest influence on creating a school culture. The first research question asked about the relationship between principals EI scores and overall school culture. A relationship between managing emotions and the school culture existed with a T-ratio of -3.161, which was statistically significant. This means that the higher the principals' EI score, the lower the school culture. The relationship between principals' emotional intelligence and facilitative leadership was the second research question explored, resulting in managing emotions being related with -2.641 T-ratio, which was also statistically significant. Again, this resulted showed a negative relationship, meaning that the higher the principals' managing emotions score, the lower the score in facilitative leadership as perceived by the teachers. The third research question asked about the relationship between the principals' EI scores and teamwork. The HLM conducted did not reveal significant results, so a reduced model was run. The reduced model revealed both managing emotions and understanding emotions to be statistically significant with a -2.548 and a 3.126 T-ratio respectively. This means that the higher the principals' EI score in the area of managing emotions, the lower the score on the sub-area of teamwork. On the other hand, the higher the principals' EI scores were in understanding emotions, the higher the sub-area score of teamwork as perceived by teachers. The sub-area of shared vision and its relationship to principals' EI was the fourth research question. The

HLM results revealed a highly statistically significant relationship ($p<.0001$) to principals' managing emotions, with a T-ratio of -3.308. Again, this means that the higher the principals' EI score in the area of managing emotions, the lower the school culture in the sub-area of shared vision. Perceiving emotions was nearly significant (p=.009), so a reduced model was run to show the relationship between managing emotions, perceiving emotions, and shared vision. In the reduced model, both were statistically significant, with T-ratios of -3.979 and 2.610 respectively. Consistent with the previous models, as the principals' managing emotions score was high, the sub-area of shared vision was low. Also, as the principals' perceiving emotions score was high, the sub-scale shared vision increased. The final research question explored the relationship between principals' EI scores and learning communities. This revealed managing emotions as a significant, yet negative, predictor of learning communities, with a T-ratio of -3.717.

School level was then included in the teacher level model to determine if elementary, middle/junior high, or high school differed significantly. The researcher included the two prominent EI scores which consistently predicted the other models, perceiving and managing emotions. The HLM results revealed that managing emotions was again a negative predictor of overall school culture with a T-ratio of -3.604, and perceiving emotions was also statistically significant with a T-ratio of .2892. The school level results revealed that elementary schools predicted a more negative school culture than the other two levels when combined with principals' managing and perceiving emotions scores.

Statistical versus Practical Significance

The data repeatedly shows a principals' ability to manage emotions as being a negative predictor of overall school culture and varied sub-categories of school culture. This was statistically significant ($p < .05$) for most of the full models and all of the reduced models. Principals' ability to manage emotions as a negative predictor of school culture stayed consistent across nearly each subscale of school culture including facilitative leadership, teamwork, and learning communities subscales. The only other areas of emotional intelligence that predicted school culture were perceiving emotions and understanding emotions; when interacting with managing emotions, perceiving emotions predictability was significant, $p < .05$, while understanding emotions when interacting with managing emotions was also positively significant, $p < .01$. Although managing emotions evidenced a statistically significant negative relationship with school culture in nearly all of the hierarchical linear models interactions, this result does not necessarily indicate that managing emotions is not an important part of a principal's role.

Chapter Summary

In this hierarchical linear model study of 443 teachers nested in 15 schools, principals' managing emotions repeatedly proved to be a negative predictor of school culture. The only other areas of emotional intelligence that predicted school culture were perceiving emotions and understanding emotion, when interacting with managing emotions. These two were positive predictors of school culture. Because of the negative predictor of managing emotions, this study conflicts with previous research related to both emotional intelligence and school culture. For example, in a study of business

leaders, those showing the most profit were those who had strengths in managing their emotions (Lusch & Serkenci, 1990). A study of schools with effective cultures revealed a positive relationship between the principals' consideration of teachers and their level of commitment to the school. Improvement in teacher motivation has been shown to have a strong link to student achievement (Cheng, 1993). The choice of instruments may have a large impact on the findings since other measures of emotional intelligence and/or other measures of school culture may have produced much different results. The following chapter discussed the implications of these results.

CHAPTER 5

CONCLUSIONS

Introduction

Research suggests a strong relationship between emotional intelligence and effective leadership skills. Leaders need self-awareness, managing emotions, and the ability to perceive emotions to be successful (Mayer, Salovey, & Caruso, 2000b; Cherniss & Goleman, 2001; Hay/McBer, 2000; Wilcox & Rush, 2004). Effective leaders have the ability to create an ideal culture for the company or school (Stein, 1998; Patterson, Purkey & Parker, 1986; Deal & Peterson, 1991; Fullan, 2003; Barth, 2000). The problem of the relationship between emotional intelligence and its effect on school culture, methodology, and results are summarized in this chapter. Additionally, summarized responses to the research questioning, discussion of the results; implications, and recommendations for further study are presented.

Problem, Methodology, and Results

This study explored what assumptions could be made regarding principals' ability ratings of emotional intelligence and its influence of the school culture as perceived by teachers. The areas of school culture examined included: (1) shared vision, (2) facilitative leadership, (3) teamwork and cooperation of staff, and (4) nurturing a learning community as measured by the School Culture Quality Survey (SCQS) (Anchin, 1994). This instrument was selected because it was designed specifically to measure the work culture of teachers.

The four areas of principals' EI examined were: (1) Perceiving Emotions, (2) Using Emotions, (3) Understanding Emotions, and (4) Managing Emotions as measured by the Mayer-Salovey-Caruso EI Test (MSCEIT) (2000). This instrument was selected because it is an ability model, as opposed to a self-report or a survey model. The SCQS scoring summarized the teachers' responses in each of the four scales measured on a Likert scale with responses including never, rarely, sometimes, often, and always.

The research questions examined in the study included:

1. What is the relationship between principals' emotional intelligence scores as assessed by the Mayer-Salovey-Caruso Emotional Intelligence Test and school culture as perceived by teachers?
2. What is the relationship between principals' scores on the Mayer-Salovey-Caruso Emotional Intelligence Test and the sub-scale of facilitative leadership as perceived by teachers?
3. What is the relationship between principals' scores on the Mayer-Salovey-Caruso Emotional Intelligence Test and the sub-scale of teamwork as perceived by teachers?
4. What is the relationship between principals' scores on the Mayer-Salovey-Caruso Emotional Intelligence Test and the sub-scale of shared vision as perceived by teachers?
5. What is the relationship between principals' scores on the Mayer-Salovey-Caruso Emotional Intelligence Test and the sub-scale of learning communities as perceived by teachers?

To answer the above research questions regarding the relationship between principals' emotional intelligence and school culture, a hierarchical linear model was conducted. This method of research was a strong fit for the hierarchical nature of schools, with teachers in a classroom, being grouped within a school, which is grouped within other schools in the district, which is grouped within the state's schools. It allowed the researcher to analyze the characteristics of the various groups of teachers simultaneously with the characteristics of the 15 principals. A hierarchical linear model was also conducted between principals' sub-area emotional intelligence scores and teachers' scores from each of the four SCQS sub-areas to answer research questions 1-5. The school levels of elementary, middle and junior high, and high school were also studied to determine if the two sub-categories of principals' ability to perceive and manage emotions could predict overall school culture. The hierarchical linear model was chosen because it interpreted both levels (teachers' perceptions of school culture and principals' emotional intelligence) simultaneously.

The study revealed mixed results, some positive and some negative, as summarized below and further discussed in the next section. The first research question sought to explore the relationship between principals EI scores and overall school culture. A statistically significant, yet negative, relationship between managing emotions and the school culture existed (Table 6). This suggests that the higher the levels of principals' managing emotions the more negative the effect on school culture. The second research question examined the relationship between principals' emotional intelligence and facilitative leadership, resulting in managing emotions again being negatively related, which was also statistically significant (Table 7). This negative relationship indicates that

the higher the principals' managing emotions score, the lower the score in facilitative leadership as perceived by the teachers. The third research question asked about the relationship between the principals' EI scores and teamwork. Since the HLM did not reveal significant results (Table 8), a reduced model of managing emotions and understanding emotions was run (Table 9). The results were mixed. These results revealed that the higher the principals' EI score in the area of managing emotions, the lower the score on the sub-area of teamwork. Shared vision and its relationship to principals' EI was the fourth research question. The results again revealed a highly statistically significant, yet negative, relationship to principals' managing emotions (Table 10). This means that the higher the principals' EI score in the area of managing emotions, the lower the school culture in the sub-area of shared vision. Perceiving emotions was nearly significant, so a reduced model was run to show the relationship between managing emotions, perceiving emotions, and shared vision. In the reduced model, both were statistically significant (Table 11). Consistent with the previous models, as the principals' managing emotions score was high, the sub-area of shared vision was low. However, as the principals' perceiving emotions score was high, the sub-scale shared vision increased. The relationship between principals' EI scores and learning communities was the final research question, once again revealing managing emotions as a significant, yet negative, predictor of learning communities.

Schools were then viewed by level of elementary, middle/junior high, and high school using the level two predictors of perceiving emotions and managing emotions predictability of overall school culture. All three of the level 2 predictors were statistically significant with a negative relationship for managing emotions, meaning that

managing emotions predicts a negative school culture. Perceiving emotions was a positive predictor of school culture, meaning that as principals' scores in the ability to perceive emotions increased, school culture also increased (Table 13). These results suggest that principals' ability to manage emotions negatively influences teachers' perceptions of school culture while a principals' abilities to perceive emotions has a positive influence on overall school culture.

Discussion of the Results

The study revealed mixed results, some suggesting a negative relationship and others a positive relationship. The negative relationship between a principals' level of managing emotions and school culture indicates that the higher the principals' EI score in the ability to manage emotions, the lower the overall school culture. This finding is not consistent with the research related to emotional intelligence. For example, Lusch and Serkenci (1990) suggest that leaders with emotional self-control have the most flourishing businesses. Managers who controlled their own stress and were not affected by other's negativity made the most return. However, schools are much different than businesses, and the outcome is measured much differently than a return on an investment. A business' outcome can be measured by a profit margin. A business has many controls over the quality of the product. Conversely, schools educate and nurture children, who are much different than "products," and the academic gains or lack thereof have many contributing factors including family income, ethnicity, and mother's level of education. In addition, many variables factor in a school's culture (i.e. school goals, academic achievement, recognition of achievement, parents' attitudes, and students' attitudes).

Due to the differences between businesses and schools, emotional self-control may be interpreted differently in the different contexts. In schools, a more personalized approach to leadership may be required. This personalization may include displaying emotions, expressing passions, openly, asking for help when needed, and letting the staff members see vulnerability, which differs from the ability to "manage" emotions. The negative relationship between managing emotions and facilitative leadership and teamwork indicates that the higher the principals' levels of managing emotions, the lower the school culture in the areas of facilitative leadership and teamwork. The principals' ability to manage emotions may cause teachers to interpret the principal as capable, in control, and not requiring teamwork-type assistance.

Managing emotions as a negative predictor of school culture may be due to the idea that employees may view a manager who is very polished and always in control of emotions as arrogant or independent. Managers that portray these characteristics could be viewed by staff members as aloof and "all knowing." Teachers may be intimidated by principals who are always in control and may not participate as much as they might with a principal who appears more human.

The consistency of managing emotions as a negative predictor could be, in part, related to the construct validity of the MSCEIT in the area of managing emotions, which is measured by two managing emotions tasks. The Emotion Management task portion of the MSCEIT asks the respondent to rate the effectiveness of varied actions in achieving a certain result in situations where it is important to regulate emotions. The Emotional Relations task asks respondents to evaluate the effectives of varied actions in achieving a desired outcome involving others. Combined, the task scores give the overall managing

emotions score. However, the ability to choose the correct emotion in a contrived situation is much different than the ability to control one's emotions in difficult situations. Further research in the area of the construct validity would need to be conducted to confirm this rationale. Pusey's (2000) construct validity concluded that the faces portion of the MSCEIT had the strongest construct validity. That portion of the EI test did not measure managing emotions; rather it measured one's ability to perceive emotions.

The results revealed two positive relationships between EI and school culture. First, the higher the principals' EI scores were in understanding emotions, the higher the sub-area score of teamwork as perceived by teachers. This fits well with previous research. John and Taylor's (1999) research revealed that in order to increase teachers' perception of the school climate, principals needed strong relationships with teachers. Having the ability to understand teachers' emotions, as measured by the MSCEIT, would seem to benefit relationship and cause teachers to want to function more as part of the team. Understanding emotions is an integral component of a principal's daily job since a principal interacts with, manages, and leads people of all ages, backgrounds, and abilities. Secondly, the principals' ability to perceive emotions in others corresponded to a stronger school culture in the sub-area of shared vision. This ability would naturally seem to be an important part in a strong school culture because it would help build strong relationships between the principal and teachers. For example, perceiving how a teacher is reacting to constructive advice related to classroom practices would help a principal know how to proceed in helping the teacher The ability to accurately perceive others' emotions is clearly part of a principal's daily routine. As mentioned previously, the perceiving

emotions portion of the MSCEIT was rated as having good construct validity (Pusey, 2000), thus adding more credibility to perceiving emotions as accurately predicting school culture..

The positive relationship between emotional intelligence and school culture is further supported by research. Barth (1990) asserts that the principal-teacher relationship is a critical component of an effective school culture. These findings support the dispositions in the ISLLC standards including that a principal should have the ability to treat all people with dignity and respect, collaborate with others in the best interest of students, and be an effective communicator (*ISLLC*, 1996). These findings also support colleges that include study and discussion of the interpersonal aspects of principal preparatory programs, as well as school districts which invest in the ongoing commitment to helping their principals develop strong interpersonal skills including emotional intelligence.

Methodological Issues

The study of the principals' levels of EI and its relationship to school culture yielded mixed results. One reason for the mixed results in this study of principals' emotional intelligence is that culture could be too broad of a topic to be measured by the variable of principals' emotional intelligence. Culture is such a large construct that too many other variables may have affected the perceived school culture. This is consistent with research and experts in the field. For example, principals' daily encounters with staff members, parents, students, and community all work together to create the culture. Supportive stakeholders are necessary in creating a positive change in school culture.

These include business leaders, teachers, administrators, and school boards (Cole & Griffin, 1987; Deal & Peterson, 1991; Barth, 2000). Fink's research (1999) showed that the age of a school can also have an effect on the culture. When a school is newly organized, the leaders spend time making the shared values apparent to the varied stakeholders. Since anonymity was guaranteed to the principals and teachers in this study, the tenure of the principal and the newness of the schools were not included in the study.

Another methodological concern could be the instruments used to measure school culture and emotional intelligence. A different measure of school culture may have produced different results. A broader measure of the school culture, which surveys students, parents, support staff, and community members may give a more accurate picture of a school's culture. In relation to EI, a broader measure may have produced much different results. This broad measure could include surveys of teachers' opinions of their principal's EI, principals' own interpretation of their EI, parents' opinions of the principals' EI, as well as the superintendents' opinions of principals' levels of EI could be more consistent with their perceptions of school culture. The MSCEIT was chosen because it is an ability model, rather than one based on opinion. However, in retrospect, a 360-degree view of the principals' EI may yield quite different results. Further, the MSCEIT was tested as in the business world as both valid and reliable, but has not been tested in school leadership. School leadership requires a different set of skills than a business leadership position because of the many different levels of accountability and the many different profiles of "clients."

This study did not produce comparable results to the research in the area of managing emotions. This could be due in part to the sample size of the principals and the

context of the state of Wyoming. Although the sample size of teachers was 443, the limitation of using only 15 principals' emotional intelligence scores was one weakness in the data. A larger sampling may have yielded different results. Another delimitation was that all of the principals were from Wyoming. Principals from urban areas may yield different results. In response to the new guidelines set forth by No Child Left Behind (2003), Wyoming legislators and the superintendent of instruction have taken the lead in many of the change initiatives in the country. Oftentimes, these fast-paced changes are difficult for the Wyoming teachers, causing them to place blame on their principals. Teachers sometimes view principals as being omnipotent, which is far from reality. Wyoming's culture of change in this era of high accountability may have influenced the scores of the SCQS. Teachers may have been frustrated by the many changes in the state, and therefore, the school culture scores may be reflective of current climate of accountability.

Further Implications

Although the results of this study were mixed, showing both positive and negative relationships between EI and school culture, research and parts of this study support that emotional intelligence deserves some notice in preparing leaders in schools and in businesses. EI training and continued application is one answer for principals, especially in this era of high accountability. Mayer (2001) stresses the importance of practicing and applying EI skills in the workplace. He suggests that it is much more difficult for adults to learn these skills, but it is possible with continued dedication. Can emotional intelligence skills such as the ability to understand other's emotions and to be able to use

emotions effectively be taught? Weisinger (1998) asserts that emotional intelligence skills can be learned and consciously applied in any work or home setting. For example, he discusses the emotional intelligence skill of sensitivity by using a strategy called "checking in." This involves asking open-ended questions and then reading other's emotions before proceeding in sensitive issues. Cherniss and Goleman (2001) also advocate for EI programs in workplaces, organizations, and schools. Obviously, further research is needed in the areas of effective leadership, emotional intelligence, and school culture. Until then, hiring committees can benefit from knowing that a relationship does exist between EI and school leadership and can structure interview questions and tasks accordingly. Principals can benefit from knowing that EI is an ability that can be strengthened to help them in their craft. Colleges can look at additional ways to include relationship skills, EI, and school culture in their principal preparatory program.

Recommendations for Further Research

Research in the area of emotional intelligence supports its effect on leadership, including the work environment and culture. It is suggested that further research focus on the following questions:

1. What would the results yield with a larger sample size of principals? (One limitation of this study was that only 15 principals' scores were included.)
2. What would be the results of a varying measure of emotional intelligence, such as a 360 degree survey by self, teachers, and superintendent?
3. What would be the results of a varying measure of school culture, such as the CASE?

4. What would be the results of including additional stakeholders' surveys in school culture such as those of classified staff, parents, and students?
5. What results would be different if the study were given to principals in other states? (This study was limited to 15 principals in Wyoming.)
6. What results would be different if all surveys and emotional intelligence tests were administered by the researcher?
7. Would results differ if the EI instrument selected was tailored specifically to a principal's EI, as opposed to a business leader's EI?
8. What results would be different is construct validity was stronger in the MSCEIT?

Chapter Summary

In conclusion, the support from previous researchers and from parts of this study (principals' perceiving and understanding emotions) indicates that emotional intelligence strengths of leaders do make a positive difference in the culture of a workplace or school. The body of research related to school culture and leadership provide a basis for qualities needed for the principals of our schools. Research also links school culture to academic achievement of students and job satisfaction of teachers. In an effort to meet the increased demands of society, the principalship is perhaps one of the most difficult management positions in corporate and academic arenas. To lead effectively in this role, numerous qualities are needed, including emotional intelligence skills. To meet the demands put forth by No Child Left Behind legislation, demands of the business community, needs of the students, demands of the staff, community, the principalship

requires a unique set of personal relationship skills, including emotional intelligence skills.

This study revealed mixed results. Principals' ability to perceive emotions and understand emotions of self and others are positive predictors of creating a school culture. These traits are necessary in the leadership of a school. The abilities of perceiving and understanding the varied emotions in schools (i.e. upset parents, injured students, hurt teachers, angry coaches) are qualities necessary for any successful principal in creating a strong, caring school culture. In spite of managing emotions being a negative predictor of school culture, the researcher still sees value in a relationship between emotional intelligence and school culture. Further research is needed to recognize the qualities of successful principals in an effort to help others fulfill this role and meet society's demands for academic excellence for all students. Knowing these qualities would help principal preparatory programs at the college level prepare future building leaders for the demands they will face. It would also help hiring committees when looking for the best match for the needs of their students and staff. Defining these traits will help our world's most important leaders, the school principals, guide teachers to be highly effective in our ever changing world and in an era of high accountability.

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APPENDICES

APPENDIX A

INITIAL CONTACT WITH PRINCIPALS

NAME OF PRINCIPAL,

Thank you for considering taking part in my research study. I am conducting research for my dissertation topic: *Principals' Levels of EI and the Measurement of Teachers' Perceptions of the School Culture.* Recently, I contacted your superintendent NAME OF SUPERINTENDENT and received permission to conduct this research in your school district with any head principals who are willing. If you are willing to participate, I will send you the Mayer-Salovey-Caruso EI Test (MSCEIT), the David Anchin School Culture Quality Survey (SCQS), and directions for taking the MSCEIT and administering the SCQS. Then upon completion of the instruments, you will be asked to return them in the self-addressed stamped envelope, which I will enclose. **For your convenience, if you prefer, I can come to your district to administer both instruments.**

No names of principals, teachers, or schools will be used in my text. All information obtained from you or your school will be used to gather research and then mailed to you. No copies will be kept at any location. The coding, EI scores, and cultural survey scores will be kept locked in a filing cabinet at the Johnson County School District's central office until the dissertation is successfully defended. Upon completion of the defense of the dissertation, all scores and codes will be sent via mail or hand delivered to each school principal.

The benefit of participating is that you will learn about your own level of EI using the well known MSCEIT. The results will include a summary of your areas of strength, a summary of areas in which growth is needed, and suggestions for making improvements in those areas. In addition, you will receive a booklet with a multitude of graphs of the teachers' perception of the school's culture using the SCQS. In addition, I will gladly share with you the overall results of my dissertation upon request.

Please respond to me via e-mail whether or not you are willing to participate in this research study. **Thank you very much!**

Thank you again for your consideration,

Jeanie M. Barent

APPENDIX B

PARTICIPANT INFORMATION AND CONSENT FORM

PLEASE USE A NO. 2 PENCIL TO TAKE THE MSCEIT.
RETURN THIS CONSENT FORM, THE BOOKLET, and THE ANSWER SHEET TO JEANIE BARENT.

FOR DEMOGRAPHIC INFORMATION MARKED "OTHER" PLEASE WRITE THE NUMBER OF YEARS IN YOUR POSITION AS HEAD PRINCIPAL OF THE CURRENT SCHOOL IN WHICH YOU WORK.

PARTICIPANT INFORMATION STATEMENT AND CONSENT FORM

Principals' Levels of Emotional Intelligence

You are invited to participate in a study of principals' levels of emotional intelligence and its assumed relationship to school culture. I hope to learn whether or not there is an assumed connection between emotional intelligence of a building principal and that school's culture as perceived by the teachers. You were selected as a possible participant in this study because the researcher randomly selected your school district from all of the school districts in Wyoming.

If you decide to participate, no names of principals, teachers, or schools will be used in my dissertation. All information obtained from you or your school will be used to gather research and then mailed to you. No copies will be kept at any site. The coding, emotional intelligence scores, and cultural survey scores will be kept locked in a filing cabinet at the Johnson County School District's central office until the dissertation is successfully defended. Upon completion of the defense of the dissertation, all scores and codes will be sent via mail or hand delivered to each school principal.

Taking the MSCEIT and listening to information about the culture survey will take less than one hour.

The benefit of participating is that you will learn about your own level of emotional intelligence using the well known MSCEIT. The results will include a summary of your areas of strength, a summary of areas in which growth is needed, and suggestions for making improvements in those areas. In addition, you will receive a booklet with a multitude of graphs of the teachers' perception of the school's culture using the SCQS. In addition, I will gladly share with you the overall results of my dissertation upon request.
However, I cannot and do not guarantee or promise that you will receive any benefits from this study.

Confidentiality and Disclosure of Information

Any 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. If you give permission by signing this document, I plan to publish the results in a dissertation at Montana State University as part of my doctoral degree. In my dissertation or in any publication, information will be provided in such a way that you cannot be identified.

Your decision whether or not to participate will not prejudice your future relations with me. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice.

If you have any questions, please feel free to ask. If you have any additional questions later,
I will be happy to answer them (307/684-9571).You will be given a copy of this form to keep.

You are making a decision whether or not to participate. Your signature indicates that, having read the Participant Information Statement, you have decided to take part in the study.

Signature of Research Participant

…….
(Please PRINT name)

……
(Witness)

……

Signature(s) of Investigator(s)

APPENDIX C

GUIDELINES FOR TAKING THE MAYER-SALOVEY-CARUSO EI TEST

Guidelines for Taking the Mayer-Salovey-Caruso Emotional Intelligence Test

Dear (PRINCIPAL'S NAME):

Thank you so much for your willingness to take the Mayor-Salovey-Caruso Emotional Intelligence Test (MSCEIT). I think you'll find it interesting, to say the least. It is an ability test that is both a valid and reliable measurement of one's emotional intelligence. Thanks, too, for allowing your staff to take the Culture Survey. A few guidelines for your facilitation:

1. For the MSCEIT, set aside one hour of your time to take it, preferably without interruptions.
2. Be sure to use a No. 2 pencil.
3. Answer the questions on the answer sheet, not in the booklet.
4. Read and sign the consent form.
5. For the Culture Survey, have a lead teacher administer it.
6. The Culture Survey will take 15 minutes or less
7. Have teachers use a No. 2 pencil.
8. Mail the surveys, MSCEIT, answer sheet, and consent form to me in the SASE.

Be sure to call if you have any questions or concerns.
Thank you so much for your participation,

Jeanie Barent
Associate Superintendent
601 West Lott Avenue
Buffalo, WY
82834

(307) 684-9571

APPENDIX D

GUIDELINES FOR ADMINISTERING

THE DAVID C. ANCHIN SCHOOL CULTURE QUALITY SURVEY

Researcher will read the following statement to the staff before handing out the survey:

"You are being asked to take a survey that will measure your school's culture in 4 key areas: (1) having a shared vision, (2) facilitative leadership, (3) teamwork and cooperation of staff, and (4) nurturing a learning community. Your participation is voluntary and your name and responses will remain totally confidential. The results of this survey will be used to promote research in the area of school culture and to help your school establish goals based on areas needing improvement and build on your school's strengths.

- Use a No. 2 pencil only.
- Make solid marks that fill the oval completely.
- Erase cleanly any marks you wish to change. Make no stray marks on this form. Do not fold, tear or mutilate this form.
- Please respond to the following statements in terms of how frequently each statement is descriptive of your school.
- Upon completing the survey, please place it in the manila envelope, which will be mailed directly to the researcher.

Thank you for your help in this research project!"