

Running head: EXAMINING EMOTIONAL INTELLIGENCE IN PRINCIPALS

EXAMINING EMOTIONAL INTELLIGENCE IN PRINCIPALS

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**Abstract**

**DISSERTATION/THESIS/RESEARCH PAPER/CREATIVE PROJECT:** Examining Emotional Intelligence in Principals

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The purpose of this study was to understand if a principal's level of emotional intelligence has a relationship to leadership practices and, in turn, to student achievement. As such, the research question driving this study was: Does emotional intelligence in a principal operate through practices that relate to student achievement? As used in this study, emotional intelligence refers to a set of abilities in a 4 dimensional model that represent an individual's competency in appraising their own and others' emotions, regulating emotions, and using their emotions to reach a goal. The data collected and analyzed in the pursuit of this question included survey questionnaires from Indiana public school principals that encompassed the Wong Law Emotional Intelligence Scale (WLEIS) as well as an adapted and condensed portion of the survey developed by Marzano, Waters, and McNulty (2005) in regarding their 21 responsibilities of school principals shown to positively correlate to student achievement. For the purposes of this study, the 5 practices identified with highest level of correlation to student achievement were utilized: discipline, flexibility, monitoring/evaluation, outreach, and situational awareness.

School demographics as well as student achievement data from the 2016-17 and 2017-18 Indiana standardized assessment (ISTEP+) were collected from the Indiana Department of Education.

While no correlation was found between student achievement and either the practices or emotional intelligence ratings of the principal, there were other significant results. Major findings in this study included correlations between a principal's level of emotional intelligence and their engagement of the 5 practices as well as correlations to each of the individual practices and emotional intelligence. Each of the individual domains of emotional intelligence correlated to the 5 practices as a whole, as well. Additionally, correlations between several individual practices and individual emotional intelligence domains were found. These findings of a relationship between a principal's level of emotional intelligence and effective practices related to student achievement should continue to be studied. As emotional intelligence represents a set of abilities in which an individual can increase their proficiency, this relationship may provide additional means of professional preparation for and development of school principals.

**Table of Contents**

Abstract .....	2
Table of Contents .....	4
List of Tables.....	7
CHAPTER 1 .....	9
Problem .....	11
Purpose of the Study and Research Questions .....	12
Significance of the Study .....	13
Definition of Terms.....	14
Emotional intelligence.....	14
Wong and Law Emotional Intelligence Scale (WLEIS). .....	15
CHAPTER 2 .....	17
Background .....	17
Schism in the Field of Emotional Intelligence .....	19
Analyzing Emotional Intelligence .....	24
Emotional Intelligence and Leadership .....	26
Emotional Intelligence in Other Fields.....	27
Significance of Emotional Intelligence to the Field of Education.....	28
Emotional Intelligence and Education.....	30
Criticism of Emotional Intelligence .....	31

Emotional Intelligence Through Principal Leadership Practices .....	33
Principal Leadership Practices Related to Student Achievement .....	34
Flexibility.....	39
Monitoring/Evaluating.....	41
Outreach.....	42
Situational Awareness .....	44
Student Achievement .....	45
Summary .....	46
CHAPTER 3 .....	50
Methods Rationale.....	50
Sampling Procedures.....	51
Instrumentation.....	52
Measuring the Principal Practice.....	54
Measuring Student Achievement.....	59
Analysis.....	59
CHAPTER 4 .....	61
Descriptive Data Results .....	61
Factor Loading Analysis .....	65
Correlations .....	70
Summary .....	72

CHAPTER 5 .....	74
Review of Problem and Purpose of the Study.....	74
Research Question.....	75
Major Findings .....	77
Findings Related to the Review of Literature .....	82
Implications, Recommendation, Limitations .....	86
Policy .....	86
Practice .....	88
Theory.....	90
Limitations .....	91
Recommendations for Further Study.....	94
Discussion and Concluding Remarks.....	95
References.....	97
APPENDIX.....	119
Appendix A. McREL International Letter of Permission.....	119
Appendix B. Wong and Law Emotional Intelligence Scale (WLEIS) .....	120
Appendix C. Principal Responsibilities and Practices Questionnaire - Copyright McREL International. Adapted with permission.....	121

**List of Tables**

Table 1: Descriptive Data of WLEIS .....	54
Table 2: Factor Correlation to Student Achievement for Principal Practice Questionnaire .....	56
Table 3: Study Participants .....	62
Table 4: Principal Descriptive Data.....	63
Table 5: Respondents' School Demographics .....	64
Table 6: Factor Analysis Reliability Results .....	66
Table 7: Factor Load Analysis – Emotional Intelligence .....	67
Table 8: Factor Load Analysis – Principal Practices .....	69
Table 9: Principal Practices Component with Emotional Intelligence Component Correlations.	71
Table 10: Principal Practices and Emotional Intelligence Correlations to Student Achievement.	72

**List of Figures**

Figure 1: Comparing Categories in Theories of the 4 Domains of Emotional Intelligence ..... 23

Figure 2: Hypothesized Correlations Between Emotional Intelligence and Principal Practice.... 58

## CHAPTER 1

### INTRODUCTION

The idea that emotions are at odds with logical thinking has long been a common societal perception. Who in western society has not heard the advice of following your head instead of your heart? Publilius Syrus wrote in the first century B.C., “Rule your feelings, lest your feelings rule you,” (Syrus 100 BC/1934). As our understanding of intelligence has evolved to include aptitudes outside of logical reasoning, the realization that one’s discernment of emotions and acuity with emotional responses has emerged as a predictor of success in a variety of ways. Over the past quarter century, much research related to the concept of emotional intelligence reveals its correlation to one’s relationships, health, and success in occupation, leadership, and life (Angelidis & Ibrahim, 2011; Côté et al., 2011; O’Boyle, et al., 2011; Yip & Côté, 2013). In a field such as education leadership, where so much of one’s success is based upon relationships and interactions with various stakeholders (Hattie, 2008), it stands to reason that the level of emotional intelligence school leaders possess could contribute to their success in their position. Research sheds light on some practices of principals that correlate with increased student achievement. The link between effective principals and successful schools, in fact, is believed to be so strong that federal policy, beginning with the No Child Left Behind Act, encouraged that principals be replaced in schools repeatedly underperforming (Branch, Hanushek, & Rivikin, 2013). Following effective teachers, principals are largely seen as the second most value-added aspect of a school in regards to student achievement outcomes (Ahmad, 2017; Branch et al., 2013; Carbaugh, Marzano, & Toth, 2015; Marzano, Waters, & McNulty, 2005; Wallace Foundation, 2013; Waters, Marzano, & McNulty, 2003). The importance of the principal to a school’s effectiveness is even more important when considering

that, although principals may be impacting student achievement indirectly, they do directly impact teachers and policies that teachers follow governing curriculum and instruction practices which in turn have direct impacts on students (Carbaugh et al., 2015; Marzano et al., 2005; Wallace Foundation, 2013). With so much at stake for the principal, it is no surprise that a dearth of research exists on practices of principals that are the most effective in terms of student achievement outcomes (Cotton, 2003; Marzano et al., 2005; Seashore Louis & Leithwood, 2011; Wallace Foundation, 2013; Waters et al., 2003). And while this research and the identified practices are informative, Ahmad (2017) points out that most principals are aware of the importance of the role in the school and the research pertaining to which practices are most supported by empirical evidence to be effective in increasing student achievement. Principals are tasked with the challenge of mastering the managerial aspects associated with their role as the official of the school, but also must balance these responsibilities with strong instructional leadership to lead and develop teachers. Many principals find this a difficult balance to maintain (Goldring, Porter, Murphy, Elliot, & Cravens, 2007) which may explain why many principals report that despite know which practices are supported by research, they do not always know how to enact them effectively in their school (Ahmad, 2017). Carbaugh, Marzano and Toth (2015) reveal that most principals are assessed using framework that does not accurately reveal their daily behaviors and practices nor does the typical evaluation system of principals generate effective feedback to improve. Understanding what individual competencies or abilities within individual principals correlate to their engagement in practices known to increase student achievement may be useful in providing principals an avenue to increase their engagement in such behaviors through strengthening their competency in the abilities associated with the practice. Emotional intelligence, with its empirical evidence of correlation to leadership

practices, success in occupation, and positive relationships (Angelidis & Ibrahim, 2011; Côté et al., 2011; O'Boyle, et al., 2011; Yip & Côté, 2013) is a logical choice of abilities and competencies that may correlate to principal practices associated with increased student achievement. Thus, such research may reveal a correlation can be seen between emotional intelligence, as it operates through the practices, and student achievement.

### **Problem**

The state of education has changed dramatically over the past few decades as federal legislation and policy such as No Child Left Behind, Race to the Top, and Every Student Succeeds Act has tied higher stakes to student testing outcomes for teachers, school leaders, and schools in general. In Indiana, the implementation in 2012 of legislation known as Public Law 90 redefined the requirements for teacher evaluations and added a stipulation that student achievement must be tied to a teacher's rating (Danzig & Black, 2019). Such high stakes illustrate the need to better identify the characteristics and practices of school leaders who will be most effective in the role.

There is a wealth of research pertaining to practices and actions in which principals should engage to be effective in their role (Ahmad, 2017; Branch et al., 2013; Carbaugh et al., 2015; Marzano, et al., 2005; Wallace Foundation, 2013; Waters et al., 2003). However, as the Wallace Foundation (2013) points out, research has not always changed the day to day behaviors of principals as they execute their responsibilities. Many principals may know what practices they should be engaging in, however, they may not know how to effectively implement them (Wallace Foundation, 2013). Simply stated, the majority of principals are aware of research and practices that are empirically supported as important to their effectiveness in their role. The challenge seems to be in how to execute those activities and behaviors in the day-to-day

performance of their job (Ahmed et al., 2017). This calls for an understanding of underlying factors, then, that correlate to whether or not principals engage in these practices known to increase effectiveness. If there are factors that relate to abilities and competencies, such as emotional intelligence, in which the principal can increase their proficiency, they may be better able to execute the practices related to effective school governance. There is evidence that such a correlation may be found. Brackett et al. (2011) found that there is a correlation between the principal's level of emotional intelligence and factors sometimes used to measure a principal's effectiveness in their role such as teacher effectiveness and longevity and a teacher's level of job satisfaction. Branch et al., (2013) points out that the principal's interaction with staff is a key element in their role and thus, the impression and attitudes of teachers can be an effective measure for a principal's effectiveness. In relatively recent years, research has begun to examine the relationship between the principal's level of emotional intelligence and student achievement; while smaller in scale and qualitative, these studies show connections (Cliff, 2011; Poirel & Yvon, 2014). Taken as a whole, these pieces of evidence suggest that a principal's level of emotional intelligence may be correlated to effective practice. As these practices are known through empirical evidence to relate to increased student achievement outcomes, a compelling question arises as to whether emotional intelligence, operating through such practices, may be correlated to student achievement outcomes.

### **Purpose of the Study and Research Questions**

The purpose of this study was to understand if a principal's level of emotional intelligence has a relationship to leadership practices and, in turn, to student achievement. As such, the research question driving this study was does emotional intelligence in a principal operate through practices that relate to student achievement?

As such, this study was quantitative in nature and utilized data demographic information regarding the principal and school. Emotional Intelligence was measured utilizing the Wong and Law Emotional Intelligence Scale (WLEIS), which consisted of 16 items on a 5 point Likert scale and measured 4 dimensions of emotional intelligence. Practices of school principals was measured using a questionnaire comprised of items selected from Marzano, Waters, and McNulty (2005) used in their survey of school leadership practices. Though the questionnaire is copyrighted, it was adapted and used with permission from the McREL International (See Appendix A). Both the practice questionnaire as well as the emotional intelligence along with the particular methods employed in this study will be further discussed in Chapter 3. The sample in this study was sought to be representative of principals throughout the state of Indiana.

### **Significance of the Study**

This study sought to fill a gap in understanding in the field of education leadership. Much research shows school leadership has an association with student achievement (Ahmad, 2017; Carbaugh et al., 2015; Cotton, 2003; George, 2000; Hallinger et al., 1996; Jansen, et al., 2014; Marzano et al., 2005; Moore, 2009; Waters et al., 2003; Wallace Foundation, 2013). School leaders are under tremendous pressure to be effective in their roles as legislation and policy continues to tie student achievement to the perceived effectiveness of the principal (Carbaugh, et al., 2015; Clifford & Ross, 2012; Davis, Kearney, Sanders, Thomas, & Leon, 2011; Wallace Foundation 2013). As the principal plays such a key role in schools, there has been much research to identify which key behaviors and leadership practices have a stronger association with student achievement than others (Carbaugh et al., 2015; Cotton, 2003; Marzano et al., 2005; Waters et al., 2003; Wallace Foundation, 2013). Most principals are aware of the practices that are most empirically supported as effective, yet they report not always knowing

how to implement them (Ahmad, 2017) and do not always receive effective, actionable feedback to improve (Carbaugh et al., 2015). By identifying internal abilities that are associated with increased engagement of effective practices, principals have a means to increase their practice by building competence and proficiency in their ability. Emotional intelligence is a set of abilities, which, if associated with these practices, provides a path to principals to increase their effectiveness. Providing support for emotional intelligence as an ability logically associated with principal practices, there is research that shows a relationship between effective leadership practices and emotional intelligence levels (Cliffe, 2011; Gage & Smith, 2016; Van Houtte & Van Maela, 2011). But, the vast majority of this research between emotional intelligence and leadership has been done in other fields not directly related to education. As leadership practices are positively correlated with student achievement (Barling, Slater, & Kelloway, 2000; Follesdal & Hagtvet, 2013; Marzano et al., 2005; Mills, 2009; Waters et al., 2005), it stands to reason that by increasing their emotional intelligence, principals may also be able to increase student achievement. This study sought to contribute to the field of education leadership by providing data that showed a relationship between a principal's level of emotional intelligence and student achievement by establishing a relationship between the principal's emotional intelligence and effective practices associated with increased student outcomes.

### **Definition of Terms**

In this study, several terms from the fields of education and psychology are used, some in specific ways. Following is a list of terms that are key to this study.

**Emotional intelligence.** Emotional intelligence as defined in this study is as a set of mental abilities and follows the conceptual framework, rooted in social intelligence theory, that it is not a preferred behavior or personality trait. Following this conceptualization, emotional

intelligence consists of a person's ability to appraise their own and others' emotions, regulate emotions and use their emotions to achieve a goal. This clarification is important to understand as there are other definitions of emotional intelligence that are often referred to as trait models. The distinction is important here as the ability model is more scientifically viable and stands apart from other known aspects of personality (Caruso et al., 2015; Mayer & Salovey, 1997; Mayer et al., 2004; Mayer et al., 2008; Mayer & Salovey, 1997; Salovey et al., 2008). The term model denotes the multi-faceted nature of the ability definition of emotional intelligences that encompasses 4 distinct dimensions or domains, (Mayers, Salovey, Caruso, & Sitarenios, 2003; Law, Wong, & Song, 2004).

**Wong and Law Emotional Intelligence Scale (WLEIS).** The WLEIS, in accordance with the definition of the scale's authors, is an ability-based, self-report measure of emotional intelligence following the definition of the scale's authors (Law et al., 2004; Wong et al., 2002). The WLEIS has 16 items with 4 items in each of 4 subsets (See Appendix B for full listing of items). The 4 subsets are the self-emotion appraisal dimension (SEA) which measures one's ability to understand and express their own emotion, the others' emotion appraisal dimension (OEA) which measures one's ability to perceive and understand the emotions of others, the use of emotions dimension (UE) which measures an individual's ability to use their emotions effectively to achieve a goal, and the regulation of emotions dimension (RE) which measures the individual's ability to manage their own emotions. All items are measured through a self-report 5-point Likert scale.

**Big Five Personality Traits.** The Big Five refers to what may be the most common model of personality traits encompassing 5 traits: (I) extraversion, (II) agreeableness, (III) conscientiousness, (IV) emotional stability, and (V) intellect/imagination (Goldberg, 2001).

**Ability.** In this study, an ability refers to a set skill in which an individual's capacity can be increased through study, practice, and coaching.

**Trait.** As used here, a trait refers to an innate attribute or disposition of an individual.

**Personality.** In this context, personality refers to the combined traits and dispositions of an individual.

The following chapter will provide an explanation of the background context of emotional intelligence, conceptualization of the 4 domains, and a review of the current research available on emotional intelligence as it is related to leadership and principals. There will also be a discussion of the research supporting a positive correlation between school leadership and student achievements and what key practices have emerged as being the most strongly correlated with increased achievement. This chapter will provide a foundation from which this study builds and an understanding of where this study fits in the field of educational leadership. Following the literature review in Chapter 2, Chapter 3 will include an explanation of the methods and the rationale behind the choices of measurement tools utilized to conduct the original research in this study.

## CHAPTER 2

### REVIEW OF THE LITERATURE

The purpose of this review of literature is to address the most current research related to emotional intelligence and its role in the principalship, as well as to discuss findings related to leadership practice of the principal that are known to have a positive association with student achievement, and to provide a context for this study. In order to understand the current literature on emotional intelligence and how it relates to school leadership and principals, it is first necessary to understand the history and evolution of emotional intelligence research. Following the background of emotional intelligence the subsequent sections of this chapter will outline the most current research findings related to education and the role of the principal.

#### Background

The foundation for emotional intelligence comes from the evolving understanding of intelligence in general. Commonly, intelligence is thought of as one's ability to learn and reason (Goleman, 1995; Kihlstrom & Cantor, 2011). However, the concept of intelligence has long been associated with a far greater complexity of understanding. As early as 1920, E.L. Thorndike proposed intelligence as having 3 distinct facets: abstract intelligence, or one's ability to understand extrapolate ideas; mechanical intelligence, or that associated with solid objects; and social intelligence, or one's ability to understand and manage relationships and interactions with others.

The idea of multiple modalities of intelligence was further fleshed out by Howard Gardner (1978). Gardner proposed a more holistic view that takes into account multiple modalities that represent various areas of intelligence. Gardner's theory accounts for an individual who may be highly musically intelligent, but less intelligent in matters of bodily

kinetics, for example. To Gardner, the number of modalities of intelligences was unquantifiable. The range of human intelligences is too great to expect a master list to be possible (Gardner, 1978). However, he did propose criteria that an ability must meet to be considered an intelligence. First, the ability had to encompass a set of skills that could be put to use to solve genuine problems one might encounter. The ability had to allow for one to acquire new knowledge over time. And finally, for the ability to qualify as an intelligence it must stand apart from other human processes. For example, whether it could be isolated and impacted by brain damage or exceptional individuals would be indicative of an intelligence that stands apart from other intelligences. (Gardner, 1978). In his 1978, *Frames of Mind*, Gardner identifies 2 personal intelligences that he classifies as intrapersonal (one's intelligence of themselves and knowledge of their own feelings) and interpersonal (one's knowledge and perception of others' emotions).

Following the publication of theories from Gardner, other researchers began proposing additional intelligences. Early on, the concept of emotional intelligence emerged as related to, but distinct from, Gardner's concept of personal intelligence (Salovey & Mayer, 1990). Defined as a subset to personal and/or social intelligence, emotional intelligence encompasses one's ability to perceive his or her emotions and the emotions of others and to utilize these perceptions to guide their actions and thinking (Mayer & Salovey, 1993; Salovey & Mayer, 1990). Controversy followed swiftly as to whether emotional competence should be considered a type of intelligence or if it was a mere trait or behavioral skill (Mayer & Salovey, 1993; Scarr, 1989). Then journalist Daniel Goleman took the ideas mainstream in his *New York Times* bestselling book, *Emotional Intelligence: Why It Can Matter More Than IQ* (1995). The public's interest was further peaked when the concept took the cover of *Time Magazine* in 1995 with Gibbs asking, "What's your EQ?" However, this journalistic attention was not overly welcomed

by the scientific community as the definitions and concepts were distorted and misunderstood (Mayer, 1999; Mayer & Cobb, 2000; Mayer et al., 2008; Mayer et al., 2011).

### **Schism in the Field of Emotional Intelligence**

What emerged following this attention from society at large as well as ongoing research in scientific community were 2 directions in which emotional intelligence diverged. On the one hand, emotional intelligence became a phrase that encompassed an array of traits, personality aspects, motivations, and dispositions (Bar-On, 2004; Day & Carroll, 2008; Goleman, 1995; Goleman, 1996; Ng, Wang, Zalaquett, & Bodenborn, 2008; Petrides & Furnham, 2000; van der Linden et al., 2017). This approach often includes concepts such as self-control, empathy, and optimism as measures of emotional intelligence (Gibbs, 1995; Goleman, 1995; Goleman, 1996; Goleman, 1998). In this way, emotional intelligence is analyzed as more of a disposition or trait contributing to one's overall personality (Ng et al., 2008). While research supports that these factors may indeed correlate and predict success, these factors are often overlapping with aspects of personality (Brackett et al., 2006; Caruso et al., 2015; Mayer et al., 2008; Mayer et al., 2011; Ziedner et al., 2008). Due to the nature of this approach that encompasses some aspects that represent emotional management ability and some aspects that are more traditionally considered personality aspects, it has been referred to as not only a trait measure of emotional intelligence, but also sometimes as a mixed models approach (Brackett et al., 2006; Caruso et al., 2015; Mayer et al., 2008; Mayer et al., 2011; Ziedner et al., 2008). Researchers prescribing to this alternative way of defining emotional intelligence developed scales and tools, some of which are widely used such as The Bar-On Emotion Quotient Inventory (Bar-On, 1999; Mayer et al., 2000, Law et al., 2004). This scale, for example, includes not only emotional intelligence scales, but also, as Mayer et al. (2000) state, non-ability dispositions and traits as well as personal and social

functioning measures. Scales in this model are typically self-report measures. These definitions of emotional intelligence were criticized as muddled and confusing. Davies, Stankov, and Roberts (1998) concluded that emotional intelligence was elusive when they loaded responses from the typical trait-base self-report scales on the same factors as the Big Five personality traits. The Big Five refers to what may be the most common model of personality traits encompassing 5 traits: (I) extraversion, (II) agreeableness, (III) conscientiousness, (IV) emotional stability, and (V) intellect/imagination (Goldberg, 2001).

On the other hand, emotional intelligence has been studied through an ability model. This conceptualization originated in the work of Mayer and Salovey in 1990, but was further fleshed out and defined as a traditional ability in their 1993 and 1997 work as well as the work of Davies et al. in 1998. The theory has been repeatedly refined throughout the following years to better fit a psychometric intelligence structure that is supported by valid and reliable measures (Barchard et al., 2016; Mayer & Salovey, 1993; Mayer & Salovey, 1997; Mayer et al., 2004; Petrides & Furnham, 2000; Salovey & Mayer, 1990; Salovey et al., 2008). The theoretical framework encompassing the theory was revisited by the original authors in 2016 at the 25-year anniversary of the original publication and updated to reflect this work (Mayer et al., 2016).

Studied as an ability, the concept of emotional intelligence stands apart from other aspects of psychology and personality study and constitutes a design that fits a standard intelligence model (Caruso et al., 2015; Mayer & Salovey, 1997; Mayer et al., 2004, Mayer et al., 2008; Mayer & Salovey, 1997; Salovey et al., 2008). Proponents of the ability model of emotional intelligence argue that it is a cognitive ability and thus, related to other intelligences. A 2004 meta-analysis was conducted to study how emotional intelligence was correlated to General Mental Abilities (Van Rooy & Viswesvaran, 2004). The meta-analysis used emotional

intelligence measured through the Multifactor Emotional Intelligence Scale (MEIS), an early iteration of Mayer and Salovey that follows the ability model, and several measures of emotional intelligence that follow the trait model including the Trait Meta-Mood Scale (TMMS), Emotional Intelligence Sale (EIS), Emotional Quotient Inventory (EQ-i), and Emotional Competence Inventory (ECI). They found a validity of .33 ( $SD=.09$ ) between the MEIS, an ability-based measure, and General Mental Ability (GMA), whereas the validity was only .09 ( $SD=.10$ ) for the trait based measures (Van Rooy & Viswesvaran, 2004). This suggests that the ability-based scale is more valid as a construct separate from GMA. Further, proponents of this definition of emotional intelligence, state that in addition to this moderate correlation criterion with other general intelligence abilities (not too much, not too little), emotional intelligence can also be positively correlated with age, and is distinct from other Big-Five personality dimensions. They argue, by meeting these 3 benchmark, that emotional intelligence qualifies as an intelligence facet and is an ability measure (Mayer et al., 2000; Law et al., 2004; Wong et al., 2002).

This approach to emotional intelligence as an ability represents an evolved definition of emotional intelligence as a person's ability to understand and process one's own emotions and those of others and to reason based on those perceptions to guide thinking and behavior (Brackett & Salovey, 2006; Mayer et al., 2008; Salovey et al., 2008). This model also fits a Gardner's view of intelligence in that one's capacity can be increased through skill enhancement, coaching, and teaching. A key aspect of the ability model of emotional intelligence is the conceptualization that it is a cognitive ability and as such, that is able to meet the criterion of an intelligence:

- a) standing apart from other mental processes,

- b) new knowledge in the area can be acquired over time, and
- c) that the ability encompasses a set of skills that can be put to use to solve a problem.

The most notable evolution in the ability model of emotional intelligence was the emergence of a four-branch model first introduced by Mayer and Salovey (Caruso et al., 2015; Mayer & Salovey 1997; Mayer et al., 2004; Mayer et al., 2008; Mayer et al., 2011; Salovey et al., 2008). This integrated model represents 4 categories that encompass distinct skills. These categories are:

- a) perceiving emotions, the ability to perceive emotions of one's self and others accurately;
- b) facilitating thought, the ability to incorporate emotions into thinking;
- c) understanding emotions, the ability to understand communication cues in language and signals; and
- d) managing emotions, the ability to manage emotions toward achievement of a specific resolution (Brackett & Salovey, 2006; Mayer et al., 2004; Mayer et al., 2008; Mayer et al., 2011). These 4 categories represent distinct areas of ability that relate to individual's understanding and management of emotions. The first category, the ability to perceive emotions, refers to an individual's ability to interpret emotions through facial expressions and body language, voice and tone, as well as in pictures. The second category, the ability to incorporate emotions into thinking, relates to the individual's ability to utilize self-talk and thinking to manage their own emotions and responses. The third category of understanding communication cues in language speaks to the individual's ability to understand slight nuances between emotions and to be perceptive to the emotional language and the complex relationships between emotions. The final category is the individual's ability to manage emotions toward the

achievement of a specific end. This category speaks to managing not just our own emotions, but the emotions of others through speech, tone, and expression (Salovey & Grewal, 2005).

Davies, Stankov, and Roberts (1998), utilizing the definition proposed by Mayer and Salovey, also designated 4 branches that are similar to those defined by Mayer and Salovey. The comparison is outlined in Figure 1 below. The Davies et al. (1998) model was later utilized by Wong, Law, and Song (2004) in their development of the WLEIS which will be further discussed subsequently. As the definitions in Figure 1 illustrate, the Davies et al. (1998) domains are almost identical to the WLEIS domains. These constructs are very similar to that of Mayer and Salovey (1994) however, 2 categories are slightly different. Davies et al. (1998) and the WLEIS break Mayer and Salovey’s *perceiving emotions* branch into 2 domains (*appraising one’s own emotions* and *appraising the emotions of others*). The Mayer and Salovey branch of *understanding emotions* is encompassed in both of these appraisal categories as the emotion related to one’s self or others. The remaining 2 dimensions in each construct are nearly identical (*use of emotions* represents the same skills as *facilitating thought* and *regulations of emotions* is synonymous across all 3 constructs).

Figure 1  
*Comparing Categories in Theories of the 4 Domains of Emotional Intelligence*

<b>Mayer &amp; Salovey (1994) 4 Branch Model of Emotional Intelligence</b>	<b>Davies, Stankov, &amp; Roberts (1998) Domains of Emotional Intelligence</b>	<b>Wong, Law, &amp; Song (2004) Domains of Emotional Intelligence</b>
<b>Perceiving Emotions</b> The ability to perceive emotions in oneself and others.	<b>Appraisal &amp; Expression of Emotions in Self</b> This area pertains to being aware of both one’s emotions and thoughts that concern mood.	<b>Self-emotion Appraisal</b> The ability to accurately assess one’s thoughts and feelings to understand their current emotional state and be aware of changes in their mood.

<p><b>Facilitating Thought</b> The ability to use emotions to facilitate problem solving, communicate feelings, and direct tone and mood.</p>	<p><b>Use of Emotion to Facilitate Performance</b> This involves an individual's ability to use their emotions in order to achieve a goal through self-motivation, selective attention, delayed gratification, etc.</p>	<p><b>Use of Emotion</b> The ability to utilize one's emotions to solve problems, achieve goals, and improve performance toward an object.</p>
<p><b>Understanding Emotions</b> The ability to understand how different emotions may transition or be interrelated and to interpret complex feelings and changes in emotional states.</p>	<p><b>Appraisal &amp; Recognition of Emotions in Others</b> This aspects concerns one's ability to assess the emotions of others through verbal and facial expression, and body language.</p>	<p><b>Other's Emotional Appraisal</b> The ability to perceive and understand the emotions of others and appraise the differences in emotions and behaviors of others.</p>
<p><b>Regulation of Emotions</b> The ability to manage emotions in oneself and others through monitoring and reflecting.</p>	<p><b>Regulation of emotions</b> This involves one's ability to evaluate their own mood and act to change their mood intentionally.</p>	<p><b>Regulation of emotions</b> The ability to regulate one's emotion through monitoring, evaluating, and acting to change one's mood.</p>

### Analyzing Emotional Intelligence

Just as the definitions and theories related to emotional intelligence have diverged in multiple paths, so, too, have the tools used to measure it. As research has evolved over the last several decades related to the study of emotional intelligence, 3 types of measurement scales have emerged (Miao, Humphrey, & Qian, 2017; Pacheco, Rey, & Sanchez-Alvarez, 2017). The first type are self-report measures of such measures as Emotional Intelligence Sale (EIS), Emotional Quotient Inventory (EQ-i), and Emotional Competence Inventory (ECI) (Van Rooy & Viswesvaran, 2004) in which participants rate themselves on a wide array of items that include dispositional behaviors, social skills, traits, and self-perceptions. The second type in which participants respond to performance or tasked based items measure the responses against expert identified correct responses. Measures such as the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT) fit this category. The MSCEIT contains over 100 items and takes

approximately 45 minutes to complete. Results then require proprietary scoring by an expert. The third category of involved self-report measures that involved items that are consistent with the ability model definition and 4 domain construct such was the Rotterdam Emotional Intelligence Scale (REIS) and the Wong and Law Emotional Intelligence Scale (WLEIS).

The WLEIS (Wong & Law, 2002; Wan Sulaiman, & Mohd Noor, 2015) is a widely used measure of emotional intelligence that is based upon the four-branch definition of the ability model presented by Mayer, Salovey, and Caruso (Mayer et al., 2016) and also Davies, Stankov, and Roberts (1998). This is a unique tool because, while self-report scales are typically associated with a definition of emotional intelligence that is more of a trait model, the authors of the WLEIS explicitly state this self-report scale was designed to adhere to the 4 branch ability model. Law, Wong, and Song (2004) describe the conceptualization of their measure as being based upon the four-branch approach as important because it was “empirically distinct from the Big-Five personality dimensions,” (Law et al., 2004, p. 484). They admit, “Traditionally, abilities are measured by tests as opposed to self-report measures,” (Law et al., 2004, p. 495). However, they go on to say that emotional intelligence, because it can be positively correlated with age, meets moderate correlation criterion with other general intelligence abilities (not too much, not too little), and because it is distinct from other Big Five personality dimensions, that emotional intelligence qualifies as an intelligence facet and is an ability measure and that their scale, the WLEIS, captured a construct distinct from the Big Five and with validity and reliability (Law et al., 2004). Regardless, there is some debate about whether the WLEIS falls into the category of an ability measure of emotional intelligence. Because it is self-report tool, some consider it a trait measure (Li et al., 2012; Ng et al., 2008).

The WLEIS consists of 16 items, and thus takes less time to administer than some other measures, but still measures within the 4 dimensions of emotional intelligence categorized as self-emotional appraisal, others' emotional appraisal, regulation of emotion, and use of emotion (defined in Figure 1 above). The scale measures respondents on a standard Likert scale with 4 questions representing each of the 4 domains. More information on the measure and sample items is included in Chapter 3.

In the 25 years of research since emotional intelligence findings emerged, substantial evidence has emerged to show that it is a predictor of outcomes in various areas including relationships, health, and occupational success (Barchard et al., 2016; Mayer et al., 2016). The following section will outline research that has correlated emotional intelligence to various pertinent aspects in education and leadership.

### **Emotional Intelligence and Leadership**

Emotions can act as a contagion spreading among group members (Vijayalakshmi & Bhattacharyya, 2012). It stands to reason then, that a leader's ability to recognize and properly interpret the moods of the group would be beneficial in addressing negativity before it spreads and erodes the climate and culture of an organization. Emotional intelligence is correlated with ethical decision making, pro-social behavior and limits anxiety associated with risk-taking behavior (Angelidis & Ibrahim, 2011; Côté et al., 2011; Yip & Côté, 2013). Further, it has been established that there is a positive correlation between general job performance and emotional intelligence (Côté & Miner, 2006; O'Boyle et al., 2011). And while there is, as yet, not clear research showing so, it may very well be that the correlation is even stronger in jobs where interpersonal communication is highly demanded, such as in teaching and managerial and leadership roles, among others (O'Boyle et al., 2011).

Emotional intelligence has been widely confirmed to point to favorable leadership in a variety of fields and also in recognizing leadership emergence (Jansen et al., 2014; Momm et al., 2015; Walter et al., 2011). Further, in a study of nurse managers emotional intelligence was positively correlated with leadership (Spano-Szekely et al., 2016). In groups where the leader had high emotional intelligence, researchers have found the group cohesiveness is greater (Yung-Shui & Tung-Chun, 2009).

Additionally, limited research points to a correlations between emotional intelligence and school leadership (Cliffe, 2011; Moore, 2009). Specifically, there is empirical evidence that a principal's ability to recognize emotions, has a positive relationship with leadership behaviors (Berkovich & Eyal, 2017).

### **Emotional Intelligence in Other Fields**

Emotional Intelligence has been widely studied in the field of nursing. As previously cited, in studying nurse managers, emotional intelligence has been positively correlated with transformational leadership, a style that has widely been lauded as effective across multiple fields (Spano-Szekely et al., 2016; Yung-Shui & Tung-Chun, 2009). Emotional intelligence has also been associated with other benefits in the field of nursing and nurse management including in their ability to form meaningful and authentic relationships with both patients and team members, effective clinical decision making, and motivating team members (Bulmer Smith, Profetto-McGrath, & Cummings, 2009; O'Boyle et al., 2011).

Further, O'Boyle et al. (2011) find that emotional intelligence transcends effective patient care and found a significant correlation between leaders with high levels of emotional intelligence and job satisfaction of employees as well as high job performance. These findings

are echoed by Jordan, Ashkanasy, Hartel, and Hooper (2002) who found that aspects of emotional intelligence are positively correlated with performance in the workplace.

These findings are important when taken in the context of the work of Acosta-Pradio and Zarate Torres (2017) who claim that 65-75% of employees believe that the worst aspect of their job is their immediate supervisor. They cite reasoning given as the supervisor's coldness, arrogance, and poor interpersonal skills. Acosta-Pradio and Zarate Torres (2017) found that employees across fields in business rank managers more favorably when they score higher on the Wong Law Scale of Emotional Intelligence. While the samples in the previously mentioned studies are specific of private sector business, it is interesting to reflect on when considering the high rate of teacher turnover in the United States. In a study of Texan schools, Jellison Holme et al., (2018) found that 60% of schools experienced at least one year of high turnover and 4.4% of schools lost 30% or more of their teaching staff each year over a 7 year period. While there are undoubtedly many factors contributing to teacher turnover rate, the degree to which their immediate supervisors impact their day to day working is an interesting consideration. Grissom (2011) found that principal effectiveness was related to a teacher's overall rating of satisfaction and negatively correlated with their likelihood of leaving their current school within the year. While this study does not involve teachers and cannot inform the policy related to retention, understanding the relationship between a school leader's level of emotional intelligence and their engagement of practices known to increase student achievement may provide a lens through which to further examine how a principal may be measured as effective.

### **Significance of Emotional Intelligence to the Field of Education**

Much evidence shows teachers as having the greatest impact on student achievement in the classroom (Allen et al., 2011; Boonen et al., 2013; Konstantopoulos & Chung, 2011; Mincu,

2015). After the teacher, it is well established that the second greatest impact on student achievement in schools is the school leader (Brown III, 2016; Day et al., 2016; Hitt & Tucker, 2016; Ham et al., 2015; Leithwood, et al., 2004; Leithwood & Jantzi, 2008; Lazaridou & Jordanides, 2011; Mincu, 2015; Shaw & Newton, 2014). This is due, in part, to the principal's role in fostering teacher commitment, morale, and stress levels (Cherkowski, 2012; Lambersky, 2016). A leader's ability to build trust, establish a shared vision, and maintain a culture in which teachers and students thrive is directly related to the teachers' happiness and longevity as well as their ability to be effective (Lambersky, 2016; Mincu, 2015). Perceived characteristics of a leader are often correlated with effectiveness of organizations outside the field of education (Cliffe, 2011; Gage & Smith, 2016; Van Houtte & Van Maela, 2011). However, as Stewart (2006) notes, it is vital to support any theories of effective school leadership with empirical studies of student outcomes. The rationale behind this belief is that leadership in a school setting is different than leadership in other fields. In other fields, it is enough to lead those in one's charge effectively. However, in a school setting effective leadership not only means leading the adults, it also means leading students. Effective leadership in a school must not only produce positive results in regard to staff and teachers, but also among student outcomes as those are the essential goal of effective school leaders. This study sought to identify a correlation between a school principal's level of emotional intelligence and student achievement outcomes in order to further understand the importance of continued study of emotional intelligence in relation to effective school leadership. In part, this was precipitated by research of emotional intelligence's impact on other aspects of education. In the following section, emotional intelligence will be explored in relation to curriculum, teachers, and the limited research into how it relates to principals.

### **Emotional Intelligence and Education**

There are a variety of avenues through which emotional intelligence in schools has been explored ranging from how it is incorporated in curriculum to build the emotional intelligence ability of students, the role of a teacher's emotional intelligence on classroom outcomes, and the role of the school leader's emotional intelligence. In this section, the focus will specifically be on emotional intelligence in principals and school leaders.

**Emotional intelligence in principals.** Poirel and Yvon (2014) qualitatively studied 6 principals and how their emotional responses related to their leadership decisions. Interestingly, in all 6 principals, compromises were often the principal's decision, even when the principal felt strongly opposed to the compromise. The reasoning for this is that the principals are tasked with maintaining or improving school climate and thinking of the school as a whole. When asked about the aspects of personality or traits that make their principal effective, teachers repeatedly point to characteristics of the emotional intelligence ability model (Brinia et al., 2014; Brown III, 2016; Shaw & Newton, 2016; Yip & Côté, 2012). Indeed, emotional intelligence is a key component to effective leadership (Cliffe, 2011; George, 2000; Gage & Smith, 2016; Jansen, et al., 2014; Moore, 2009).

When studied explicitly, principals and vice principals who were rated as having higher levels of emotional intelligence ability were also rated as more effective or above average in their leadership abilities (Stone et al., 2005; Williams, 2008). Having high levels of the aspects of emotional intelligence ability enables school leaders to deal effectively with situations (Cliffe, 2011; Moore, 2009). Further, in studies examining the reasons teachers leave schools, and leave education, working conditions top the list – including aspects of leadership, school cohesiveness,

and school culture (Simon & Johnson, 2013). These components can all be related to typical practices of principals in their effectiveness in school management.

A school leader is different than the leader of other organizations, though. While school leaders are tasked with the successful guidance and leadership of a staff of adults in an organization like leaders in other fields, school leaders must also be successful with their interactions with students in order to be considered effective in their position (Marzano et al., 2005). As discussed in a previous section, aspects of emotional intelligence are seen to be important indicators of student academic success as well as health and well-being (Hagelskamp et al., 2013; Joseph, 2015). Therefore, these social-emotional aspects are taught explicitly and implemented into curricular and extra-curricular aspects of schools (Brackett et al., 2012; Hagelskamp et al., 2013; Joseph, 2015; Rivers et al., 2012). A key component to their success is the support such initiatives have from the school leaders and the fidelity with which the program is utilized throughout the school (Hagelskamp et al., 2013; Joseph, 2015). As such, it is reasonable to imagine that principals who are participants and leaders in the training and implementation of such programs would be building their own emotional intelligence ability and cultivating its use through the modeling of techniques for students.

### **Criticism of Emotional Intelligence**

There is some controversy surrounding the concept of emotional intelligence and its usefulness as a predictor of educational or occupational success. Much of this conflict seems to come from the history of emotional intelligence and the divergent meanings employed by various camps of researchers. For instance, Landy (2005) argued that having multiple means of measuring emotional intelligence that do not agree on terms and concepts makes it impossible to rely on empirical research in the field. Further, Landy (2005) also suggested that ongoing work

by the camps to improve and keep proprietary rights over measurement tools such as Bar-on, EQ-I, and MSCEIT have prevented replication studies. Others have argued that there are issues with emotional intelligence research because measures of emotional intelligence can be faked, especially if using self-response measures (Day & Carroll, 2008). There is still further critique of emotional intelligence that suggests that measures of emotional intelligence may be culturally biased (Xie et al., 2006). As Wong et al. (2004) describe it is possible that performance and task based measures which report correct or incorrect responses could exhibit social and cultural bias in what is a socially desirable choice. This is especially true when the measures are norm-referenced or scored by experts only representing one cultural group (Wong et al., 2004; XIE et al., 2006). Other theorists have argued that there is no need to study emotional intelligence in leadership because a combination of intelligence quotient and personality inventory would provide the same information (Antonakis, Ashkanasy, & Dasborough, 2009). In other words, a good leader is determined solely on the conditions of how intelligent one is and if one has the appropriate personality characteristics (Antonakis, Ashkanasy, & Dasborough, 2009). In this study, the use of the Wong Law Emotional Intelligence Scale was chosen, in part, because of it was shown to be empirically distinct from the Big-Five personality dimensions (Law et al., 2004; Wong et al., 2002).

As the theory of emotional intelligence stems from Gardner's theory of Multiple Intelligence (1993), it is also important to note that this theory is not without controversy. Critics, such as Waterhouse (2006), argue that Gardner has not provided any validating research or evidence to support the theory of Multiple Intelligence and that claims to the contrary sidestep neuroscience findings for cognitive systems. As such, critics argue that multiple intelligence

theory should not be used in education, and therefore, emotional intelligence, having stemmed from the original multiple intelligence theory, would also not be worthwhile.

In this study, I focused exclusively on emotional intelligence as an ability based upon not only the distinction of emotional intelligence from other personality aspects (Caruso et al., 2015; Mayer & Salovey, 1997; Mayer et al., 2004; Mayer et al., 2008, Mayer & Salovey, 1997; Salovey et al., 2008), but also based on the validity of measurement instruments associated with this definition, specifically the WLEIS (Law et al., 2004; Law, Wong, Huang, 2008; Libbrecht et al., 2010; Shi & Wang, 2007; Wong & Law, 2002) Though some argue that that the WLEIS is a trait measure based on it being a self-report scale, Wong and Law state that it was conceptualized through the ability model and meets the definition therein (Law et al., 2004; Wong et al., 2002). The validity and reliability of this measure will be discussed in further detail in the next chapter.

### **Emotional Intelligence Through Principal Leadership Practices**

While not explicitly citing emotional intelligence, the Marzano, Waters, and McNulty (2005) meta-analysis of successful school leadership behaviors contain many aspects that relate to emotional intelligence ability including communication, demonstrated awareness of personal aspects of the staff, ability to increase high quality interactions with both staff and students, fostering shared vision, and others. Some specific attributes related to the Marzano, Waters, and McNulty (2005) meta-analysis directly correlate to results of emotional intelligence measurement tools such as the Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT). For instance, Marzano et al., (2005) identify fostering a shared vision as an aspect of successful school leadership, and respondents who score higher on the MSCEIT were found to exhibit better vision formation and articulation (Brackett & Salovey, 2006). In understanding that leadership in a school has different attributes than leadership in another field, it is critical to

understand that many factors influence student achievement – a typical ultimate measure of a school leader’s success. In this study, I studied principal leadership practices in relation to a principal’s emotional intelligence to further understand the characteristics of principals that may play a role in increasing student achievement. The subsequent section will discuss the research supporting the practices that were selected for inclusion.

### **Principal Leadership Practices Related to Student Achievement**

In the quest to find the attributes and practices of a principal that positively correlate with effective schools, typically defined as those with high student achievement, much research has been conducted. Empirical evidence shows that student achievement can be impacted by factors ranging from those personally related to the student such as their resiliency, stability of their home life, social and emotional measures as well as the effectiveness of the teacher and quality of the instructional strategies (Bernard, 2004, Cornelius-White & Harbaugh, 2010; Hattie 2008; Marzano, Pickering & Pollak, 2001; Waters et al., 2003). However, despite all of the different factors shown to correlate with student achievement, in the field of education, increasing focus is being paid to school leadership as a means to improve student achievement. Seashore Louis and Leithwood (2010) found that quality teachers stood above all other factors perceived to be priorities for school reform, however, principal leadership came next. However, these 2 factors, quality teachers and principal leadership, may be related. As Sutchter, Darling-Hammond, and Carver-Thomas (2019) point out, schools across the country are facing major teacher shortages and challenges in staffing schools with high quality teachers. A recent study found that the workplace condition that was most predictive of whether or not a teacher would leave a school was a perceived lack of administrative support, which was defined as the administrator’s ability

to communicate a clear vision, encourage and acknowledge staff and generally run a school well (Carver-Thomas & Darling-Hammond, 2019).

The Wallace Foundation (2013) offers a rationale for why the role of the principal is empirically linked to student achievement (Seashore Louis et al., 2010). The foundation argues that when taken separately, many school variables have small correlations with student achievement, however when taken together, the impact is greater. Branch, Hanushek, and Rivkin (2013) found that high effective principals could raise student achievement of a typical student in their school by between 2 and 7 months in a school year, whereas an ineffective principal would reduce achievement by the same measure. Creating an environment in schools where a clear vision exists, high standards are maintained, data drive instruction, best practices in pedagogy and instructional practices are utilized, as well as numerous other empirically supported practices all falls to the principal (Wallace Foundation, 2013). As early as a 1977 U.S. Senate Committee Report on Equal Educational Opportunities (U.S. Congress, 1970) the principal was identified as the single most influential individual in a school for their responsibility in setting the tone, climate, and level of professionalism and degree of concern for students. Given the extensive responsibilities of the principal, it is no surprise that there has been active research for decades to ascertain what practices principals should engage in to be most effective (Cotton, 2003; Hallinger & Heck, 1996; Hattie, 2008, Hill & Guthrie, 1999; Marazano et al., 2005; Waters et al., 2003). However, as Elmore (2000) points out, reading the literature available concerning an effective principalship is overwhelming because it seems to suggest that principals must possess all of the skills and traits and engage in every practice to remedy all of the areas in need of reform in their school. This may help to explain why Ahmad (2017) found that despite being

able to understand what the research says about being an effective school leader, many principals may not know how go about engaging in those practices.

With so much research available, a synthesis of the available research is necessary to draw conclusions about where the greatest impacts to student achievement can be made for the principal. Cotton (2003) conducted such a synthesis through a narrative review of 81 studies pertaining to practices and responsibilities associated with principals. Through her review, she was able to establish 25 categories of practices and behaviors that were most influential to student achievement. Waters, Marzano, and McNulty (2003) produced a meta-analysis of 30 years of research related to practices and behaviors of principals in the seminal McREL study. Their study found that there was a statistically significant relationship between leadership and student achievement. What's more, in their continued work, Marzano, Waters, and McNulty (2005) published a book detailing the key responsibilities and practices that had the strongest correlations with student achievement. In total, they identified 21 key responsibilities or principal practices. These 21 items are not personality characteristics, but rather behaviors or actions that a principal enacts (Marzano et al., 2005). The average correlation of each practice to increased student achievement was  $r=.25$ . With this in mind, I chose the 5 that had a correlation greater than  $r=.25$  to include as principal practices in this study to measure for correlation with emotional intelligence and ultimately facilitate an understanding of how emotional intelligence may relate to student achievement.

Many of the elements encompassed in the Marzano and Water's practices appear in other studies of aspects of effective leadership, including in Cotton's (2003) identification of 25 responsibilities (Marzano, et al., 2005). The 5 elements they identified at the top of this list include a principal's ability to shield and protect teachers from outside distractions in order to

keep the focus on instruction (discipline), the principal's ability to adapt leadership techniques to fit a situations (flexibility), the degree to which the leader monitors the effectiveness of the school and provides feedback (monitor/evaluation), the extent to which the leaders is an advocate and spokesperson for the school (outreach), and the extent to which the leaders is aware of details and undercurrents in the school and how they use this information to solve and ward-off potential problems (situational awareness). To understand these 5 key practices more thoroughly, each will be discussed in the following sections. Further information on each key practice, including the average correlation of each to student achievement, will be discussed in the Chapter 3.

### **Discipline**

Marzano et al. (2005) define discipline as the leader protecting teachers from distractions to their teaching, whether that be issues outside the classroom, systems that infringe on instructional time, or procedures that take away from time on task in the classroom. They give examples that include instituting policies prohibiting announcements during instructional time and handling local media issues in ways that do not involve individual teachers. Elmore (2000), refers to this practice as buffering, meaning that the principal is buffering the teacher from unnecessary distractions. Effective school administrators, Elmore (2000) argues are not managing the actual instruction but the management of the processes and structures around instruction. Interestingly, Elmore gives 2 reasons why this is an effective leadership practice: 1) it allows teachers the ability to focus on instruction and teaching, and 2) it gives the impression to those outside of the school of a well-run facility in which the community can be confident. The latter portion is further encompassed in the practice referred to as Outreach, discussed in a subsequent section.

The practice of discipline is associated with Instructional Leadership as it related to time and importance place on the teacher's instruction. Heck (1992) included the principal's actions minimizing interruptions to instructional time as a component to evaluate a principal's level of instructional leadership implemented. Several researchers have found a school schedule planned around key instructional needs to be a component of an effective school (Cotton, 2003; Evans & Teddlie, 1995; Johnson & Asera, 1999) and many include the concept of sacred instructional time, or instructional time that is free from interruptions and preserved whenever possible, as part of instructional leadership (Fullan, 2003; Leithwood & Jantzi, 2000). This practice, as well as practices to be discussed in subsequent sections, are also reflected in the principles of leadership that were developed by The National Policy Board for Educational Administration, a consortium of 9 other councils and organization representing education leadership organizations, principal associations, school board associations, state school officers, and others. Their Professional Standards for Educational Leaders (2015) (the latest iteration of standards formerly known as the ISLLC Standards) were developed as an anchor and guiding framework by which to measure the expectation and effectiveness of principals. The standards were also utilized in creating guiding standards for principal preparation known as the National Educational Leadership Preparation Standards (NELP; formerly the Education Leadership Constituent Council Standards, NPBEA, 2015). The standards were developed through a study of empirical research concerning best practices as well as surveys and focus groups with practitioners (NPBEA, 2015).

The National Policy Board for Educational Administration (2015) explicitly lists protecting teachers' and staff members' work from disruptions to learning as a standard of effective leadership. They also prescribe the management of internal and external politics and

conflicts in ways consistent with a school's vision and mission as a standard of effective leadership. While not as explicit, it stands to reason that most schools have a vision or mission that relates to student learning and achievement and that the management of conflicts and political issues by the principal would be best handled in way that would not distract or dispute instruction and learning for students. Heck (1992) also included this aspect of the discipline practice in his rating scale of instructional leadership with an item measuring how well the principal protected the faculty from outside pressures.

### **Flexibility**

In the Marzano et al. (2005) definition, flexibility refers to the principal's ability to adapt leadership techniques and behaviors that fit individual situations, and also their degree of comfort with dissent. They point out that much of this practice is associated with transformational leadership theory. Transformational leadership theory was first developed by James MacGregor Burns (1978). Burns theorized that leadership falls into 2 categories- transactional and transformational. In transactional leadership, the leader motivates followers through social exchange. For example, politicians, as Burns (1978) noted, exchange jobs to financial subsidies or benefits for votes. Transformational leadership, however, is founded on the leader's ability to inspire followers through a vision and empowering them to grow and develop their own leadership capacity (Bass & Riggio, 2006; Burns, 1978). This is directly related to the practice of flexibility as Marzano et al. (2005) describes a key characteristic of the practice being the ability to allow teachers to feel ownership over some decision making and not intervening when unnecessary.

In transformational leadership theory, effective leaders are thus deemed so by their ability to bring about change in their followers and/or organization, often attaining greater levels of

achievement than perceived possible (Bass, 1999; Burns, 1978; Stewart, 2006). George (2000) proposed that effective transformational leaders are successful in creating a vision of change and successfully implementing such a vision because they are adept at reading the emotions of the members of the organization, understanding why those emotions may exist and responding in such a way to the emotions as to help their vision become shared by the collective. Teachers in schools with highly transformational principals report positive organizational cultures (Haueserman & Stick, 2013), have greater levels of emotional wellness (Berkovich & Eyal, 2017), while members of other organizations with transformational leaders also report more fair and equitable working environments (Bacha & Walker, 2013). Schools with principals who display a transformational leadership style are also associated with higher levels of faculty job satisfaction and small achievement gaps among minority and non-minority students (Griffith, 2003).

Additionally, Deering, Dilts, and Russell (2003) describe the practice of flexibility as having to do with a leader's ability to accept varied opinions including those that may be contrary to their own. This practice encourages teacher's to express their opinions and denotes a comfort with making major changes as warranted by the organization (Waters et al., 2003). It involves a comfort with allowing one's leadership style be adapted based on the situation at hand. Leadership style is seen to directly relate to teacher motivation (Eval & Roth, 2011), which may have an indirect correlation with student achievement.

The practice of flexibility also directly relates to standard 6, Professional Capacity of School Leaders, as outlined by The National Policy Board for Educational Administration (NPBEA, 2015) that includes elements related to empowering and supporting teachers and staff to develop to the highest levels of their practice as well as developing the capacity of, and

creating opportunities for, teacher leaders. Elements are also present in their 7<sup>th</sup> Standard of Building a Professional Community in the directives to encourage faculty-lead initiatives, and promoting open, trusting relationships (NPBEA, 2015).

### **Monitoring/Evaluating**

Monitoring and evaluating, in the Marzano et al. (2005) definition, is the extent to which the principal monitors the running of the school and evaluates effectiveness in terms of student achievement. This practice is also encompassed in instructional leadership theory as it related to the principal's ability to manage, supervise, and coordinate curriculum and instruction as it directly relates to student learning outcomes (Hallinger, 2011). Robinson, Lloyd and Rowe (2008) also found that monitoring and evaluating were critical components of school leadership that positively correlate with increased student achievement. In their meta-analysis of 27 studies, they identified the principal's role of monitoring and evaluating teachers and curriculum as one of 5 key practices. They also include the principal's frequency in observations and feedback as a facet of this behavior. Another aspect of monitoring involves the frequent analysis and action taken based school and student data. Effective principals have been shown to not only effectively analyze data, but use it to make decisions (Fullan, 2003; Leithwood & Jantzi, 2000). To sum up the impact of the practice of monitoring and evaluating practice on achievement research shows that the more involved and aware the principal is of specific aspects of teaching in learning in the school, the more they make decisions through student achievement data, the greater the positive impact on student learning outcomes (Robinson et al., 2008).

Monitoring and Evaluating also relates also to the degree to which the principal is able to give effective feedback. In Hattie's original 1992 meta-analysis of factors influencing student achievement, he concluded that the single most powerful modification that can be made to

increase student achievement was in effective feedback. However, as Marzano et al. (2005) point out, quality feedback occurs only when the systems are established within the school to all it. This not only relates to the principal's ability to effectually observe and monitor the teaching and learning in the school, but also in the quality of the performance review system the principal engages in that culture of feedback. Kaagan and Markle (1993) describe effective schools as having a culture indicative of continual evaluation and feedback. Marzano (2012) points out that measuring a teacher's performance is not the same as observing and providing feedback to help the teacher develop. Mathers and Olivia argue similarly that evaluation of teachers should include summative as well as formative observations in order for teachers to have the opportunity to research feedback and implement their learning into their practice. This sentiment is echoed by Danielson and McGreal (2000) when they cite a key component of their framework for effective teacher evaluation as the conferencing and time set aside to explicitly discuss observations and provide feedback.

As with the previous practices discussed, the practice of monitoring and evaluating can also be seen in the National Policy Board for Educational Administration (2015) Professional Standards for Educational Leaders 2015. An element of the 6<sup>th</sup> standard (professional capacity of school personnel) lists the ability to provide feedback that is specific and actionable regarding instructional and professional practices. In addition, the 4<sup>th</sup> standard entirely related to a leaders ability to monitor, evaluate, implement, and promote curriculum, instruction, and assessment practices that promote student achievement (NPBEA, 2015).

### **Outreach**

In outreach, Marzano et al. (2005), include several aspects related to advocating and speaking on behalf of the school. In their definition, this key practice includes ensuring that the

school follows district and state mandates, as well as advocating with parents, community, and the district staff. This practice also operate through the theory of transformation leadership. As Wolf (2012) explains, at its root, transformational leadership is the art of advocacy and influence. This practice may seem farther removed from student achievement than the previous 3 practices discussed (discipline, flexibility, and monitoring and evaluation). However, the practice of outreach concerns an understanding of the role the school plays in the larger context of a community and striving to connect that community to the practices, needs, and achievements of the school. Comer (2003) argues effective school leadership includes ensuring that all stakeholders in the community are participating in the school community. Bauer and Previtis (2014) also found that relationships outside of school and the ability to communicate the needs of the students to the community were key aspects of effective school leadership. Rutherford, Anderson, and Billig (1997) in a meta-analysis sponsored by the U.S. Department of Education, Office and Education Research and Reform found that increased involvement of parents and the business community in the school resulted in increased achievement outcomes for students as well as more positive opinions in the community regarding teachers, instruction, and curriculum. Sanders, (2003) argues, however, that school and community partnerships are only as successful as the school principal pointing out that it is the principal's leadership that leads to the planning and reflection necessary to create quality collaboration and involvement. It is also under the principal's prevue to perform this practice of outreach to ensure that community entities such as the police, fire department, public and civic agencies, as well as local government officials are engaged in the school community and aware of the needs and therein (Benecivenga & Elias, 2003). Professional standards have also encapsulated this practice as a key responsibility of the principal by including the meaningful engagement of families and communities as standard 8 of

the Professional Standards for Educational Leaders 2015 (NPBEA, 2015). In fact, advocating for the school is specifically listed under 2 of the elements defining the standard, just as Marzano et al. (2005) describe advocating as one of the key behaviors associated with this practice (NPBEA, 2015).

### **Situational Awareness**

Deering, Diets, and Russel (2003) discuss the leader's need to develop the ability to identify clues and hints of coming opportunities and threats in an organization. This is the heart of what Marzano et al. (2005) define as situational awareness. In this practice, the extent to which the principal reads undercurrents and anticipates situations before they arise is identified as having a strong correlation to student achievement. This factor includes the principal's ability to identify informal groups and relationships among staff, predicting what could go wrong day-to-day within the school, and being aware of issues that have not yet surfaced.

This practice has roots in a couple of theories that relate to effective school leadership. The inclusion of the concept as part of these theories lends weight to the importance and applicability of the practice. One theoretical aspect that supports this practice is through social systems theory, another is sociopolitical systems theory. In writing about schools and sociopolitical systems, Hanson (2003) points out that there are informal and formal structures in a school and effective leadership means having effective lines of communication in both. This theory further stipulates the importance of being aware of conflict that may arise through informal factions and subgroups. The concept is also supported in the concept of anticipatory leadership (Deering, Dilts, & Russell, 2003; Savage & Sales, 2008) which points to the importance of being aware of clues and hints to coming problems or trends that could impact an organization.

An argument could also be made that this practice of situational awareness is related to transformational leadership is well. This theory emphasizes building the leadership capacity of followers and empowering them to take on more responsibility within the organization (Bass 1999). Additional research has concluded that when principals and teachers share leadership, teachers' working relationships with each another are stronger and student achievement is higher (Louis et al., 2010). It would stand to reason that with stronger working relationships would come greater communication which would allow the principal to be more aware of situations in the school that were on the minds of teachers but had not erupted to the surface as an issue yet.

### **Student Achievement**

As previously stated, Stewart (2006) argues that all theories of effective school leadership should be substantiated by empirical evidence of student outcomes. While there is much debate involving the multiple aspects that make up the purpose of education, one remains steadfast: student learning. The shape and scope of that learning has evolved over the years since 1983's *A Nation at Risk* to focus more on mathematics and reading achievement outcomes for students after this seminal report showed United States students were lagging behind students in other countries in math and reading (Adler-Greene, 2019). Over the years, the call for more rigorous standards and higher student achievement has continued. The 1995 Third International Mathematics and Science Study showed the United States underperforming and with less challenging expectations than a number of other developed countries (Glatthorn & Jailall, 2009). Such studies lead to legislation such as *No Child Left Behind* (2002) which tied student achievement outcomes to measurements of schools effectiveness in an effort to increase rigorous learning expectations (Glatthorn & Jailall, 2009). Other countries also rely on standardized assessments to measure student achievement. England and Wales require students entering

secondary school to pass A-levels, France requires a standardized assessment to earn a baccalaureate diploma, Germany requires the Abitur assessment of secondary students (Ravitch, 1995). Ravitch (1995) argues that one reason that student achievement outcomes are such an important measure in the United States is that such outcomes reveal how effectively a school is operating and, especially when considering publicly funded schools, can lead to valuable reforms in learning opportunities and equity for all students across the country. The current political landscape has continued the reliance on student achievement outcomes as measures of effective schools through the Every Student Succeeds Act (Adler-Green, 2019).

In this study, student achievement was measured by the percent of students passing the Indiana Statewide Testing for Educational Progress Plus (ISTEP+) in mathematics, English Language Arts, and in both categories. I selected these measures because they are taken by all students in the state of Indiana in grades 3-8 and 10, therefore it is a common measure across the state. While there are valid arguments to be made for analyzing growth versus passing rates, that is not applicable in this study as the ISTEP+ underwent foundational changes, which made growth an unreliable measure. More information regarding the limits of this measure will be detailed in latter chapters.

As one of the primary purposes of education is student learning, and given the societal importance placed on mathematics and reading, as evidenced by national educational policies such as No Child Left Behind, Race to the Top, and the Every Student Succeeds Acts, the ISTEP+ was considered adequate means of accessing student achievement in Indiana.

### **Summary**

Much research exists to support emotional intelligence as an ability that can be measured as well as increased in individuals (Mayer, 1999; Mayer & Cobb 2000; Mayer et al., 2008;

Mayer, et al., 2011; Mayer & Salovey, 1993; Salovey & Mayer, 1990). Emotional intelligence as used in this research refers to the ability model that includes the following 4 domains:

- a) the ability to appraise the emotions of one's self,
- b) the ability to use emotions in thinking to achieve a goal or desired outcome,
- c) the ability to appraise the communication cues in language and signals in others, and
- d) the ability to regulate one's emotions. (Brackett & Salovey, 2006; Davies et al., 1998,

Law et al., 2004; Mayer et al., 2004; Mayer et al., 2008; Mayer et al., 2011; Wong et al., 2002).

Defined in this way, emotional intelligence is positively correlated with pro-social behaviors, ethical decision making, and positive risk-taking behaviors (Angelidis & Ibrahim, 2011; Côté et al., 2011; Yip & Côté, 2013). There is also a positive correlation between general job performance and emotional intelligence (Côté & Miner, 2006; O'Boyle et al., 2011, Law et al., 2004). In addition, there is much evidence to support that emotional intelligence is positively correlated with effective leadership (Angelidis & Ibrahim, 2011; Côté et al., 2011; O'Boyle, et al., 2011; Yip & Côté, 2013). Research also shows that emotional intelligence plays an important role in schools from social-emotional curriculum (Caprara et al., 2000; Cherniss et al., 2006; Durlak et al., 2011; Elias et al., 2001; Payton et al., 2000) to the correlation of teacher's emotional intelligence and classroom outcomes (Barchard, 2003; Curci et al., 2014; Jones et al., 2013). In the limited research that specifically studies emotional intelligence in principals as it correlates to aspects of their role, there is evidence that a principal's level of emotional intelligence positively correlates to his or her ability to make decisions, manage stressful situations, and otherwise perform daily duties (Cliffe, 2011; Moore, 2009). These are important aspects, however they are not altogether different from leadership in any field. School leadership, however, is unique in its responsibilities for not just leadership of teachers and staff

but also of students. Much research exists regarding the principal's role in student achievement. This study utilized the meta-analysis work of Marzano, Waters, and McNulty (2005) that has identified 21 practices in which principals engage that are correlated with increased student achievement. Of those 21 practices, the 5 with the strongest positive correlation to student achievement are as follows:

- a) discipline, defined as the principal's ability to shield teacher's from extraneous distractions and interruptions to instructions;
- b) flexibility, which relates to the principals comfort making major changes as well as their ability to adapt the leadership style to fit a situation and encourage others to express opinions even when they are contrary to the leader's own;
- c) outreach, which is a practices related to ensuring district and state policies are adhered to, but also concerns the principal serving as advocate of the school to the district, families, and community;
- d) situational awareness, defined as the leader's ability to predict which issues will come to the surface, understand the undercurrents in the school, and recognize the relationships and informal groups and teachers; and
- e) monitoring and evaluating, which concerns the monitoring and evaluation of curriculum, assessment, and instructional practices in terms of student achievement outcomes (Marzano et al., 2005; Waters et al., 2003).

Each of the practices encompasses various individual factors, however, measured as an overall practice, each correlated positively with student achievement outcomes at a level of  $r=.25$  or higher. The practices, through the factors and definitions, also relate to established theories of leadership. While the practices of discipline and monitoring and evaluating are related to the

instructional leadership, outreach, flexibility, and situational awareness all encompass aspects related to the transformational leadership.

It is known that aspects of emotional intelligence are positively correlated with leadership considered transformational and effective (Cliffe, 2011; Gage & Smith, 2016; Jansen et al., 2014; Moore, 2009). Emotional intelligence has been widely confirmed to point to favorable leadership in a variety of fields and also in recognizing leadership emergence (Jansen et al., 2014; Momm et al., 2015; Walter et al., 2011). In groups where the leader had high emotional intelligence, researchers have found the group cohesiveness is greater through transformational leadership behaviors (Yung-Shui & Tung-Chun, 2009). With these connections between emotional intelligence and transformational leadership, as well the correlation between emotional intelligence in principals in the limited research (Cliffe 2011; Moore, 2009), as well as empirical evidence that a principal's ability to recognize emotions has a positive relationship with effective leadership behaviors (Berkovich & Eyal, 2017), it would be reasonable to see a correlation between the 5 practices of the principals identified and emotional intelligence.

Therefore, the next step on this continuum is to study the correlation of the principal's emotional intelligence to the practices, known to correlate with increased student achievement outcomes and to understand if, by operating through the practices, a relationship exists between the principal's level of emotional intelligence and student achievement. Chapter 3 will describe the methods used to answer my research questions.

## **CHAPTER 3**

### **METHODS**

In this chapter, I will discuss the methods implemented in this study. First, I discuss the rationale for this method; second the design of the study is described. Third, I explain the population and sample utilized in the study followed by specifics regarding the data collection and data analysis techniques employed. Finally, I include the limitations of this study.

#### **Purpose of the Study**

The purpose of this study was to understand if a principal's level of emotional intelligence has a relationship to leadership practices and, in turn, to student achievement. As such, the research question driving this study was does emotional intelligence in a principal operate through practices that relate to student achievement?

#### **Methods Rationale**

To investigate this research question, a quantitative method was utilized, specifically a correlational design. Quantitative research seeks to quantify a relationship between variables (Hopkins, 2000). The goal of this study was to explore if a correlated relationship existed between a principal's level of emotional intelligence and student achievement as well as a principal's level of emotional intelligence and principal practices known to influence student achievement. Correlational studies, as described by Gay, Mills, and Airasian (2012), tend to investigate a number a variables that are hypothesized to relate to another more complex variable. The first complex variable in this study was emotional intelligence, as measured by responses on the WLEIS. Emotional intelligence, as measured by the WLEIS is complex because it measures responses through 4 identified domains of emotional intelligence following the

Davies et al. (1998) four-dimension definition of emotional intelligence. This definition is in line with the Mayer and Salovey ability four-branch model. A comparison of the 3 models will be included in the instrumentation section below.

There are a number of other factors that could influence student achievement beyond the principal's level of emotional intelligence. Several factors related to the demographics of the school were collected and controlled for to ensure as accurate as possible an analysis. These factors included the percent of students receiving free and reduced lunch, percent of minority students, the percent of previous year students passing ISTEP+, and the size of the school.

To understand what practices and responsibilities in which principals with varying levels of emotional intelligence engage in, a questionnaire based on the seminal meta-analysis of Marzano, Waters, and McNulty (2003, 2005) was adapted and used with permission of McREL International. In their meta-analysis, Marzano et al., (2005) identify 21 key aspects they refer to as responsibilities that impact student achievement. The survey in this study used 5 of those practices in a scaled down survey of the responsibilities found to have the greatest correlation with student achievement ( $r > .25$ ). This questionnaire is discussed in more detail in the instrumentation section below.

### **Sampling Procedures**

The population in this study was principals in Indiana with at least 2 years of experience in their position at their current school. The goal for the sample in this study was at least 200 participants. Participants were sought from all grade levels and across all demographics. In order to ensure a representative sample, care was given to review that the sample obtained was representative of public school principals according to the National Center for Education Statistics (statistics could not be found for Indiana specifically). Demographics measured

included the principal's self-reported racial identification, gender, age, highest degree, and years of experience.

The only limiting factor in principal selection for the sample was that they had at least 2 years of experience in their current position in their building. The rationale behind this limitation was to avoid analyzing principals with student achievement scores that do not represent the time the principal has been the leader of the school. Surveys were conducted electronically in an effort to facilitate greater participation. Participants were recruited through networking events, state organizations, and were contacted individually through school email addresses found on the Indiana Department of Education's website.

### **Instrumentation**

For the purpose of this study, emotional intelligence is conceptualized as an ability that follows a 4 dimensional model. Further, the WLEIS is defined as an ability-based, self-report measure of emotional intelligence following the definition of the scale's authors (Law et al., 2004; Wong et al., 2002). The WLEIS has 16 items with 4 items in each subset (See Appendix B for full listing of items). The 4 subsets are the self-emotion appraisal dimension (SEA) which measures one's ability to understand and express their own emotion, the others' emotion appraisal dimension (OEA) which measures one's ability to perceive and understand the emotions of others, the use of emotions dimension (UE) which measures an individual's ability to use their emotions effectively to achieve a goal, and the regulation of emotions dimension (RE) which measures the individual's ability to manage their own emotions. All items are measured through a self-report 5-point Likert scale. The WLEIS has been found to have reliability and validity in the four-factor structure and overall as well as to have validity in predicting life satisfaction, academic performance, job performance, and job satisfaction (Law et

al., 2004; Law, Wong, & Huang, 2008; Libbercht et al., 2010; Shi & Wang, 2007; Wong & Law, 2002).

The WLEIS was chosen as the measurement tool in this study for a variety of reasons. The Mayer and Salovey ability model of Emotional Intelligence is supported as reliable and valid (Caruso et al., 2015; Mayer & Salovey, 1997; Mayer et al., 2004; Mayer et al., 2008; Mayer & Salovey, 1997; Salovey et al., 2008). Wong, Wong, and Law (2007) admit that “although many self-report EI scales have been developed... they are usually not based on the ability-based four-dimensional definition of EI,” (Wong et al., 2007, p. 44). They go on to explicitly state that though practitioners in the ability model of emotional intelligence are often more in favor of task-based measures, the WLEIS is a self-report measure developed using this conceptualization of the four-dimension and found to be reliable and valid (Law et al., 2004; Wong et al., 2007). Ngoc Nguyem, Tuan Nham, and Takahaski (2019) explain that while task-based measures such as the Mayer Salovey Caruso Emotional Intelligence Scale (MSCEIT) may be preferred by some researchers because they limit the inclusion of socially desirable responses that may be present in self-report measures, they are time-consuming and expensive which presents difficulties for practical applications. In contrast, the WLEIS is short, easy to operationalize, and shown to have similar outcomes to the MSCEIT when both were utilized in conjunction (Ngoc Nguyem et al., 2019). In fact, Wong and Law used exploratory and confirmatory factor analysis to show that the WLEIS was distinct from other personality inventories, a criticism of other self-report measures (Law et al., 2004). In Wong and Law’s (2002) initial development of their measure, internal consistency reliability ( $\alpha$ ) of the 4 factors, each with 4 items, ranged from .83 to .90. The means ranged from 4.25 to 4.94 and standard deviation ranged from 1.20 to 1.43. The results are broken down for each factor in Table 1 below.

Table 1  
*Descriptive Data of WLEIS (Wong & Law 2002)*

	M (SD)	A
Self-appraisal (SEA)	4.84 (1.09)	.89
Other-appraisal (OEA)	4.60 (1.15)	.85
Using Emotions (UOE)	4.57 (0.99)	.88
Regulating emotion (ROE)	4.27 (1.20)	.76
Total (16 items)	3.63 (.48)	.84

N=209, M=mean, SD= Standard Deviation

Other researchers and similarly shown the WLEIS to be valid with high reliability (Li, Saklofski, Bowden, Yan, & Shing Fung, 2015; Shahrazad Wan Sulaiman & Zainuddin Mouhd Noor, 2015). Further, the WLEIS is the only tool developed specifically to be used within an organization (Law & Wong, 2002; Whitman et al., 2009) and has shown less cultural bias than some task based measures of emotional intelligence (Whitman et al., 2009). Further, the 16 Likert-type items require relatively little time to complete, which was hoped would bolster responses to a more robust sample size.

### **Measuring the Principal Practice**

In order to understand how a principal's level of emotional intelligence might impact student achievement, a questionnaire used selected items from a previously existing questionnaire developed by Marzano, Waters, and McNulty (2005) in their research outlining the practices of effective school leadership. In the meta-analysis conducted by Marzano et al. (2005), overall, they found that leadership practices of the principal in a school and student achievement have an average correlation of  $r=.25$ . These leadership practices can have direct or indirect influences on students. Marzano et al., (2005) went on to breakdown the practices with the most significant correlation to student achievement into 21 responsibilities of the school

leader. Of those 21, 5 had a correlation that was greater than .25. These 5 were selected for use in the survey in this study to examine the primary responsibilities and activities of principals.

The 5 responsibilities are as follows:

- 1) Discipline, which refers to the degree to which the school leader protects teachers from issues and influence that would detract from their teaching time or focus ( $r=.27$ );
- 2) Flexibility is the degree to which the principal adapts his or her leadership behavior to the needs of the current situation and is comfortable with dissent ( $r=.28$ );
- 3) Monitoring/Evaluating refers to the degree to which the principal monitors the effectiveness of school practices and their impact on student achievement ( $r=.27$ );
- 4) Outreach is the degree to which the principal is an advocate for the school to all stakeholders ( $r=.27$ ); and
- 5) Situation Awareness is the degree to which the principal is aware of the details and undercurrents in the running of the school and uses this information to address current and potential problems ( $r=.33$ )

The correlations with student achievement for each of the 5 factors can be found in Table 2 along with the number of the studies which included each practice from the Marzano, Waters, and McNulty (2005) meta-analysis as well as the number of schools.

Table 2  
*Factor Correlation to Student Achievement for Principal Practice Questionnaire (Marzano et al., 2005)*

	<i>r</i>	No. Studies	No. Schools
Discipline	.27	12	437
Flexibility	.28	6	277
Outreach	.2	14	478
Monitoring/Evaluation	.27	31	1,129
Situational Awareness	.33	5	91

*r* = correlation to student achievement

No. of studies refers to the number of studies that referred to that specific practice studied by Marzano et al. (2005)

No. of schools refers to the number of schools used to compute the average correlation.

In their work, Marzano et al., (2005) established a 92 item questionnaire that allowed for factor analysis of each of the 21 responsibilities as well as 2 degrees of the change process. In this study, I will be using 20 items that they used to operationalize the 5 practices identified above. All 20 items included in the survey for this study can be found in Appendix C.

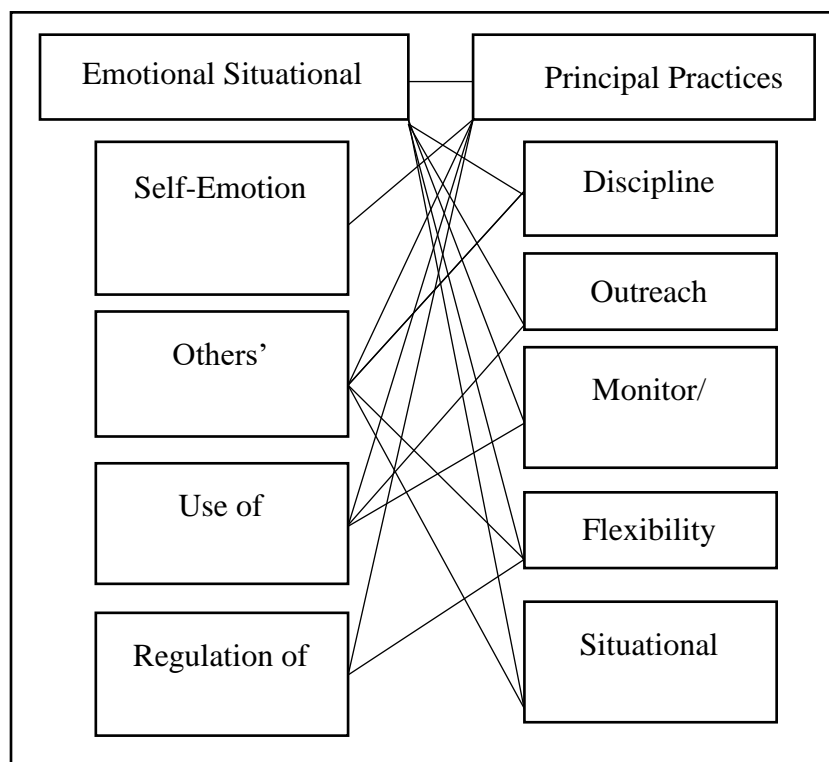
The nature of the individual practices as well as an examination of the items related to each practice in the operational questionnaire lead to several hypotheses regarding correlations to emotional intelligence and the specific domains that encompass the 4 dimensions. To begin, I hypothesize that correlation would be seen between the practices taken as a whole and emotional intelligence. The rationale for this is based on the empirical evidence of emotional intelligence's correlation to leadership practices (Angelidis & Ibrahim, 2011; Côté et al., 2011; Côté & Miner, 2006; O'Boyle et al., 2011; Wong et al., 2004; Yip & Côté, 2013). Beyond this overall correlation between the 2 large factors, I would also hypothesize that a correlation between each of the individual practices and emotional intelligence as well as between the practices and individual domains emotional intelligence. In addition to these correlations, there are several

hypothesized correlations between individual practices and individual domains. Flexibility, the practice that pertains to the principals comfortability with encouraging dissenting opinions and adapting their leadership style to the needs of a situation would be expected to correlate with one's ability appraise the emotions of others as well as one's ability regulate their own emotions. These 2 emotional intelligence domains would be expected dispassionately read a situation for the appropriate leadership response. Also, the ability to understand the emotions of another would allow the leader to be more aware of when a dissenting opinion may exists, but their ability to regulate their own emotions is what allows one to encourage its expression. The practice of situational awareness, which involves the principal's awareness of undercurrents as well as one's awareness of the relationships and informal groups within the school, would also be expected to correlate to one's ability to appraise the emotions of others as that would reveal when they were perhaps uncomfortable or unhappy with decisions made by the principal. Outreach, which consists of the principal's role as an advocate of the school and also the school's compliance with mandates and regulations would be expected to correlate with the principal's use of emotions. The rationale for this is that the domain of use of emotions centers on one's ability to set goals and work to achieve them through such measures as delayed gratification. Likewise, this domain of emotional intelligence would be expected to correlate with monitoring and evaluating, the practice of assessing the effectiveness of curriculum, assessment, and instructional practices and determining the overall effectiveness of the school. It would stand to reason that is a principal is engaged in such ongoing monitoring and evaluating, they are using a goal or benchmark as a measure of what effective means. Finally, the practice of discipline measures how well the principal is able to shield teachers from distractions and interruptions to their teaching. In addition, one of the items factored in this practice involves

limiting the escalation of disagreements between staff members before they disrupt the school as a whole. In thinking through the ability to meet the demands of this practice, it could reasonably be assumed that it would correlate with the principal's ability to appraise the emotions of others as they mediated conflicts and also in understanding how the protection of teachers' instructional time would affect their emotions. For reference, these hypothesis are outlined in Figure 2 below.

Figure 2

*Hypothesized Correlations Between Emotional Intelligence and Principal Practice*



Emotional intelligence has been widely confirmed to point to favorable leadership in a variety of fields and also in recognizing leadership emergence (Jansen et al., 2014; Momm et al., 2015; Walter et al., 2011). Further, in a study of nurse managers emotional intelligence was positively correlated with leadership (Spano-Szekely et al., 2016). In groups where the leader had high emotional intelligence, researchers have found the group cohesiveness is greater (Yung-Shui & Tung-Chun, 2009).

### **Measuring Student Achievement**

For the purpose of this study, student achievement was measured by the percent of students in the principal's school passing ISTEP+ in Language Arts, mathematics, and the percent passing both. General demographic data was collected regarding the percent of students who receive free and reduced price lunch (as a proxy for poverty) well as data on student gender and ethnicity in order to control for those factors.

### **Analysis**

Descriptive statistics related to the principal's school involving demographics and student achievement as well as the principal's scores from the WLEIS and the principal responsibilities questionnaire were analyzed utilizing the SPSS software. Analysis was done first of univariate data of the sample including the frequency of gender of the principal, mean age of principal, mean years of experience, and frequency distribution of principal race. In addition, analysis of univariate data related to the schools was conducted related to the frequency of various school levels (elementary, middle, high) and demographics of the school including the percentage of students qualifying for free and reduced lunch, race distribution, and gender.

Factor analyses was conducted for responses of both the WLEIS (4 factors) and the principal practices questionnaire (5 factors). These factor loadings were conducted for each of the individual factors as well as for the 2 different concepts as a whole (emotional intelligence and principal practices). These factors were used in a bivariate comparison with a Pearson Correlation to assess if a statistically significant relationship existed among factors of emotional intelligence and factors of principal practices. Each factor, in addition to overall scores from each questionnaire, was also be employed in analysis through a Pearson Correlation test with student achievement data. Because of the complex structural relationships of the variables

involved in the research question, a path analysis had been planned as an analytical method, though ultimately, no regression models were employed. The next chapter will detail the results of the data collection in this study and the findings of the data analysis.

## CHAPTER 4

### RESULTS

This chapter describes the results obtained in this study. These results include the descriptive data related to the principal participants and their schools as well as comparative data from the National Education Center Survey (NCES) report (McFarland et al., 2019) from 2017-18 of public school principals across the country. Following these descriptive measures, the quantitative data related to the emotional intelligence measures and the principal practice measures, as well as the student achievement outcomes, are discussed.

#### Descriptive Data Results

As discussed in previous chapters, emails were sent to 1,920 principals in Indiana requesting their participation in this study through an online survey. Of the 174 respondents (9% response rate), 143 participants answered all questions, met the study criteria, and were included for analysis in this study (7% useable response rate). This sample is comprised 57% male ( $n = 81$ ). The majority, 97% of respondents ( $n = 138$ ), identified as White while 2% ( $n = 3$ ) identified as Black or African-American, and 1% ( $n = 2$ ) identified as multiple races. The majority of respondents, 70% ( $n = 100$ ) had Master's Degree, 18% ( $n = 26$ ) had an Education Specialist Degree, 11% ( $n = 16$ ) had a Doctorate, and 1 respondent reported a Bachelor's Degree as their highest degree. This distribution is similar to the NCES national distribution of principals of all public schools in which 1.8% had Bachelor's or less, 61.8% a Master's, 25.9% a Specialist, and 10.5% had a Doctorate. Of the respondents in this study, 52% ( $n = 74$ ) were elementary principals, 15% ( $n = 22$ ) were middle or junior high school principals, 22% ( $n = 32$ ) were high school principals, and 11% ( $n = 15$ ) were principals in combined junior and senior high schools (see Table 3 for participant demographics in comparison to NCES data).

Table 3  
*Study Participants*

Variable	<i>n</i>	%	NCES %
Total Principals	143		
Principal Gender			
Male	81	56.6	46.3
Female	62	43.4	53.7
Principal Race			
Black	3	2.1	10.5
White	138	96.5	77.7
Multiracial	2	1.4	2.9
Highest Degree			
Bachelor's	1	.7	1.8
Master's	100	69.9	61.8
Specialist	26	18.2	25.9
Degree	16	11.2	10.5
Grade Level of Building			
Elementary	74	51.7	
Middle/ Jr High	22	15.4	
High	32	22.4	
Combined	15	10.5	
Jr/Sr High			

The range of participant ages was 28 to 68 with a mean of 47 years ( $SD = 8$ ). This is similar to the mean age of public school principals reported from NCES of 48 years. Criteria to be included in the study was at least 2 years serving as a principal in their current role. The range of time spent as a principal was 2 years to 35 years with a mean of 6 years ( $SD = 5$ ). The mean time spent as principal nationally for public school principals from NCES was 6.8 years. The

range of time spent working in education was 2 years to 38 years with a mean of 12 years ( $SD = 7$ ), this measure was not available through the NCES in 2017-18.

Table 4  
*Principal Descriptive Data*

Variable	Min	Max	Mean	$SD$	NCES Mean
Years in Education	2	38	12.3	7.2	
Years as Principal	2	35	6.3	5.2	6.8
Age	28	68	46.5	8.1	48

The demographics of the schools in which the respondents were principals were captured through the Indiana Department of Education through the school identification codes provided by the principals and are listed in Table 3. The majority, 51.7% ( $n = 74$ ), were principals of elementary schools, 22.4% ( $n = 32$ ), were high school principals, 15.4% ( $n = 22$ ) were middle or junior high school principals, and 10.5% ( $n = 15$ ) were principals in combined junior/senior high schools. The percent of students qualifying for free and reduced lunch in the principals' buildings was fairly evenly dispersed with 37% ( $n = 54$ ) having between 41% and 60% of students qualifying for subsidized lunches, 32.2% ( $n = 46$ ) with 40% or less qualifying, and 30.1% ( $n = 43$ ) with greater than 61% qualifying. Nearly 40% ( $n = 57$ ) had 400 or fewer students enrolled, approximately 26% ( $n = 37$ ) had enrollments between 401 and 600, approximately 19% ( $n = 27$ ) had enrollments between 601 and 800, and 15.4% ( $n = 22$ ) had enrollments of 801 or more students.

Table 5  
*Respondents' School Demographics*

Variable	<i>N</i>	%
<b>Building Grade Level</b>		
Elementary	74	51.7
Middle / Jr High	22	15.4
High	32	22.4
Combined Jr/Sr High	15	10.5
<b>Percent of Free and Reduced</b>		
40% or less of the building	46	32.2
41-60% of the building	54	37.8
61-100% of the building	43	30.1
<b>Percent of Minority Students</b>		
20% or less of the building	4	2.8
21- 40% of the building	113	79
41 – 80% of the building	9	6.3
81 – 100% of the building	8	5.6
<b>Building Enrollment Size</b>		
400 or fewer students	57	39.9
401 to 600 students	37	25.9
601 to 800 students	27	18.9
801 or more students	22	15.4

Despite the relatively small sample size of 143 and the low response rate of useable responses at 7%, the sample was representative to nationwide principals according to data compiled through the National Center of Education Statistics (McFarland et al., 2019). In this study, slightly more respondents were male compared to the national statistics (57% compared to 46%). More respondents identified as White in this study (97%), however, national statistics

show that minorities are vastly underrepresented in the principalship with nearly 78% reporting as White. This study contained 70 percent of respondents with their highest degree as a Master's compared to 62% nationally.

### **Factor Loading Analysis**

Emotional intelligence was measured through the WLEIS self-report questionnaire which asked 4 questions for each of the 4 dimensions or factors. The 4 dimensions, based on the research of Mayer and Salovey, are use of emotions, self-emotional appraisal, others' emotional Appraisal, and regulation of emotions. Each question was measured on a 5-point Likert scale, where the highest affirmative answer is strongly agree (5) followed by agree (4), neither agree nor disagree (3), disagree (2), and strongly disagree (1). Responses were subjected to factor analysis and tested for reliability in using Cronbach's Alpha (Table 6). In the dimensions of use of emotions and self-emotional appraisal, the internal consistency was a bit low ( $\alpha = .56$  and  $\alpha = .59$  respectively). The other 2 dimensions, others' emotions and regulation of emotions both measured higher ( $\alpha = .72$  and  $\alpha = .80$  respectively). Overall, the emotional intelligence measure had an internal consistency of .59 in this study. This is lower than internal consistency of .89 that Wong and Law (2002) found on their study and lower than the internal consistency of the measure when used in other studies (Law et al., 2004; Law, Wong, & Huang, 2008; Libbercht et al., 2010; Shi & Wang, 2007; Wong & Law, 2002). This lower than ideal internal consistency will be discussed further in Chapter 5.

Principal practices were similarly measured through a self-report questionnaire with a series of questions, measured on a 5-point Likert scale, making up each of the 5 practices. The Cronbach's Alpha reliability measured highest in the practices of Flexibility ( $\alpha = .62$ ) and monitoring and evaluating ( $\alpha = .79$ ). The other 3 practices had similar results that were lower in

internal consistency (discipline  $\alpha = .59$ , outreach  $\alpha = .52$ , and situational awareness  $\alpha = .57$ ).

Overall, the principal practices had an internal consistency of .54.

Table 6  
*Factor Analysis Reliability Results*

Component	<i>M</i>	<i>SD</i>	Cronbach's Alpha
WLEIS	2.9	.62	.59
Use of Emotions	2.8	.82	.56
Self-Emotion Appraisal	2.4	.76	.59
Others' Emotion	3.5	1.0	.72
Regulation of Emotions	2.9	1.1	.80
Principal Practices	3.8	.38	.54
Discipline	3.9	.63	.59
Outreach	3.4	.49	.52
Flexibility	3.6	.62	.62
Situational Awareness	4.1	.66	.57
Monitor / Evaluate	4.0	.75	.79

The individual questions that comprise each dimension were also analyzed. In examining the individual survey questions, there were items with lower factor loadings that may explain some of the lower internal consistency measures. For example, in the dimension of use of emotions, 3 of the 4 questions, as seen in Table 7, showed factor loadings between .47 and .69, but one question (I always tell myself I am a competent person) was much lower at .14. The subscale reliabilities in this study were lower than those observed by other researchers; however, this may be due to a smaller sample size in this study. For example, Pacheo et al. (2019) observed reliability ranging from  $\alpha = .79$  to  $\alpha = .84$  but used a sample size of over 1400 compared to the 143 participants in this study. Another possible reason for the lower reliabilities

may be related to the method of administration through an online scale. It is possible that responses were skewed through technological mistakes (accidentally clicking the wrong choice or changing answers without meaning to when trying to scroll down).

Table 7  
*Factor Load Analysis – Emotional Intelligence*

Factor	<i>M</i>	<i>SD</i>	Factor Loading
<b>Factor 1 - Use of Emotion</b>			
I am a self-motivated person	2.41	1.05	.59
I would always encourage myself to try my best	2.35	.98	.67
I always set goals for myself and then try my best to achieve them.	3.03	1.41	.47
I always tell myself that I am a competent person	3.43	1.45	.14
<b>Factor 2 - Self-Emotion Appraisal</b>			
I have a good understanding of my own emotions.	2.52	1.14	.52
I have a good sense of why I have certain feelings most of the time.	1.22	.42	.61
I really understand what I feel.	3.12	1.45	.59
I always know whether or not I am happy.	2.66	1.24	.30
<b>Factor 3 - Others' Emotions</b>			
I always know my friends' emotions from their behavior.	4.17	1.30	.52
I am a good observer of others' emotions.	3.38	1.48	.63
I have good understanding of the emotions of the people around me.	3.28	1.48	.53
I am sensitive to the feelings and emotions of others.	3.00	1.40	.48
<b>Factor 4 - Regulation of Emotions</b>			
I am able to control my temper and handle difficulties rationally.	2.83	1.36	.57
I am quite capable of controlling my own emotions.	2.86	1.36	.74
I can always calm down quickly when I am very angry.	3.20	1.45	.50
I have good control of my own emotions.	3.04	1.44	.72

The individual questions of the principal practice portion of the questionnaire were also analyzed (Table 8). The factor loading in each of the 5 areas was high, however, there was some variance in each area. However, this was seen most prevalently in the first practice, discipline. Two of the questions had a loading of .59 and .65, but the other 2 questions were .38 and .21. In the practice of monitoring and evaluating, 3 of the 4 questions had factor loading between .63 and .70, but the fourth question had a loading of .47. In the practice of outreach, all of the loadings were between .59 and .78, the loadings in flexibility were between .36 and .54, and the practice of situational awareness was between .38 and .52. As with the WLEIS measures, the factor loading measures were lower than is typically expected. Marzano, Waters, and McNulty (2005) discuss their rationale for considering anything measuring .15 or greater as statistically significant due to the size of their sample and the acceptable rate of error. They note that this is lower than is typically considered acceptable for social sciences. In this study, the majority of factor loadings are higher there are a few factors with lower loadings.

Table 8  
*Factor Load Analysis – Principal Practices*

Factor	<i>M</i>	<i>SD</i>	Factor Loading
<b>Factor 1 – Discipline</b>			
In my school, teachers are not brought into issues external to the school that would detract them from their emphasis on teaching.	4.06	.96	.59
I have been successful in protecting teacher from undue distractions and interruptions to their teaching.	4.13	.97	.65
In my school, controversies or disagreements involving only one or a few staff members do not escalate into school wide issues.	3.65	.92	.38
In my school, the instructional time of teachers is well protected.	3.60	.92	.21
<b>Factor 2 – Outreach</b>			
I make sure that my school complies with all district and state mandates.	3.17	.54	.63
I am a strong advocate for my school to the community at large.	3.45	.85	.77
I am a strong advocate for my school to parents of our students.	3.25	.67	.78
I make sure that the central office is aware of the accomplishments of my school.	3.83	.97	.59
<b>Factor 3 – Flexibility</b>			
I adapt my leadership style to the specific needs of a given situation.	3.61	.91	.45
I can be highly directive or nondirective as the situation warrants.	3.66	.93	.54
I encourage people to express opinions that are contrary to my own.	3.59	.91	.54
I am comfortable making major changes in how things are done.	3.48	.88	.36
<b>Factor 4 – Situational Awareness</b>			
I am aware of the issues in my school that have not formally come to the surface but might cause discord.	4.34	.94	.46
I can accurately predict things that may go wrong in my school on a day-to-day basis.	4.19	1.02	.40
I am aware of what is running smoothly and what is not running smoothly in my school.	3.88	1.00	.52
I am aware of the informal groups and relationships among the teachers in my school.	3.85	1.01	.38

## Factor 5 – Monitoring / Evaluating

I continually monitor the effectiveness of our curriculum.	4.01	.96	.70
I continually monitor the effectiveness of the instructional practices used in our school.	3.87	.96	.63
I continually monitor the effectiveness of the assessment practices used in my school.	3.99	.96	.68
At any given time, I can accurately determine how effective our school is in terms of enhancing student learning.	4.29	.92	.47

**Correlations**

There was a positive, significant correlation between the overall factors for emotional intelligence and principal practices in this study,  $r(141) = .47$  ( $p < .001$ ) as seen in Table 9.

There were also positive, significant correlations between the emotional intelligence to each of the 5 principal practices (Table 9) as well as between the principal practices and each of the 4 dimensions of emotional intelligence (as seen in Table 9). In this study, emotional intelligence is correlated most strongly to the practices of situational awareness,  $r(141) = .32$  ( $p < .001$ ) and flexibility,  $r(141) = .38$  ( $p < .001$ ). The practice of situational awareness was positively correlated to each of the other 4 practices. Three of those practices (monitoring and evaluation, flexibility, and outreach) all had the same level of correlation,  $r(141) = .25$  ( $p < .001$ ), the final practice, discipline, was slightly higher,  $r(141) = .27$  ( $p < .001$ ). Flexibility and outreach were positively correlated,  $r(141) = .21$  ( $p = .01$ ), as were discipline and flexibility,  $r(141) = .22$  ( $p = .01$ ).

Principal practices were positively correlated with each of the 4 dimensions of emotional intelligence (Table 9). The strongest correlation was seen between the principal practices and self-emotional appraisal,  $r(141) = .40$  ( $p < .001$ ). The weakest correlation,  $r(141) = .18$  ( $p = .03$ ) between principal practices and regulation of emotions. Each of the dimensions also showed a positive correlation with each other, the strongest of those being between the dimensions of use

of emotions and regulation of emotions,  $r(141) = .29$  ( $p < .001$ ). As noted above and in Table 9, overall the principal practices are significantly positively correlated with emotional intelligence,  $r(141) = .47$  ( $p < .001$ ). This is a higher correlation than any of the individual dimensions of emotional intelligence were correlated to the principal practices and higher than any of the individual principal practices were correlated to emotional intelligence overall.

Table 9

*Principal Practices Component with Emotional Intelligence Component Correlations*

	PP	UE	SEA	OE	RE	EI	ME	SA	F	O
Use of Emotions (UE)	.37*									
Self-emotion Appraisals (SEA)	.40*	.22*								
Others' Emotions (OE)	.33*	.17*	.26*							
Regulation of Emotions (RE)	.18*	.29*	.36*	.21*						
Emotional Intelligence (EI)	.47*	.60*	.65*	.65*	.74*					
Monitor / Evaluate (ME)	.61*	.25*	.26*	.13	-.05	.19*				
Situational Awareness (SA)	.69*	.17*	.31*	.32*	.07	.32*	.25*			
Flexibility (F)	.61*	.22*	.31*	.21*	.27*	.38*	.16	.25*		
Outreach (O)	.50*	.23*	.27*	.16	.12	.26*	.13	.25*	.21*	
Discipline (D)	.57*	.25*	.11	.18*	.17*	.27*	.12	.27*	.22*	.09

\* $p < .01$  level

In this study, there was no correlation between student achievement as measured by ISTEP+ passing rates in Math and/or English Language Arts and either emotional intelligence or principal practices (Table 10). There was also no correlation between the amount of growth from 2016-17 and 2017-18 in the percent passing both English Language Arts and Math or either test individually and the principal practices or emotional intelligence (Table 10). Further, there was no correlation between any of the individual domains of emotional intelligence or individual principal practices and student achievement as measured in this study.

Table 10

*Principal Practices and Emotional Intelligence Correlations to Student Achievement*

	Practices	Emotional Intelligence
2017-18 ISTEP+ Both Pass	.00	-.09
2016-17 ISTEP+ Both Pass	-.06	-.06
2017-18 ISTEP+ ELA Pass	.04	-.65
2016-17 ISTEP+ ELA Pass	.05	-.07
2017-18 ISTEP+ Math Pass	.00	-.08
2016-17 ISTEP+ Math Pass	.03	-.09
Growth Both	-.06	-.02
Growth ELA	.03	-.01
Grow Math	.07	-.01

\*p &lt; .01 level

**Summary**

Despite no correlation found between either emotional intelligence or the principal practices and student achievement as measured in this study, there is still a key finding in the

correlation between emotional intelligence and principal practices. Further, this study found correlations between several individual practices to emotional intelligence and to specific domains of emotional intelligence. There are several implications and avenues of further research that these findings present. This will be discussed in greater detail in the following chapter.

## **CHAPTER 5**

### **CONCLUSIONS**

This concluding chapter reviews the major findings of this study, situates these findings in the current literature, describes implications for policy and practice that have emerged through those findings, and presents conclusions and avenues for further research. The goal of this study was to explore if a relationship exists between a principal's level of emotional intelligence and student achievement, as well as a principal's level of emotional intelligence and practices of the principal known to influence student achievement. Prior to discussing the major findings, a review of the problem precipitating this study, the research questions, and the methods will be reviewed to provide context.

#### **Review of Problem and Purpose of the Study**

The state of education has changed dramatically over the past few decades as federal legislation such as No Child Left Behind and Every Student Succeeds Act has tied higher stakes to student testing outcomes for teachers, school leaders, and schools in general. In Indiana, the implementation of legislation related to RISE and increased expectations for teachers and school leaders has further increased the demands on those working in education. The high stakes of student achievement tied to evaluations of teachers and principals illustrate the need to better identify the characteristics and practices of school leaders who will be most effective in the role.

There is a wealth of research pertaining to practices and actions in which principals should engage to be effective in their role (Ahmad, 2017; Branch et al., 2013; Carbaugh et al., 2015; Marzano, et al., 2005; Wallace Foundation, 2013; Waters et al., 2003). However, as the Wallace Foundation (2013) points out, the research has not always changed the day to day behaviors of principals as they execute their responsibilities. Many principals may know what

practices they should be engaging in, however, they may not know how to effectively implement them (Wallace Foundation, 2013). Simply stated, the majority of principals are aware of research and practices that are empirically supported as important to their effectiveness in their role. The challenge seems to be in how to execute those activities and habit in the day-to-day performance of their job (Ahmed et al., 2017). This calls for an understanding of underlying factors, then, that will correlate to whether or not principals engage in these practices known to increase effectiveness. Brackett et al. (2011) found that there is a correlation between the principal's level of emotional intelligence and factors sometimes used to measure a principal's effectiveness in their role such as teacher effectiveness and longevity and a teacher's level of job satisfaction. However, there remained a question as to whether characteristics within the principal, such as emotional intelligence, may be operating through these practices known to correlate with increased student achievement. In relatively recent years, research has begun to examine the relationship between the principal's level of emotional intelligence and student achievement; while smaller in scale and qualitative, these studies show connections (Cliff, 2011; Poirel & Yvon, 2014).

### **Research Question**

As stated above, the purpose of this study was to understand if a principal's level of emotional intelligence has a relationship to leadership practices and, in turn, to student achievement. As such, the research question driving this study was does emotional intelligence in a principal operate through practices that relate to student achievement?

This correlation study of complex variables required multiple scales of measurements as well as demographic data. This study was quantitative in nature and utilized demographic information regarding the principal and school. Emotional Intelligence was measured utilizing

the WLEIS, which consisted of 16 items on a 5 point Likert scale and measured 4 dimensions of emotional intelligence. Practices of school principals was measured using a questionnaire comprised of items selected from Marzano, Waters, and McNulty (2005) used in their survey of school leadership practices. This portion of the participant survey included an additional 21 items that each participant responded to related to the 5 principal practices studied. These 21 items were taken from the Marzano, Waters, and McNulty (2005) meta-analysis of principal behaviors and responsibilities. As outlined in previous chapters, the 5 practices in this study were selected out of the 21 in the meta-analysis because they were the 5 practices with the highest positive correlations to student achievement.

Student achievement in this study refers to the percent of students in the participant's school passing the ISTEP+ in English Language Arts, Math, and both in both of the 2 years it was utilized state-wide as well as the increase in percent passing from the first year to the second. These data, as well as the demographics of the school, were taken from the Indiana Department of Education's Compass website.

Nearly 2,000 requests were sent seeking participation in the study. Of those that responded, 143 participants fully completed the survey and provided accurate identification of their school that was required to match the respondent to demographic and student achievement data, a 7% response rate. Despite this smaller than hoped for sample size, the sample was fairly representative of public school principals across the country when compared to the 2017 data of the National Center for Education Statistics (U.S. Department of Education, 2017). The vast majority of participants in this study identified as White (97%) however, there is a large underrepresentation of minorities nationally according to the NCES (U.S. Department of Education, 2017) data showing 78% of public school principals identify as White. The mean age

of principals in this study was 47 years compared to the NCES mean age of 48 years. Similarly, the mean years of principal experience for participants in this study was 6 compared to the NCES mean of 6.8 years. In this study, 70% of participants reported a Master's as their highest degree compared to 62% nationally according to NCES (U.S. Department of Education, 2017).

Factor analysis was conducted for the emotional intelligence portion of the study survey as well as the principal practice portion. Overall, emotional intelligence was reliably measured with an internal consistency of  $\alpha = .59$  (use of emotions  $\alpha = .56$ , self-emotional appraisal  $\alpha = .59$ , others' emotional appraisal  $\alpha = .72$ , and regulation of emotions  $\alpha = .80$ ). This is a lower internal consistency than would be ideal. In Wong and Law's (2002) exploratory study of the WLEIS, their internal consistencies ( $\alpha$ ) measured .85, .86, .82, and .79 respectively. As for the principal practices portion of the study, the internal consistency was  $\alpha = .54$ . The specific practices has reliability measures as follows: flexibility  $\alpha = .62$ , monitoring and evaluating  $\alpha = .79$ , discipline  $\alpha = .59$ , outreach  $\alpha = .52$ , and situational awareness  $\alpha = .54$ . In the Waters, Marzano, and McNulty (2005) factor load analysis is provided for individual items but not the practice categories except to say that their results showed them as distinct. The following major findings are reported with an understanding that the internal consistency measures were lower than would be ideal and responses may have been slightly skewed.

### **Major Findings**

There were 2 aspects to the research question in this study. The first aspect of the research question asked what relationship could be found to emotional intelligence, as operated through the principal practices, and student achievement. As seen in Table 8, in this study, no significant correlations were found between emotional intelligence and student achievement, or the principal practices and student achievement. The principal practices were selected for use in

this study because they had been shown in previous research to have statistically significant positive correlations to student achievement (Waters et al., 2003). The correlation of each practice was outlined in Chapter 2, Table 2. Each practice showed a correlation greater than  $r=.25$ . There are several possible factors that contributed to a different result in this study. These will be discussed further in the limitations section later in this chapter.

The second aspect of the research question guiding this study was whether or not a relationship could be seen between emotional intelligence and the 5 principal practices selected for study and emotional intelligence (Table 7). A positive correlation was found between principals' practices and emotional intelligence as well as between the practices overall and each of the 4 domains of emotional intelligence and emotional intelligence and each of the 5 individual practices included in this study.

Interestingly, not only was there a statistically significant positive correlation between emotional intelligence and the practices as a whole, several of the practices and domains of emotional intelligence were also correlated. This study showed a relationship between one's regulation of their emotions and their flexibility in leadership as well as their engagement in activities designed to limit interruptions and distractions to instructional time in their school (discipline). Regulation of emotions was determined through items including one's ability to control one's temper and handle difficulties, calm down quickly when very angry, and controlling one's emotions. It makes sense this domain would correlate to the practice of flexibility ( $r=.27$ ) which includes items such as encouraging others to express their opinions even when contrary to one's own and being highly directive or nondirective as the situation warrants. Likewise, it is not surprising to see a correlation between regulation of emotions and discipline which includes the item, "In my school, controversies or disagreements involving only

one or a few staff members do not escalate into school wide issues.” The leader’s ability to keep control over their own emotions during controversies or disagreements would be critical to keeping the situation from escalating. Having high levels of the aspects of emotional intelligence ability enable school leaders to deal effectively with such situations (Cliffe, 2011; Moore, 2009).

Others’ emotional appraisal was also correlated to discipline and flexibility. Others’ emotional appraisal was comprised of items asking if one rates themselves as a good observer of other’s emotions, if one is sensitive to the feelings and emotions of others, has a good understanding of the emotions of people around them, and can tell the difference between a friend’s emotions and their behaviors. Being aware of the emotions of the teachers in their building, may help to explain the correlation between this emotional intelligence domain and discipline which asks items related to protecting instructional time of teachers and protecting teachers from undue distractions and interruptions to their teaching. Also, this awareness of the emotions of the teachers as staff may explain a measure of the correlation between this domain and flexibility which includes being comfortable making major changes and adapting leadership style as situations call for it. Other’s emotional appraisal was also correlated to situational awareness. Several items such as “I am aware of the issues in my school that have not formally come to the surface but may cause discord,” are logically correlated to one’s ability to observe and assess the emotions of others, even when they are out of sync with their behaviors. In addition, the item, “I am aware of the informal groups and relationships among the teachers in my school,” would require a keen ability to observe and understand the emotions of others and how they interact. As Marzano, Waters, and McNulty (2005) described, the more a principal is aware of the inner workings of the school, such as the relationships of teachers to each other, the

better they can manage the school. This can include the formation of committees, teaching teams, co-teaching assignments, and mentor relationships.

Situational awareness was also correlated with self-emotional appraisal. This domain of emotional intelligence involves one's ability to understand what they are feeling, to know whether or not you are happy, to understand your emotions, and to understand why you feel the way you do. It this last item, understanding why principals feel the way they do that may reveal the rationale behind the correlation to situational awareness. All of the items in the situational awareness practice relate to one's ability to understand issues, relationships, and emotions of others that may be below the surface (I am aware of the issues in my school that have not formally come to the surface but might cause discord; I can accurately predict things that may go wrong in my school on a day-to-day basis; I am aware of what is running smoothly and what is not running smoothly in my school, and I am aware of the informal groups and relationships among the teachers in my school). While this connection may not be immediately obvious, the ability to understand and be aware of situations and issues that are happening below the surface in a school would require the same type of observation and reflection that it takes to understand why one may be experiencing the feelings that they are.

Situational awareness was also correlated to one's use of emotions. This correlation is much more straightforward when comparing the items of each. Use of emotions is comprised of items such as I have a good understanding of those around me, I'm a good observer of others' emotions, and I'm sensitive to the emotions of others. These items are closely related to items in the situation practice that determine one's awareness of discord that has not yet come to the surface and one's awareness of relationships and coalitions that exist among staff members.

Coalitions and relationships tend to form around a common goal or similar feelings. Being able to appraise the emotions of others would make it much easier to identify such relationships.

Use of emotions was correlated with all of the 5 practices. The items that comprise use of emotions relate to one's self-motivation, belief in one's competence, self-encouragement, and the setting of goals for one's self and trying to achieve them. The correlations of this domain to outreach (advocating for the school, making others aware of the school's accomplishments, and compliance with mandates) and monitoring and evaluating (monitoring the effectiveness of curriculum, instruction, and assessment, and determine how effective the school is at improving student learning) are the most straightforward as both relate to task-based items that required of the leader that are easily measurable when set as goals. When the goals are met or progressed to, the leader feels competent and this competence is self-motivating. Indeed, this domain of emotional intelligence stands apart from the other 4 domains as more based on goals and achievement than emotions per se. When considering all of the participants in this study are leaders in their building, having pursued additional degrees and licensure and taken on the additional responsibilities associated with school leadership, it is not surprising to see correlation to this domain and each of the 5 principal practices that were selected based on their proven effectiveness as school leadership practices, as outlined in Chapter 2 (Cotton, 2003; Branch et al., 2013; Louis 2015; Marzano et al., 2005; Waters et al. 2003).

The next section will further review of the research from Chapter 2 and how these findings fit and expand the understanding of emotion intelligence and principal practices.

### **Findings Related to the Review of Literature**

This study sought to understand what relationship may exist between emotional intelligence and student achievement through examining the relationship of emotional intelligence and practices of principals that increase student achievement. In the review of literature that established the foundation for this study, the historical evolution of emotional intelligence as detailed beginning as far back as Thorndike (1920) who proposed that intelligence has distinct facets including social intelligence described as one's ability to understand and manage relationships and interactions with others. Later, Gardner (1978) further fleshed out the concept when he proposed that there were multiple modalities of intelligence that were ability based and stood apart from other human processes. Over time, emotional intelligence emerged through an ability model that conceptualized a set of skills that were distinct from personality traits and could be classified in 4 branches (Brackett et al., 2006; Davies et al., 1998; Law et al., 2004; Mayer et al., 2008). These 4 branches, as defined in this study, consist of a person's ability to self-appraise their own emotions, appraise the emotions of others, regulate their own emotions, and use their emotions to set and pursue a goal (Law et al., 2004, Wong et al., 2002). As an ability, some individuals will have a higher competence and some will have less, however, one's particular acuity can be improved through practice and study (Brackett et al., 2006; Davies et al., 1998; Law et al., 2004; Mayer et al., 2008). As an ability model, empirical evidence supports emotional intelligence is distinct from personality traits (Brackett et al., 2006; Davies et al., 1998; Law 2004; Mayer et al., 2000; Wong et al., 2002).

Emotional intelligence is an interesting concept when considering what characteristics may correlate with effective school principals because there are several research trends in which emotional intelligence is emerging as related to aspects of education, leadership, and

organizations. However, there remains limited research directly studying emotional intelligence and school principals such as in this study. When considering the relationship between emotional intelligence to leadership, it has been positively correlated with ethical decision making, pro-social behavior, general job performance, and aspects of leadership practices characterized as empowering followers and fostering positive changes in organizations (Angelidis & Ibrahim, 2011; Cliffe, 2011; Côté et al., 2011; Côté & Miner, 2006; Gage & Smith, 2016; Jansen et al., 2014, Moore, 2009; O'Boyle, et al., 2011; Yip & Côté, 2013). In school leaders specifically, the principal's ability to recognize emotions is also positively correlated to effective school leadership (Berkovich & Eyal, 2017; Cliffe, 2011; Moore, 2009). In qualitative studies principals were often seen to be guided in decision making through emotional responses (Poirel & Yvon, 2014), leading one to the logical conclusion that if principals were better able to self-appraise emotions and regulate their emotions, principals would make better decisions. When teachers were asked to identify characteristics of principals they believed to be effective leaders, their responses often mirrored aspects of the emotional intelligence ability model (Brinia et al., 2014; Brown III, 2016; Shaw & Newman, 2016). It was therefore hypothesized that principals considered effective would have high emotional intelligence. However, quantifying what it means to be an effective principal required study as well.

Effective schools are generally considered those with high student academic achievement. Stewart (2006) argued that any theory of effective school leadership should be substantiated by empirical evidence of student outcomes. This is further emphasized through national education policy tying teacher and principal evaluation and effective ratings to student academic achievement scores. To that end, it was necessary to understand if a relationship with emotional intelligence and student achievement could be found. However, student achievement

is impacted by effective teaching, social-emotional status, critical thinking opportunities, supportive adult interactions, authentic assessments, quality feedback, health and nutrition, school climate and culture and many other factors (Becker, 2000; Benard, 2004; Cornelius-White & Harbaugh, 2010; Durlak, 2000; Hattie, 2008; Marzano et al., 2001; Waters et al., 2005).

Therefore, to understand how a principal's level of emotional intelligence might be related to student achievement, specific practices of principals that were already identified to have positive correlations to student achievement were chosen to examine how a relationship might illuminate whether emotion intelligence in a principal may be an important factor. To this end, the seminal meta-analysis conducted by McREL was utilized. The work of Waters, Marzano, and McNulty (2005) encompassed a meta-analysis of 30 years of research into leadership responsibilities and practices that correlated positively to student achievement. Through this work, they identified 21 principal practices or actions that principals engage in (Marzano et al., 2005). For this study, the 5 practices with the highest correlation to student achievement were included: discipline, flexibility, monitoring/evaluation, outreach, and situational awareness. All 5 practices had correlations to student achievement that were  $r=.25$  or greater (Waters et al., 2003). As the Waters, Marzano, and McNulty (2003) identified through their meta-analysis that these practices had high positive correlations to student achievement, it was expected that the 5 practices would correlate positively to student achievement in this study. However, no statistically significant relationship was found between the practices and student achievement in this study.

The findings in this study between emotional intelligence and the selected practices is a worthwhile finding that expands understanding of how emotional intelligence may be associated with effective school leadership. The correlation of one's ability to use their emotions correlated to each of the 5 practices is particularly compelling. This supports research that found a

principal's ability to recognize emotions is related to leadership styles considered effective (Berkovich & Eyal, 2017) but takes that research an additional step because emotional intelligence, as an ability, can be increased through study and practice. Therefore, the research in this study suggests that if principals worked to increase their ability to use emotions, they would likely increase their competency at these practices. Self-appraisal of emotions was correlated with 4 of the 5 practices (a correlation was not found with discipline, the practice related to keeping teacher's instructional time void of interruptions). In this same thinking, as a principal increases their ability to accurately assess their own emotions, they are better able to monitor and evaluate the effectiveness of instruction curriculum, assessment, and the overall effectiveness of the school; exhibit flexibility in making major changes as needed, encourage others to express opinions that are contrary to the leader's opinion, be both directive and nondirective as the situation requires, and adapt leadership styles; Perform outreach in advocating for the school to the community, district, and parents/students; and also to engage in situation awareness of underlying issues, relationships among teachers and informal groups, and predict what may go wrong or become an issue in the future. These are critical findings because research has shown that a majority of principals are aware of research and practices that are empirically supported as important to their effectiveness in their role. The challenge seems to be in how to execute those activities in the day-to-day performance of their job (Ahmed et al., 2017). This understanding of the correlation of emotional intelligence in general and specific branches within the emotional intelligence ability model that are correlated to specific practices of principals that promote student achievement and thus effect school management allow principal an a way to specifically target areas where they may be less competent and through

building their emotional intelligence competence in those areas, also build their competence in these practices of effective principals.

### **Implications, Recommendation, Limitations**

This section will outline implications related to the finding in this study for policy, practice, as well as the theory. In addition, recommendation will be given for future research to build on the findings in this study. Finally, a discussion regarding the limitations related to this study will be included. Again, these implications and recommendations are given with the caveat that additional research would be needed to ensure a higher internal consistency for the measures than was found in this study. However, internal consistency of the measures have been as high as .89 in other studies utilizing WLEIS (Law et al., 2004; Law, Wong, & Huang, 2008; Libbercht et al., 2010; Shi & Wang, 2007; Wong & Law, 2002). The same is true for the principal practice measures. When Marzano et al. (2005) conducted their study using the full tool, their Cronbach Alpha measured at .92. This study only used a portion of their original questionnaire, which be a partial explanation for the discrepancy seen. In this study the overall internal consistency as .58. Other factors that may have impacted this lower than ideal Chronbach Alpha measure are similar to those discussed for WLEIS including potential technology issues.

### **Policy**

Since the enactment of federal legislation such as No Child Left Behind and the Every Student Succeeds Act, the stakes for principals and schools related to student achievement are high. School leaders must immediately engage in productive practices that relate to student achievement and that research illustrates foster effective school environments. Empirical evidence suggests a link between school leaderships and student achievement (Seashore Louis et

al., 2010). The research seeking to explain the ways in which principals engage in behaviors and actions that lead to these increases in student achievement is varied (Eval & Roth; 2008; Fullan, 2003; Hattie, 2008; Leithwood & Jantzi, 2000; Marzano et al., 2005; Robinson et al., 2008; Waters et al., 2003). However, as Seashore Louis and Leithwood (2011) explain, the research shows that most variables, when considered separately, have a modest effect on student learning. But, when variables are combined as key practices the effects reach large scale statistically significant correlations (Wallace Foundation, 2013). The 5 practices of principals in this study are umbrella practices, such as these, that include a variety of aspects, as seen in the items listed in Appendix C.

The results of this study show a correlation between all of the 5 principal practices included for study and emotional intelligence. As well as individual practices and specific domains of emotional intelligence. As detailed in Chapter 2, emotional intelligence as defined in this study is an ability in which we can increase our capacity and proficiency of an individual can be increased (Caruso et al., 2015; Mayer & Salovey, 1997; Mayer et al., 2014, Wong et al., 2002). As detailed in Chapter 2, emotional intelligence, as defined in this study, is an ability in which capacity and proficiency of an individual can be increased (Caruso et al., 2015; Mayer & Salovey, 1997; Mayer et al., 2014; Wong et al., 2002). As continuing research is conducted in this area, policy implications may be present to include facets of the 4 dimensions of emotional intelligence as element indicators related to standards such as those released by the National Policy Board for Educational Administration (2015) referenced in Chapter 2. As these standards provide the framework for standards utilized in principal preparedness programs, this policy implication could have implications for practice as well, which will be expanded upon subsequently.

Another policy implication to consider is the role of principal evaluations. As Carbaugh, Marzano, and Toth (2015) point out, there currently are not standardized procedures for evaluating principals. Policy should be established that provide principals with a means for ongoing feedback that would allow them to increase the proficiency in their role. Based on actionable feedback regarding what practices principals are deficient in their performance may allow the principal to a greater understanding of the abilities that they need to increase their capacity for. Emotional intelligence, as demonstrated in this study, is one set of abilities that principals can work to increase in order to increase their engagement of effective practices.

As states and school districts adjust to the new expectations and ESSA that require more accountability that ties their performance evaluation to student achievement, policy should shift to include more professional development funds and expectations to assist principals in growing their capacity to be effective school leaders. Such training programs in emotional intelligence may also be ways to help active principals improve their skills as well through professional development activities. As previously stated, many principals are aware of the practices that research supports as being impactful to effective school leadership, but they are unable to implement these practices (Ahmad et al., 2018). Knowing that there is a correlation between such practices and emotional intelligence competence, explicitly training and coaching principals to build their emotional intelligence level should correlate to higher engagement in practices that are considered effective and correlated to student achievement increases.

### **Practice**

In addition, emotional intelligence screenings may be another tool to utilize when it comes to considering school leaders for professional development or promotion. For example, the WLEIS utilized in this study was created in part to assist organizations in making predictive

assessments regarding supervisory capabilities and job performance (Law et al., 2004). As school leaders look to build their own capacity for practices in their role that are known to increase student achievement, looking at increasing their skills in emotional intelligence, and in specific domain areas of emotional intelligence, may provide a framework to increase their personal skills for job effectiveness. The potential to help principals build personal skills in the domains of emotional intelligence that correlate to practices previously correlated to student achievement is particularly compelling when considering research that shows school principals are a decisive factor in the effectiveness of schools (Ahmad et al., 2008; Leithwood & Jantzi 2011; Seashore Louis et al., 2011). Strong leadership is considered especially vital for schools considered failing or in need of reform (Branch et al., 2013; Louis 2015) and fewer principals rated as highly effective are serving in disadvantaged schools, which are often rated as in need of reform (Loeb et al., 2010; Beesley & Clark, 2015).

With this correlation in mind, principal and school administration preparation programs might be well served to include emotional intelligence increasing activities in their courses of study. Leithwood and Seashore Louis (2015) argue that principal preparation programs should focus both on the ‘soft’ aspects of leadership such as emotions as well as the ‘hard’ aspects which they describe as behaviors. The findings in this study suggest that those 2 facets of leadership are correlated and building capacity in emotion intelligence provides a way to build capacity in leadership practices as well. Recent research concerning training programs designed to increase emotional intelligence through explicit instruction delivered in any of 3 methodologies (online, classroom, or coaching) to higher education students showed statistically significant improvement in participants (Gilbar-Corbi, Pozo-Rico, & Sanchez et al., 2018). Mayer and Salovey have also developed and emotional intelligence training which empirical

evidence supports as an effective way to increase a participant's emotional intelligence level (Groves et al., 2008; Schutte et al., 2013) and a meta-analysis of 24 studies so similar statistically significant increases in emotional intelligence from pre to post assessments after training and coaching programs (Hodzic et al., 2017).

### **Theory**

Some theorists have argued that there is no need to study emotional intelligence in leadership because a combination of intelligence quotient and personality inventory would provide the same information (Antonakis, Ashkanasy, & Dasborough, 2009). In other words, a good leader is determined solely on the conditions of how intelligent one is and if one has the appropriate personality characteristics (Antonakis, Ashkanasy, & Dasborough, 2009). The WLEIS scale has been shown empirically to be distinct from these personality traits such as the Big Five (Law et al., 2004; Wong et al., 2002). Further research has shown emotional intelligence as a correlating factor to general job performance, ethical decision making, pro-social behavior, and effective leadership styles (Cliffe, 2011; Côte & Miner, 2006; Gage & Smith, 2016; Jansen et al., 2014; Moore, 2009; O'Boyle et al., 2011; Yip & Côte, 2013). Research has shown that principals and vice principals who were rated as having higher levels of emotional intelligence were also rated as more effective in their leadership abilities (Stone et al., 2005; Williams, 2008). This study, which showed a correlation between a principal's level of emotional intelligence and key practices known to correlate to improved student achievement, begins to extend the understanding of what relationship may exist between emotional intelligence in a principal and school effectiveness. While this study adds to the body of knowledge of ways in which emotional intelligence is related to characteristics and practices associated with effective leadership, there is still much to learn. There are many channels

through which a principal can impact student achievement (Branch, 2013; Robinson et al., 2008; Waters et al., 2005). Continuing research to understand more about how the principalship is impacted by emotional intelligence may lead to finding additional relationships and avenues for development of effective school leaders. More recommendations for further study will be detailed after a discussion of the limitations of this study.

### **Limitations**

The correlations that were found in this study between the selected principal practices and emotional intelligence, as measured by the WLEIS, present several interesting avenues to consider for further study. In addition, there are several limitations in this study that should be considered. First, the sample of 143 participants is smaller than would be ideal. This study also only included principals and schools in Indiana. While the demographics of the principals seemed fairly representative of public school principals nationwide according to the NCES 2017 report, this limited scope lead to limitations in the measurement of student achievement. In addition to student achievement measures, the demographics of Indiana vary from those of the country as a whole. According to data on the United States Census website, (U.S. Census Bureau, 2019) the 2019 population estimates that over 85% of residents in Indiana identify as white, and the population per square mile in 2010 was 181 which places Indiana as the 16<sup>th</sup> most densely populated state. For the nation as a whole, 76% identify as white and the population per square mile is 87. Based on these demographics, Indiana is more racially homogenous than the nation (85% compared to 76% white). Indiana is also more densely populated than the nation as a whole.

It is possible that using ISTEP+ to measure student achievement was not reliable. The use of ISTEP+ to measure student achievement is limiting in a couple of different ways. One

aspect is that the test was only operational for 2 years in that iteration of the test. In 2015, Indiana began using a new version of the ISTEP+ assessment that was based on new academic standards in Language Arts and Math. This version of the assessment was given for 3 academic years (2015-16, 2016-17, and 2017-18). Due to technical and scoring problems thousands of scores were invalidated in 2015-2016 (Cavazos, 2018). This is problematic because it limits the amount of data available related to student achievement. With only 2 years of data available, it is difficult to measure student growth over time. In 2016, the Indiana Legislature voted to eliminate ISTEP+ assessment due to worries that it was inaccurate (Carvazos, 2019). The elimination of the measure due to concerns over its accuracy and validity present is the second aspect of utilizing ISTEP+ in this study that presents a limitation.

This study is also limited by the self-report measure of both emotional intelligence and the principal practices. As Nguyen et al. (2019) assert, self-report measures of ability may include social desirability bias in which responses reflect what that participant believes to be the more desirable ability. Day and Carroll (2008) found that participants were more likely to falsify responses on self-report emotional intelligence measures, though they did not specifically utilize the WLEIS in their research. Meaning that though results show WLEIS to be valid and reliable (Law et al., 2004; Wong et al., 2002), respondents may overestimate their desirable ability. Wong et al. (2004) even state that though their scale serves as a useful measure, some people may not be able to accurately judge their own abilities or be tempted to inflate their abilities. This same argument could be made for the limitations of the self-report questionnaire of principal practices. While self-report measures are cost-effective and efficient for participants, a different study that included measures that capture teachers' impressions of the participating principals may reveal interesting findings related to the relationship of emotional intelligence and

principal practices and how those practices, through varied levels of emotional intelligence in the principals, may relate to student achievement. It would also be valuable to use a task-based measure of emotional intelligence to gain not only a better understanding of a principal's level of emotional intelligence through a non-self-report method. If this were done in conjunction with measures from subordinates through a mixed-methods study, it would also provide a better understanding of how principals with high level of emotional intelligence spend their time and prioritize tasks differently than other principals.

Internal consistency of the tools in this study were also a limiting issue. In the exploratory study utilizing WLEIS the internal consistency was .89, which is similar to what has been seen in numerous studies with the scale (Law et al., 2004; Law, Wong, & Huang, 2008; Libbercht et al., 2010; Shi & Wang, 2007; Wong & Law, 2002). In this study, the internal consistency was only .59. A similar issue was seen in the principal practices portion which had an internal consistency in this study of .58. However, the original tool from which it was adapted had a Cronbach Alpha of .92 (Marzano et al., 2005). It is possible that this skewedness may be partially attributed to the method of distributions. An online format was used that can be accessed through mobile phone or a computer, which is not tracked. It is possible that respondents erroneously marked responses thinking they were marking different responses. It is also possible that answer choices were accidentally changed as participants tried to scroll and continue the survey. Future studies that utilized a different distribution format may yield results with higher internal consistency.

Another aspect of this study that should be considered is the small size of the sample. This study included 143 participants, thus 143 schools. The Waters et al. (2003) meta-analysis from which the principal practices were selected included various sample sizes for each practice,

but were as large as 1071 for practice of monitor/evaluate. Overall, the meta-analysis included 70 studies involving 2,894 schools and almost 1.1 million students (Water et al., 2003)

### **Recommendations for Further Study**

One important aspect for further study would be to discern a relationship between emotional intelligence and all of the 21 practices identified as positively correlating with student achievement (Waters et al., 2003). It would be important to learn if a positive correlation would still be seen between the practices when all were included and emotional intelligence. Further, each practice should be studied with emotional intelligence as well as with the individual 4 domains of emotional intelligence to see if similar findings are observed as in this study. As defined in this study, emotional intelligence is an ability that can be increased. Based on the correlations found in this study, increasing a school leader's level of emotional intelligence, may positively correlated to an increase in the practices of principals known to increase student achievement (Waters et al., 2003).

An interesting area to note is that in this study, no significant correlation was found between the practices and student achievement. However, in the larger studies in the literature, this was not the case. One possible explanation for this is the varied ways in which student achievement is measured across the studies. In fact, the meta-analysis used in this study to select practices included a variety of measures including some which looked a literacy achievement on a standardized scale and others that measured the principal's impact through teacher questionnaires (Marzano et al., 2005). While there is no one measure that is universally used, Carbaugh, Marzano, and Toth (2015) argue that no single measure should be used to determine student learning, but rather a value-added model makes more sense. Further, they advocate that multiple measures, at least five<sup>5</sup>, would the appropriate way to measure the value-added impact

of teachers or school leaders (Carbaugh et al., 2015). An area of further study, therefore, may be to replicate this study utilizing a different measures of student achievement through a value-added model.

### **Discussion and Concluding Remarks**

When considering the nature of emotional intelligence as an ability that can be increased through skill enhancement, teaching, and coaching (Brackett & Salavey, 2006; Gardner, 1978), the findings in this study are compelling and warrant further study into how emotional intelligence may be related to all 21 of the practices outlined in the McREL study (Waters et al., 2003) as well as other measures of principal effectiveness. Increasing a principal's level of emotional intelligence may be one more way that principals can increase their job performance effectiveness. In summarizing the findings and results of this study, while no statistically significant relationship was found between student achievement and either the principal practices or emotional intelligence, it is informative that a positive correlation was found between principals' practices and emotional intelligence.

There is a multitude of research concerning what makes schools and school leaders effective (Branch, 2013; Cotton, 2003; Robinson et al., 2008; Wallace Foundation, 2013; Waters et al., 2005). Much of the research points to one's ability to build relationships and interactions with various stakeholders as critical components to a principal's success (Branch, 2013; Cotton, 2003; Robinson et al., 2008; Wallace Foundation, 2013; Waters et al., 2005). Despite knowing the extensive work concerning what practices principals can engage in to make their work more effective, principals report that they often do not know how to implement these practices (Ahmad, 2017) and often do not receive ongoing or continual feedback through effective evaluations (Carbaugh et al., 2015).

This study adds to the research showing emotional intelligence level as a correlating aspect to one's relationships, health, and success in occupation, leadership, and life (Angelidis & Ibrahim, 2011; Côté et al., 2011; O'Boyle, et al., 2011; Yip & Côté, 2013) by showing that there is a relationship between practices the principal engages in that are known to correlate with student achievement, the common measure of school effectiveness, and the principal's level of emotional intelligence. These findings are significant in that they provide avenues of self-improvement and professional development that can be specifically designed to increase a principal's ability in the domains of emotional intelligence. Through the enhancement of skills in the domains of emotional intelligence and emotional intelligence as a whole, based on the findings in this study, correlations may be seen to practices within the principalship that are known to increase student achievement (Waters et al., 2003).

Principals are tasked with challenging roles that require a vast array of skills associated with instructional leadership as well as transformational leadership theory (Branch, 2013; Cotton, 2003; Robinson et al., 2008; Wallace Foundation, 2013; Waters et al., 2005). They must navigate operational responsibilities involved with day-to-day running of the school while also providing quality feedback and leadership to ensure curriculum, assessment, and instructional practices are yielding the highest results for student achievement outcomes. Increasingly, these outcomes are used to measure the effectiveness of the principal, teachers, and school through legislation and federal and state policy such as the Every Student Succeeds Act and RISE. Knowing which individual abilities and proficiencies of principals correlate with high-yield practices allows principals the opportunity to build proficiency in area that will correlate to the more effective implementation of practices and behaviors at their schools to increase student achievement.

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**APPENDIX****Appendix A**

## Appendix A. McREL International Letter of Permission



*Helping students, educators, and leaders flourish*

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**October 22, 2018**

Lynette Thrasher  


**Permission to Use McREL Material**

Permission is hereby granted to Lynette Thrasher to adapt “Questionnaire Used for the Factor Analysis” (pp. 162-163) from *School Leadership that Works from Research to Results* in the dissertation that she is writing.

Please mark the instrument “Copyright McREL International. Adapted with permission.”

We understand that the dissertation containing this questionnaire is for satisfying program requirements only and will not be commercially distributed. This permission is limited to the use and materials specified above. Any change in the use or materials from that specified above requires additional approval from McREL senior employees and written permission from McREL before such use is made.

Please send McREL a copy of the completed dissertation for our records.

Sincerely,



Maura McGrath  
Knowledge Management Specialist

## **Appendix B**

### Appendix B. Wong and Law Emotional Intelligence Scale (WLEIS)

#### Section 1: Self Emotion Appraisal

1. I have a good sense of why I have certain feelings most of the time.
2. I have good understanding of my own emotions.
3. I really understand what I feel.
4. I always know whether or not I am happy.

#### Section 2: Others' Emotion Appraisal

5. I always know my friends' emotions from their behavior.
6. I am a good observer of others' emotions.
7. I am sensitive to the feelings and emotions of others.
8. I have good understanding of the emotions of the people around me.

#### Section 3: Use of Emotions

9. I always set goals for myself and then try my best to achieve them.
10. I always tell myself I am a competent person.
11. I am a self-motivated person.
12. I would always encourage myself to try my best.

#### Section 4: Regulation of Emotion

13. I am able to control my temper and handle difficulties rationally.
14. I am quite capable of controlling my own emotions.
15. I can always calm down quickly when I am very angry.
16. I have good control of my own emotions.

### **Appendix C**

#### Appendix C. Principal Responsibilities and Practices Questionnaire - Copyright McREL

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##### Discipline

1. In my school, the instructional time of teachers is well protected.
2. I have been successful in protecting teacher from undue distractions and interruptions to their teaching.
3. In my school, teachers are not brought into issues external to the school that would detract them from their emphasis on teaching.
4. In my school, controversies or disagreements involving only one or a few staff members do not escalate into school wide issues.

##### Outreach

5. I make sure that my school complies with all district and state mandates.
6. I am a strong advocate for my school to the community at large.
7. I am a strong advocate for my school to parents of our students.
8. I make sure that the central office is aware of the accomplishments of my school.

##### Monitoring/Evaluating

9. I continually monitor the effectiveness of our curriculum.
10. I continually monitor the effectiveness of the instructional practices used in our school.
11. I continually monitor the effectiveness of the assessment practices used in my school.
12. At any given time, I can accurately determine how effective our school is in terms of enhancing student learning.

##### Flexibility

13. I am comfortable making major changes in how things are done.
14. I encourage people to express opinions that are contrary to my own.
15. I adapt my leadership style to the specific needs of a given situation.
16. I can be highly directive or nondirective as the situation warrants.

Situational Awareness

17. I am aware of the issues in my school that have not formally come to the surface but might cause discord.
18. I can accurately predict things that may go wrong in my school on a day-to-day basis.
19. I am aware of what is running smoothly and what is not running smoothly in my school.
20. I am aware of the informal groups and relationships among the teachers in my school.