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An Inquiry Into How Principals Make Decisions In Secondary Schools

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AN INQUIRY INTO HOW PRINCIPALS MAKE DECISIONS IN SECONDARY SCHOOLS

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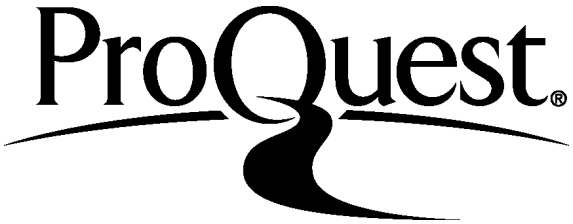

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ABSTRACT

Principals are decision makers (Hoy & Miskel, 2001; Lunenburg, 2010). Daily decisions are made along a wide spectrum of issues all of which impact students in some way, shape, or form (Wiseman, 2005). Principals must consider all stakeholders in all decisions made and bear in mind what is in the best interest of students (Queen & Queen, 2005). The purpose of this study was to ascertain if leadership style, mindset, and self-efficacy impacted principal decision making.

A quantitative study was conducted to determine if relationships existed between the predictor variables of leadership style, mindset, self-efficacy, gender, years of experience, or locale and the criterion variable of decision making. Two null hypotheses were tested. The first null discerned whether leadership style, mindset, and self-efficacy had a significant impact on secondary school principals' decision making. A simultaneous multiple regression was administered. It was determined that all three predictor variables of leadership style, mindset, and self-efficacy did explain a significant amount of variance in the criterion variable of decision making. Leadership style was the strongest predictor followed by mindset and then finally by self-efficacy.

The second null hypothesis focused on the characteristics of gender, years of experience, and locale and whether or not these predictor variables had a significant impact on the criterion variable of decision making. Again, simultaneous multiple regression was employed. The results of the regression test analyzed the variance between the predictor variables in relation to

the criterion variable. The predictor variables did not explain a significant amount of variance within the decision-making score. Implications for principals and other school leaders along with further research suggestions are discussed.

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CHAPTER 1

INTRODUCTION

Principals are decision makers (Hoy & Miskel, 2001; Lunenburg, 2010). Decisions are made at a rapid-fire speed every minute of the day (Lunenburg, 2010; Lunenburg & Irby, 2006; Matthews & Crow, 2010; Sergiovanni, 2009; Ubben, Hughes, & Norris, 2011). Decisions can be arduous, complex, and time-consuming or quick and simple. Some decisions are strategic, such as which clock schedule to run or which team member should supervise what event, and other decisions are ethical or student-focused relative to student behavioral consequences or pertain to bullying episodes (Lunenburg, 2010). The latter can be very problematic and much more stressful because of outside forces' influence on principals, causing them to feel pressure or stress. Fear of job loss and poor student performance on accountability measures are just a couple of examples of principal stress (A. Coleman & Conaway, 1984). A similar generalization was shared in statements made in 2001 by the National Association of Secondary School Principals (NASSP) Executive Director Gerald Tirozzi who said,

> The principal must be a legal expert, health and social services coordinator, fundraiser, public relations consultant, security officer, who is technologically savvy, diplomatic with top-notch managerial skills, whose most important duty is the implementation of instructional programs, curricula, pedagogical practice, and assessment models. (as cited in Queen, Peel, & Shipman, 2001, p. 131)

Further, a principal is expected to make good decisions in all situations and circumstances (Hall, 2004; Wiseman, 2005). This leads to another concern for a principal; a worry over lack-of-stakeholder approval once a decision is made. It is extraordinarily difficult to please all parties, and principals must consider the impact of their decisions on each stakeholder group (Queen & Queen, 2005).

Sergiovanni (1991) stated, "Principals work in the realm of limited resources such as time, money, and space" (p. 15). Surrounding themselves with good teacher leaders and assistants, principals learn when and how to best seek help, advice, and input. According to Sergiovanni, "One rarely finds a successful school without an effective principal. By the same token, rarely does the principal accomplish much without empowering others to act" (p. 16).

It is important for administrators to understand potential blind spots in their efficacy as leaders and in their leadership capacities so as to avoid making poor decisions. Bandura (1997) said, "Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the course of action required to produce given attainments" (p. 3). Self-efficacy also refers to one's motivational behavior, and social environment as well. Self-efficacy seems important to leadership. Seeking input from team members may help to avoid the pitfalls of a blind spot while helping to build confidence in a solid solution or decision made.

Recognizing when assistance is needed is a quality of a good administrator (Gardner, 1990). One must recognize when to approach a decision using a growth, versus a fixed mindset. Leaders should be able to identify their personal leadership styles and comprehend when it is necessary to move outside the confines of their comfort zones in order to operate adequately under stressful circumstances (Queen & Queen, 2005). Some principals are well-equipped professionally to handle the strains and pressures of the principalship, the decision-making

process, and self-reflection for improved performance; others may not be so prepared thus creating the need for guidance and support (Perreault & Lunenburg, 2002).

Statement of the Problem

John Wooden, legendary basketball coach, shared insight about life and leadership both on and off the court when he stated,

> Leaders are interested in finding the best way rather than having their own way. "Because I said so" is a poor explanation for doing something. It's no reason. Stubbornness, an insistence on having your own way, narrow-mindedness, a refusal to listen, an inability to see both sides—all are antithetical to leadership. If you cling to these traits, you and whatever team you wish to lead will not progress. The leader must make the final decision, but it should be based on his or her evaluation of the best way. The suggestions and ideas of others should play an important part in that decision. That's why a leader needs to retain an open mind. (Wooden & Jamison, 1997, p. 145)

Leadership can be tricky, especially for a principal in the school setting. Daily decisions are made along a wide spectrum of issues all of which impact students in some way, shape, or form (Wiseman, 2005). Principals' inabilities to see the big picture can be troublesome, cumbersome, and confusing, as highlighted by the saying, often, one cannot see the forest through the trees. The problem with finding solutions to school-level concerns is that typically, one obvious solution is not ready and waiting for the principal to choose from (March, 2010). Confusion and anxiety set in as the principal seeks a final decision; narrowing the possible choices to two may be relatively simple, but then the correct outcome is still uncertain in the end. Principals may often find themselves in this

very scenario. Therefore, leaders are forced to use resources available to craft solutions that are best for the students involved while carefully weighing the relationships the decisions may have relative to all stakeholders involved, including staff, parents and community (Ferrandino, 2001).

Principals must recognize when it is necessary to seek input from their teams, central office staff, and teachers, or simply rely on themselves. As Sergiovanni (1991) stated, "One rarely finds a successful school without an effective principal. By the same token, rarely does the principal accomplish much without empowering others to act" (p. 16). Like Coach Wooden mentioned above, stubbornness and having one's own way isn't always the solution (Wooden & Jamison, 1997). Having one's own way in isolation could lead to unintended or even unsettling consequences. A principal must answer to a variety of stakeholders on a daily basis, and it is necessary to understand the importance of when to approach a problem with an open-mind versus a closed-mind, what leadership style could be employed, and what individuals should be a party to making the decision. Throughout the school year, a very complex and delicate balance and process exists that some principals may execute very well while others may not. The problem begging resolution is how principals make decisions confidently and through what mindset while employing which leadership style.

Purpose of the Study

The purpose of this quantitative study was to better understand the relationship among self-efficacy, leadership style, and mindset regarding their effect on secondary school principals' decision making. It is hoped this study will provide principals with tools and insight that encourage good decision-making practices. With the existence of research supporting self-

efficacy, leadership style, and mindset, additional research into their impact on decision making should guide professional development and self-opportunities for school principals.

Research Questions

1. What are the current levels of self-efficacy among secondary school principals?
2. What is the current mindset among secondary school principals?
3. What is the predominant leadership style exhibited among secondary school principals?
4. Do factors of self-efficacy, leadership style, and mindset serve as significant predictors of secondary school principals' decision making?
5. Do principal characteristics of gender, years of experience, and locale serve as significant predictors of secondary school principals' decision making?

Significance of the Study

The significance of this study was that its findings might have the potential to offer principals insight into their decision-making practices. The goal was to allow principals to think about how they approach a decision using various constructs, thus pushing toward self-reflection for improved practice. There is a need to offer a guide for reflection outside of the pressures of the process when principals are immersed in decision making. The goal would be that the findings of the study could be generalized to other practicing principals.

Delimitations of the Study

Delimitations in a study define the parameters of a study and provide boundaries around the sample selection. In this study, delimitations included the following:

1. Participants were residents of the state of Indiana. Respondents were limited to the state of Indiana to ensure that all principals were operating under the parameters of the Indiana Department of Education's rules, regulations, and expectations. As a

result of this delimitation, any results of this study may not be generalized to principals outside of the state of Indiana.

2. Participants were secondary principals of Grades 6 through 12. For the purpose of this study, respondents could be principals in a public schools only. As a result of this delimitation, any results of this study may not be generalized to principals at other levels.

Definitions

In order to provide clarity and consistency, the following terms are defined for the purpose of this study:

Convergent thinking is the ability to give correct answers or the expected response to standard questions. In general, this ability does not require much thought or creativity (Guilford, 1966).

Closed-mindedness is

> one's tendency to block off new or different ideas, information, and beliefs. Closed-mindedness is often manifested generally or specifically. Few have fixed and final opinions on most everything. Most are closed-minded only in specific areas; such as specific beliefs, ideas, and matters. (Cloud, 2005, p. 1)

Decision making is the conscious selection of a course of action deemed appropriate for "changing an extant condition or circumstance in a desired direction" (Heald, 1991, p. 344). It is the weighing of options, given in an effort to decide upon the best solution for the presented circumstances (Heald, 1991).

Divergent thinking is "creative thinking [or] the ability to draw on ideas from across disciplines and fields of inquiry to reach a deeper understanding" (Guilford, 1967, p. 1). It is a

recognition and analysis of a variety of potential solutions before selection of an option (Guilford, 1967).

Fixed mindset is "the belief that one's qualities are carved in stone. . . .A fixed mindset [relates] an urgency to prove [oneself] over and over" (Dweck, 2006, p. 6).

Growth mindset is

> one's belief that a person's basic qualities are things that can be cultivated through effort, as well as the belief that although people may differ in every which way—in their initial talents and aptitudes, interests, or temperaments—everyone can change and grow through application and experience. (Dweck, 2006, p. 7)

Open-mindedness is an intellectual virtue that involves a willingness to take relevant "evidence and argument into account in forming or revising our beliefs and values, especially when there is some reason why we might resist such evidence and argument, with a view to arriving at true and defensible conclusions" (Hare, 2004, p. 38).

Secondary schools are schools in the state of Indiana serving students in Grades 6 through 12.

Self-efficacy was referred to by Bandura (1997) as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments. Self-efficacy can have diverse effects based on one's beliefs" (p. 3).

Leadership style is

> the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objectives held by the leader or shared by the leader and his or her followers. "Leadership style is the manner in which such persuasion is implemented by the leader" (Gardner, 1990, p. 1).

Summary and Organization of the Study

This study sought to determine how principals make decisions and whom they seek out along the way to provide help or input so as to best assist students, teachers, and parents. A focus on mindset, self-efficacy, and leadership style was explored and analyzed. Chapter 2 offers a literature review and study findings where important aspects of the research are defined and supported. Chapter 3 presents the methodology and the parameters of the research. Chapter 4 outlines the findings of the research, and Chapter 5 provides an analysis of the research findings, addresses the implications, and suggests further research possibilities.

CHAPTER 2

LITERATURE REVIEW

Contemporary Challenges in Education

Today's leaders are faced with a multitude of challenges including increased academic and accountability standards interlaced within state and federal mandates, principalship longevity and stress as well as stakeholder approval; all of which are concurrent and weigh heavily on a principal. Bonnici (2011) stated,

> How often does a school leader reflect on what he or she does on a day-to-day basis? When your day is filled with training and supporting teachers, being visible in the hallways, defusing issues before they become union grievances or media exposes, answering the latest urgent e-mail or fax requests from central office, dealing with allegations of corporal punishment, you do not have much time to sit back and reflect on what you are doing. (p. xv)

Although reflection can be crucial to success, the varied day of a school principal coupled with today's contemporary issues, can be stressful and challenging; thus, leaving no time for proper reflection at the end of the day (Stevenson, 2006).

Increased Accountability Within State and Federal Mandates

Currently, accountability is at the center of debate in the state of Indiana. Indiana legislators have embarked upon the creation of bills that greatly impact the public education

system. At the center of the debate is mandated state testing. The concern by educators and principals revolves around test length as well as reliability and validity when the testing environment is interrupted by technological glitches and other issues. Although this is today's crisis in Indiana, it all began in 1983 with the publication of *A Nation at Risk* (National Commission on Excellence in Education, 1983). The report indicated that schools were putting the nation at risk because students were failing to achieve basic skills; therefore, reform was necessary as the nation was beginning to lean toward mediocrity (Kowalski & Reitzug, 1993). This report began a push by legislators to change the tide and increase accountability.

The next wave of change was the reauthorization of the Elementary and Secondary Education Act (ESEA) in 2002. Signed into law by President George W. Bush, it was renamed the No Child Left Behind Act of 2001. This document stated students would be proficient on state tests in math, English and science by the 2012-2013 school year. It also forced the need for highly qualified teachers in subject areas as well as accountability of achievement by students in demographic subgroups.

The effects of the preceding legislation have placed extreme stress on principals running schools. If test scores do not go up, schools are labeled with a grade which comes with support and requirements from the U.S. Department of Education which, in turn, adds additional stress on the students, teachers and the principal of the building (Kowalski & Reitzug, 1993).

Principal Longevity and Stress

The public school principalship has evolved over the years with changes in the economy, national reforms, and legislative interference producing pressures on the principalship (Fullan 2001; Glass & Franceschini, 2007; Portin, Shen, & Williams, 1998). Many principals are reporting amplified stress as accountability demands go up (Queen & Queen, 2005). Long hours

and a never-ending list of responsibilities are making it more and more difficult for principals to do a satisfactory job (Kowalski & Reitzug, 1993; Steinberg, 2000). The many layers of duties coupled with the long hours can wreak havoc on a principal's work and family life. Queen and Queen (2005) stated,

> High levels of anxiety may be created by increased demands or a greater degree of role uncertainty. A principal's ability to make decisions may be impaired when ability to concentrate is reduced. Principals may experience a feeling of panic or sharp loss of confidence in leadership ability. With prolonged exposure to the anxiety of role uncertainty, principals my reach an exhaustion threshold, commonly described as feeling drained. (p. 5)

Feeling drained can lead to abandonment of the position. Queen and Queen (2005) stated, "While all educational leaders are subject to high levels of stress and burnout, we believe that leaders in the principalship, often termed an 'undoable position,' are major candidates for burnout" (p. 10).

Beteille, Kalogrides, & Loeb (2012) stated,

> Although no national analysis of principal turnover has been conducted, studies of states and districts have found that turnover rates for principals range from 15 percent to 30 percent each year, with especially high rates of turnover in schools serving more low-income, minority, and low-achieving students. (p. 906)

The schools that need the most leadership and direction are the schools where there is more turnover. The more experienced principals tend to migrate from the low-income, high minority schools to move those that are filled with students of higher socio-economic statuses and greater achievement rates (Fuller & Young, 2009).

Johnson (2005) conducted a study where 12 principals were interviewed about why they quit the profession. Johnson found that the nine principals who left did so because of their dissatisfaction with the job. They indicated that they came into the principalship because helping students and staff find success in learning and achievement was desirable, but instead found large work-loads, long hours and legislative constraints were in their way. Frustration and stress won out.

Stakeholder Approval

Brazer and Keller (2006) stated,

> Decision making in complex organizations such as large firms, government, school districts, or schools naturally involves multiple actors representing a diversity of constituencies-i.e., multiple stakeholders. Decisions are not typically made by the leader acting alone to gather the facts and choose the outcome maximizing option because no one human being has the mental capacity to achieve optimality. (p. 3)

Principals are assessed on stakeholder input and approval in the accreditation process. But more importantly, they are assessed regularly and less scientifically by the students, staff and parents they work so closely with each day. Principals must carefully consider all parties when making school decisions (Tewel, 1995). They, too, must maneuver through the field of public relations and how best to interact with the media (McNeal & Oxholm, 2009). There is constant pressure to be seen in a positive light. Leithwood & Reihl (2003) stated,

> Skillful leaders focus attention on key aspects of the school's vision and communicate the vision clearly and convincingly. They invite interchange with multiple stakeholders through participatory communication strategies. They frame issues in ways that lead to productive discourse and decision making. (p. 6)

Principals must carefully think through all decisions as they need to not only be based in the realm of what is best for students, but a principal must consider how others will view and be impacted by the decision as well.

Decision Making in the Principalship

Decision making is very important in the school setting. Most decisions made by a principal in a school day will in some way tie back to students. Leading a school has been linked to decision making (March, 2010). Lunenburg (2010) suggested, "Increasingly, important decisions are being made in schools by non-administrative personnel. Thus, while decision making is an important administrative process, it is fundamentally a people process" (p. 1).

"Decision making is the conscious selection of a course of action deemed appropriate for changing an extant condition or circumstance in a desired direction" (Heald, 1991, p. 344). Decision making happens at rapid-fire speed in a school setting. Principals are instructional leaders and are charged with "making decisions regarding curriculum and instruction" (Syed, 2013, p. 32) and how those are employed in the classroom setting. They, too, must make decisions regularly when it comes to disciplinary issues (Kirsch, 2009). Students do not typically wait for a principal to finish with one individual before the next disciplinary issue comes along. Those tend to stack up every period of the day. Even as the principal's office and dean's office is filling up, a principal must always keep in tune with school safety and often "that goes hand-in-hand" (Peterson, 2014, p. 1) with the issuing of disciplinary consequences. Also, never too far off the decision making path, a principal must be responsible for hiring and firing of employees which can be a year-long task as support staff come and go as well as working through the teacher evaluation process (Marzano, 2012). With the growing problem of not being able to find licensed teachers in some subject areas, often a principal must put a substitute

teacher in a classroom while he or she searches for someone licensed. In the area of human resources, decisions involve people, and because of that in most cases, there is added weight of ethics and morals to consider. Mills (2006) stated,

> Administrators in any field are often called upon to make decisions involving ethical considerations but are not always well prepared or prone to do so. This situation of being faced with ethical concerns is perhaps more true for educational administrators than for leaders in other arenas. Not only are administrators at school, since they deal essentially with people rather than a product, under this type of pressure on a constant basis, but they may also be looked upon to guide and advise teachers, students, and parents regarding ethical issues as well. (p. 3)

Scott and Bruce created the General Decision-Making Style Inventory PAEI in 1995. Scott and Bruce (1995) defined the decision making as "the learned, habitual response pattern exhibited by an individual when confronted with a decision situation" (p. 1). Scott and Bruce developed the inventory to identify individual differences in the domains of spontaneous, rational, intuitive or dependent with regard to career development and vocational behavior studies. The spontaneous domain recognizes a persons need to finalize a decision in an immediate way; the rational domain is where an individual follows a logical process in order to make a decision; the intuitive approach is when an individual relies on their own instinct when making decisions; and the dependent domain encompasses an individual's need to seek guidance from others (Scott & Bruce, 1995).

Lunenburg (2010) described decision making in his study, "The Decision Making Process." He referenced two "models of decision making as (a) the rational model, and (b) the bounded rationality model" (Lunenburg, 2010, p. 2). Hoy and Miskel (2001) stated, "The

rational model, or classical model assumes that decisions should be completely rational; it employs an optimizing strategy by seeking the best possible alternative to maximize the achievement of goals and objectives" (p. 317). Decision makers in this model assume all necessary information needed is present to make a sound decision. Hoy and Miskel argued that this model is not realistic as the decision maker may not have all of the needed information. Simon (1991) agreed and shared that administrative decisions tend to be complex and often several options could be applied to resolve an issue. Also, outcomes often cannot be predicted as easily when solving problems in schools.

> Administrative decision making is assumed to be rational. By this we mean that school administrators make decisions under certainty: They know their alternatives; they know their outcomes; they know their decision criteria; and they have the ability to make the optimum choice and then to implement it. (Towler as cited in Lunenburg, 2010, p. 2)

Schoenfeld (2011) stated the decision-making process, according to the rational model, can be broken down into six steps. The six steps should be revisited in a circular process as needed and are "identifying the problem, generating alternatives, evaluating alternatives, choosing alternatives, implementing alternatives, and evaluating decision effectiveness" (Lunenburg, 2010, p. 3). The first step is identifying the problem. Principals must "define the situation" (Lunenburg, 2010, p. 4) in order to identify the problem. This is the part that can become clouded as a principal must consider students, parents, and community and their level of satisfaction in the decision made. Lunenburg (2010) shared,

> A principal, for example, might discuss a school performance problem with teachers, the superintendent, or other principals to obtain ideas and information. The school

> administrator must be plugged into an information system, whether formal or informal, that gathers these data as a means of identifying problems. (p. 4)

The second step is generating alternatives. After identifying the problem, principals must determine what the end goal will be and once that is accomplished he or she may begin to seek alternatives. The principal must weigh all possible outcomes for each alternative through the lens of stakeholder success (Lunenburg, 2010).

The third step is evaluating alternatives. In this step a principal must determine how the potential outcomes of the decision will impact the stakeholders. A principal has to consider students, staff, parents and community and how each possible alternative may affect each group (Lunenburg, 2010).

The fourth step is choosing an alternative. In this stage, Lunenburg (2010) stated, "The evaluation phase will have eliminated some of the alternatives, but in most cases two or more will remain" (p. 6). The principal will then need to use his or her best judgment given the consideration of consequences to make a final decision (Lunenburg, 2010). An example might include a principal who is looking to reduce suspensions; he or she may do so by creating an alternative to suspension program which keeps kids in school in an isolated setting rather than choosing not to suspend a student when normally the suspension would have been warranted. The fifth step is implementing the decision. This is done carefully by ensuring that alternatives are clear, manageable, and come with enough resources for success (Lunenburg, 2010).

The sixth and final step is evaluating the decision. Lunenburg (2010) stated, "Evaluation is important because decision making is a continuous, never-ending process. Decision making does not end when a school administrator votes yes or no. Evaluation provides school administrators with information that can precipitate a new decision cycle" (p. 7).

Once a problem has been identified, solutions are generated and alternatives are discussed or processed so as to find the best approach to the issue. A decision maker can then cycle through the six steps listed above.

> Thus decision making is a logical sequence of activities. That is, before alternatives are generated, the problem must be identified, and so on. Furthermore, decision making is an iterative activity. Decision making is a recurring event, and school administrators can learn from past decisions. (Lunenburg, 2010, p. 3)

In contrast to the rational model, the bounded rational model assumes the decision maker does not have access to all of the necessary facts and details to make a decision or he or she will have, "inadequate comprehension of the true nature of the problem being faced" (Lunenburg, 2010, p. 8). The model accounts for the human nature of an individual to settle for a solution because of an inability to obtain information to process when making a decision. Hoy and Miskel (2001) shared the premise of this model: "Because individuals are not capable of making completely rational decisions on complex matters, they are concerned with the selection and implementation of satisfactory alternatives rather than optimal ones" (p. 318). Hoy and Miskel argued that Simon (1947/1976) was the first to define how administrators really make decisions. An example of this model would be when a principal chooses to suspend a student for an offense even though the student denies the charge. A principal may choose to take the word of other students who witnessed the account and use their statements to back his or her decision. The principal may have the opportunity to access cameras or other sources of information to help make the decision, but also may not. He or she may settle on a final decision based on what is known about the student who is being charged with the offense.

Kidder (1995) described decision-making situations as "paradigms or concepts, frameworks that are used to explain complex phenomena" (p. 114). Kidder stated there were four paradigms to guide the decision-making process for school administrators who are working through tough decisions. There was "individual versus community, justice versus mercy, truth versus loyalty, long-term versus short-term" (Kidder, 1995, p. 17).

This concept of "individual versus community is based upon doing what is best for the largest number of people" (Kidder, 1995, p. 19) involved. Petzko and Shuran (2013) asked the question whether the individual's need surpasses that of the community, and if so, the individual wins out over the community and thus a decision is made on behalf of the individual. An example here would be how a student with special needs is treated differently in an educational setting by offering accommodations to the learner. It is not about whether the special needs student is more important than the other students; it is simply that the special needs learner needs additional supports in order to achieve the same or similar outcomes as other students.

Next is justice versus mercy. This is similar to the Golden Rule which states that persons should do unto others as they would have done unto them. Policy might dictate a certain action on behalf of the student, but consistency may send a decision in another direction. Rules and policies may call for certain actions, but individual students and the circumstances surrounding the situation may drive a decision in a different direction. Students may need to be suspended, but supervision at home is in question which causes a principal to consider another consequence as an alternative. This alternative may be what might actually be best for these particular students. All situations are not readily defined. Policy exists as a guide, but must be reviewed and analyzed based on the facts at hand. Hence, the Golden Rule approach (Petzko & Shuran, 2013) would apply.

A third paradigm described by Kidder (1995) is "truth versus loyalty. This paradigm is based on both rules-based and care-based thinking. It requires the principal to decide if truth is ever less important than allegiance" (p. 18). It references the example of a principal being asked to provide a letter of reference for a mediocre teacher, and then asking the question of what should be said in the letter. Petzko and Shuran (2013) answered by saying, "The principal should tell the truth" (p. 2).

Finally, long-term versus short-term paradigm is discussed next. This is an ends-based thinking approach. An example would be for a principal to put time, effort and energy into encouraging a not so great teacher to stay versus hiring a brand new teacher who may be much more successful in the classroom. A principal must weigh the options and make the decision that is best for the organization in the long run (Petzko & Shuran, 2013). Another scenario to illustrate the long-term versus short-term paradigm is one when a teacher decides to implement a new strategy learned at the last professional development meeting. The teacher must consider whether the long-term benefits to her students will outweigh the interim task of learning and implementing the new strategy. Again, the teacher must focus on the ending outcome and weigh the process and problems that could arise before reaching the end.

The final steps in all decision-making processes are to consult with and or consider what stakeholders might think in terms of the outcome and or intended or unintended consequences of a decision. All decisions require some kind of gamble or uncertainty; however, this paradigm approach guides a leader through a useful means of getting to a final solution while considering various stakeholders along the way.

Principals' Decisions in School Safety

Principals making decisions around school safety may employ the bounded rational model as often not all of the necessary information is available for drawing a solution. Decision making regarding school safety is a major issue for school principals all over the country (Peterson, 2014). With school shootings occurring with greater frequency, concern for students and their safety is paramount in terms of principal priorities and stress. Schools are improving their efforts to ensure safety with the implementation of policies and procedures as well as technical equipment installations in order to secure school buildings. Schools are hiring police officers and training school resource officers (SRO) to help keep staff and students safe. As reported by the National Association of School Resource Officers (NASRO),

> SRO programs across the nation are founded as collaborative efforts by police agencies, law enforcement officers, educators, students, parents and community. The goal of NASRO is to provide safe learning environments in our nation's schools, provide valuable resources to school staff, foster a positive relationship with our nation's youth, and develop strategies to resolve problems affecting our youth, with the objective of protecting every child so they can reach their fullest potential. (Canady, James & Nease, 2012, p. 3)

Many schools now require active shooter drills similar to the fire and tornado drills practiced regularly. Peterson (2014) stated, "Five US states now require schools to perform *active shooter* drills, while others like Massachusetts, recommend it" (p. 1). The Department of Homeland Security has even provided schools with guidance by offering a run, hide, and fight tactic and training video that many schools use as part of their proactive training with students and staff (Peterson, 2014).

Recognizing that measures taken by schools to combat student issues of bullying is also essential to school safety; many schools use strategies such as bully boxes where students can anonymously share the names of those doing the bullying. Also available are online reporting opportunities for parents or students who may experience bullying. O'Meara (2013) cited the concept of building trust between students and adults in order to provide a safe environment where open communication offers a sense of trust. Principals rely on students and parents to report safety issues or concerns in an effort to quickly assess circumstances, address them and move on (O'Meara, 2013).

Principals' Decisions in Discipline

Kidder's (1995) paradigm approach may be utilized when approaching decisions regarding student discipline. School principals are charged with ensuring an orderly school environment where students and staff are aware of schoolwide behavioral expectations consistent with processes, procedures, and all school rules. Disciplinary decisions occur regularly throughout the school day and at times can be extremely stressful for a principal as each decision is unique and all circumstances of the scenario must be considered before securing a final decision (Kirsch, 2009).

Schoolwide discipline is improved when students and staff understand rules and expectations (Protheroe, 2011). Shellady and Sealander (2003) stated in order to build an accepted schoolwide approach, school leaders will need to

> reconceptualize schoolwide discipline as a dynamic and proactive process that evolves through teaching all students how to meet learning and behavioral expectations rather than establishing authoritarian control. Facilitate as well as participate in schoolwide discipline development or ongoing professional development opportunities to enable all

> stakeholders to assume active roles in building a solid schoolwide infrastructure based on validated principles of effective early intervention. Encourage and support shared responsibility for the frequent evaluation and discussion of student data to monitor the efficacy of current and newly implemented schoolwide discipline strategies. (p. 29)

Protheroe (2011) stated, "Schools that take a schoolwide approach invest time and attention in developing expectations for behavior, as well as consequences for misbehavior, that apply in every classroom and in all public settings" (p. 1). As a former high school principal, Cynda Rickert shared effective schoolwide systems must be proactive and structured for success, and promoting positive, encouraging, constructive interaction between students and staff as well as instructional strategies where students are taught to behave responsibly (as cited in Protheroe, 2011). Nishioka (2013) shared, "Collaboration and the active involvement of teachers, staff members, parents, and students in settling school discipline strategies help ensure that maintaining a school climate that welcomes each student is a shared priority for all stakeholders" (p. 47).

Principals' Decisions in Curriculum and Instruction

Although decisions involving curriculum and instruction may engage various models, leaders often have the necessary information needed to make a decision thus the rational model can be utilized. Strong leadership is necessary in order to drive success when it comes to curriculum and instruction decision making in schools. Syed (2013) stated, "Curriculum changes and new assessments that are based on those changes can create a lot of pressure on teachers and students alike" (p. 31). Principals most recently have had to ask their teachers to make the switch to Common Core standards. Indiana's version of Common Core is referred to as the Indiana Academic Standards. The Indiana Academic Standards are based around the Common

Core and have many of the same concepts embedded in them. Principals, as leaders, must not only recognize the standards being taught, but must ensure that each teacher understands their purpose. Principals must hold their teachers to higher standards and increased rigor (Jenkins & Pfeifer, 2012). As stated on the Indiana Department of Education (IDOE) website, "the standards clearly outline what students should know and be able to do for each content/subject area and grade level or grade band" (IDOE, 2011, para. 1). The site continues noting the following State Board of Education activity:

> In April of 2014, the Indiana State Board of Education approved the adoption of new standards for English/Language Arts and Mathematics. These new standards are the result of a process designed to identify, evaluate, synthesize, and create high-quality, rigorous standards for Indiana students. They have been validated as college and career ready by the Indiana Education Roundtable, the Indiana Commission for Higher Education, the Indiana Department of Education, the Indiana State Board of Education, and the Indiana Center for Education and Career Innovation. This means that students who successfully master these objectives for what they should know and be able to do in Math and English/Language Arts disciplines by the time they graduate from high school will be ready to go directly into the workplace or a postsecondary educational opportunity without the need of remediation. (IDOE, 2011, para. 1)

Syed (2013) also suggested that principals make parents aware of new changes in standards and assessments by hosting parent nights and informational meetings so parents are not surprised by the changes being rolled out in an effort to prepare students for college. As the leaders of their schools, principals must prepare students, teachers and parents for the changes in curriculum and instruction. Review and alignment of syllabi and pacing guides by grade level

and across the district can offer students, especially transient students, the best chance at success (Meyers, 2005). Principals are charged with ensuring that this along with engaged students and quality bell-to-bell instruction is occurring every minute of every day in their classrooms.

Principals' Decisions in Special Education

Kidder's (1995) paradigm model that provides frameworks for decision making may be an acceptable model when making decisions relative to special education. All students deserve a free and appropriate education according to the Individuals with Disabilities Education Act (IDEA) which became law in 1990 and was revised in 2004 (http://idea.ed.gov). IDEA regulates services provided to students aged three to 21 with disabilities. School principals are charged with ensuring all students regardless of ability are served equally. An individualized education plan (IEP) is a plan written specific to a student's learning needs. Principals are faced with ensuring that IEP's are implemented thoroughly and instruction is inclusive and appropriate. Assessment of students with special needs is a challenge for principals. DiPaola and Walther-Thomas (2003) cited the growing stress of special education and high-stakes testing:

> That is, given limited time, few support resources, and growing public scrutiny, professionals feel compelled to perform academic triage abandoning students with the most significant learning needs in favor of students who have a greater chance of academic survival in rigorous learning environments. (p. 5)

High-stakes testing is and always has been troublesome for principals, but with the added pressure of compliance with regard to special education law and the inherent need and want to support students with special needs, it is a daunting task (Conner & Ferri, 2007). DiPaola and Walther-Thomas (2003) also indicated that along with the high-stakes assessment issue, good

school leadership, too, has become increasingly more important to school reform as well as the planning for the curricular needs of all students.

Principals' Decisions in Athletics

All decision-making models may be explored when handling athletic issues. Principals make a multitude of decisions around athletics including such things as athletic code of conduct disciplinary infraction decisions, academic athletic eligibility decisions, finances, and staffing decisions regarding the selection of coaches. Parents and student athletes can be extremely impassioned when it comes to athletics and that passion often reveals itself when a principal must intervene in a problem. Most public high schools are governed by a state athletic association where guidance regarding such issues is provided in the form of policies and procedures. Indiana public high schools are governed by the Indiana High School Athletic Association (IHSAA). Membership schools follow IHSAA rules and regulations and create their own local policies and procedures to further enhance those provided by this agency.

Whitmer (2013) stated, "Various studies show that students who just participate in high school athletics, whether as videographer, manager, star quarterback or backup to the goalie, have higher grades, better attendance, lower dropout rates, and fewer discipline problems than their peers" (para. 6). Whitmer described one such study:

> *Comparing the Academic Performance of High School Athletes and Non-Athletes in Kansas in 2008-2009*, Angela Lumpkin of University of Kansas and Judy Favor of Baker University found 80% of athletes who reported their GPAs on the ACT questionnaire reported a 3.0 or higher, compared to 71 percent of non-athletes. Graduation rates for athletes were also found to be higher: 98 percent of athletes graduated, compared to 88 percent of non-athletes. (para. 7)

Principals, too, recognize the many benefits of sports, but must function within a budget, parental concerns with coaches and their abilities to lead, and student discipline. All of these aspects take up a lot of time, and even when working collectively with an athletic director tend to cause stress and anxiety for the principal thus impacting the decision-making process (Martin, Kelley, & Eklund, 1999).

Principals' Decisions in Teacher Evaluation

While the decisions can be time-consuming, the rational model may be employed with regard to decisions involving teacher evaluation. Teacher evaluation has been an important topic in the field of education as of late. The federal government has provided monetary incentives to force states to reevaluate their teacher evaluation processes (Loeb & Miller, 2006). Marzano (2012) shared that schools across the nation are busy implementing changes to their evaluation systems based in part on two main reasons. The first is "that teacher evaluation systems have not accurately measured teacher quality" (Marzano, 2012, p. 14) because they are not able to discriminate between the effective and ineffective teacher and secondly, teacher evaluation systems have not helped to create a highly skilled teacher workforce (Marzano, 2012, p. 14). Hull (2013) shared,

> Since 2009, over two-thirds of states have made significant changes to how teachers are evaluated. For most states, the change was motivated by incentives available through the federal programs Race to the Top, No Child Left Behind waivers, and Teacher Incentive Fund. State applications for these funds earned additional credit for upgrading teacher evaluation systems so they take place annually and are based in part on student achievement. (para. 2)

The most challenging issue related to teacher evaluation is reliance on student test performance and achievement. New evaluation systems require states to tie student performance in reading and math to teacher effectiveness. This requires teachers to develop student learning objectives (SLO) or particular performance goals expected to be met as part of the teacher evaluation process. Also new are additional required formal and informal observations to be done by the principal with each teacher on an annual basis. Hull (2013) shared that because "teacher effectiveness is a relatively new concept" (p. 26), states will have to share and analyze systems in order to find the best evaluation instrument and program.

Donaldson and Papay (2014) stated, "Almost every state in the nation has revised its teacher evaluation policies, leading to substantial changes in how teacher evaluation is designed and implemented in schools and districts" (p. 1). This new system of teacher evaluation is an added stressor on the principal as the increased number of observations as well as the more time-consuming process eats into the principal's time. Principals have to make decisions about what they see in a teacher's lesson and where it falls on an evaluation rubric.

Educational Leadership Styles

School administrators are leaders and leaders have styles. Some leaders' styles are very recognizable, distinctive and exact. Other leaders have a style which may employ an eclectic blend of varying styles which may change depending on the situation or circumstances presented (Glynn & DeJordy, 2010). A review of leadership styles can be beneficial for a school leader and is provided below.

Transformational and Transactional Styles

Transformational and transactional leadership styles are very well known types of leadership that are recognized and observed in a broad range of organizations including the field of education. Bass (1990) described and defined the transformational style of leadership.

> Transformational leadership occurs when leaders broaden and elevate the interests of their employees, when they generate awareness and acceptance of the purposes and mission of the group, and when they steer their employees to look beyond their own self-interest for the good of the group. Transformational leaders achieve these results in one or more ways: They may be charismatic to their followers and thus inspire them; they may meet the emotional needs of each employee, and/ or they may intellectually stimulate employee. (p. 21)

Transformational leadership calls for a more adaptive, flexible leadership. Adaptive "leaders work more effectively in rapidly changing environments by helping to make sense of the challenges confronted by both leaders and followers and then appropriately responding to those challenges" (Bass, Avelio, Jung, & Berson, 2003, p. 207). The word adaptive lends itself to the extent to which leaders must be flexible and responsive to the needs of those around them.

Transactional leadership was also defined by Bass and revolves around praise and reward. "Transactional contingent reward leadership clarifies expectations and offers recognition when goals are achieved. The clarification of goals and objectives and providing of recognition once goals are achieved should result in individuals and groups achieving expected levels of performance" (Bass, 1985, p. 154). "Exhibiting transactional leadership meant that followers agreed with, accepted, or complied with the leader in exchange for praise, rewards, and resources or the avoidance of disciplinary action. Rewards and recognition were provided

contingent on followers successfully carrying out their roles and assignments" (Podsakoff, Toder, & Skov, 1982, p. 815).

Autocratic Leadership Style

Lewin, Lippit, and White's (1939) autocratic leadership style is one where leaders are in complete control of the decision making process for their group or organization. This style indicates the leader is in charge based upon his or her title and the expectation is subordinates are given directive and supervised closely until tasks are completed to the leader's satisfaction (Lewin et al., 1939). The autocratic leader tends to solve issues and make decisions for the group by focusing on observations and then generalizing them to the group (Dessler & Starke, 2004). According to Lewin et al., some characteristics of an autocratic leader are leaders make all decisions for the group, leaders provide specific directions regarding how tasks should be performed, leaders provide supervision to ensure tasks are completed properly, and group members are not consulted for input. Gastil (1994) stated, "Critics of authoritarian leadership argue that the leadership style leads to high member dissatisfaction, turn-over, and absenteeism. At least in the school setting, it is deemed appropriate for teachers to provide feedback and input, which goes against this particular leadership style" (p. 956).

Democratic Style

Lewin et al. (1939) was also the mastermind behind the democratic or participative style as well. Foster (2002) stated regarding democratic leadership, "This style consists of the leader sharing the decision-making abilities with group members by promoting the interests of the group members and by practicing social equality" (p. 4). The democratic style involves collective decision making among group members as well as active member involvement. A participative or democratic leader discusses with followers work related ideas often asking for

"followers opinions, and [then regularly using] his subordinates' ideas when making [final] decisions that will impact the organization" (Bass, 2008, p. 441). Velasco, Edmonson, and Slate (2012) in turn stated, "These leaders give confidence, request participation and contributions from subordinates, and help followers feel more significant and dedicated to the decision-making process" (p. 327). Hamilton (2008) stated,

> Although accomplishing a task takes more time under a democratic leader, motivation, initiative, and creativity are higher than in autocratic groups. Also, under democratic leadership, team members experience a high level of personal satisfaction and are more committed to the team and its final decision. (p. 289)

Laissez-Faire Leadership Style

The laissez-faire leadership style as described by Lewin et al. (1939) is very different from both the autocratic and the democratic style. This style has even been referred to as a non-leadership style by some as the leader is very withdrawn from the actual decision-making process. The laissez-faire leader trusts their group members to set goals and problem solve for themselves. The laissez-faire leader would step back from decision making so as to encourage group members to employ "problem-solving [tactics] and use critical thinking skills, without allowing [said group members] to depend on the leader for the final word" (Dessler & Starke, 2004, p. 341). Rubin (2013) stated that laissez-faire leadership empowers employees into action. "The premise here is to hire the right type of people and then give them free reign to tackle any challenges" (Rubin, 2013, p. 60). Hamilton (2008) stated,

> Most groups seem to need more guidance than the laissez-faire leader gives. As a result, this style of leadership tends to result in a low level of group productivity and poor member satisfaction. Only one type of group usually excels with this 'nonleader': a

> group of highly trained, highly motivated experts (such as a group of vice presidents) who perform leadership roles themselves. (p. 273)

Situational Leadership Style

The situational leadership style was defined by Hersey and Blanchard (1969). It was originally known "as the life cycle theory of leadership and was later renamed" (Hersey & Blanchard, 1995, p. 144). The situational model is made up of four grids: "high task-low relationship, high task-high relationship, low task-high relationship, and low task-low relationship" (Hersey & Blanchard, 1969, p. 144). The overall direction of situational leadership is that the leader displays supportive directive behavior while leading and the follower is receptive based on the level of the relationship (Grimm, 2010). Grimm (2010) also stated,

> Situational leadership theory is built on a relationship between a leader's supportive and directive behavior and the follower's level of development. The leader's supportive ability involves the extent that leaders maintain a personal association with the followers. This is done by maintaining open lines of communication and providing socio-emotional support to the followers. The leader's directive behavior is the degree of direction given to the group in terms of defining group roles, explaining the activities each role must accomplish, and explaining how the tasks are to be completed. The development level of the followers is a product of their experience and their willingness and ability to take on responsibility. (p. 76)

Yet another explanation comes from Rubin (2013) who stated, "Situational leadership entails implementing a style of leadership suited to a particular set of circumstances. Those who practice it must be masters of flexibility" (p. 62). Situational leadership requires the leader to be totally aware of possible outcomes given all circumstances of a particular situation. "In

situational leadership, three factors affect the leader's decisions: the situation, the capability of the followers, and the capability of the leader" (Rubin, 2013, p. 62).

Servant Leadership Style

Robert Greenleaf was an expert on servant leadership. In 1970, he wrote an essay entitled *The Servant as a Leader* where he defined the servant-leader philosophy. Greenleaf (1970) shared the idea of the servant-leader as one who leads by meeting the needs of those around him while also serving as leader in mind and spirit. Sergiovanni (1991) offered,

> One of the great secrets of leadership is that before one can command the respect and followership of others, she or he must demonstrate devotion to the organization's purposes and commitment to those in the organization who work day by day on the ordinary tasks that are necessary for those purposes to be realized. (p. 334)

This supported Greenleaf's (1977) philosophy; "People will freely respond only to individuals who are chosen as leaders because they are proven and trusted as servant" (p. 10). Sergiovanni (1991) went on to say that principals fulfill this servant role well as they look after the needs of students, parents and teachers. In schools, leaders must ensure that their students are safe, secure, fed, counseled and in a good state of mind in order to learn. They, too, must ensure that teachers are just as well taken care of day in and day out. Russell and Stone (2002) reviewed the literature on servant leadership. It stated, "Larry Spears, CEO of Greenleaf Center, concluded that Robert Greenleaf's writings incorporated ten major attributes of servant leadership. These included listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to the growth of the people, and building community" (Russell & Stone, 2002, p. 146).

Russell and Stone (2002) went on to say that other attributes have been identified as characteristics of servant leadership. "The overall literature reveals at least 20 distinguishable attributes of servant leadership" (Russell & Stone, 2002, p. 146). In summary, servant leadership focuses on how the leader can support and serve the subordinate.

Mindset

Dweck (2008) is known for her work on mindsets. She explained,

> As one begins to understand the fixed and growth mindsets, you begin to understand how one things leads to another, how a belief that your qualities are carved in stone leads to a host of thoughts and actions, and how a belief that your qualities can be cultivated leads to a host of different thoughts and action, taking you down an entirely different road. (Dweck, 2008, p. 10)

She defined both fixed and growth mindsets.

> Believing that your qualities are carved in stone-the *fixed mindset*-creates an urgency to prove yourself over and over. If you have only a certain amount of intelligence, a certain personality, and a certain moral character-well, then you'd better prove that you have a healthy dose of them. It simply wouldn't do to look or feel deficient in these most basic characteristics. (Dweck, 2008, p. 6)

Dweck (2008) described those with a fixed mindset as analyzing decisions and outcomes in a way that is a reflection of their intelligence or self-worth. They may make statements such as, "I'd feel like a reject [or] I'm a total failure [or] I'm a loser" (Dweck, 2008, p. 8), because they see that everything that happens is direct measure of their competence and worth. Dweck also defined growth mindset:

> In this mindset, the hand you're dealt is just the starting point for development. This *growth mindset* is based on the belief that your basic qualities are things you can cultivate through your efforts. Although people may differ in every which way-in their initial talents and aptitudes, interests, or temperaments-everyone can change and grow through application and experience. (p. 7)

Individuals with a growth mindset would not feel the same as those described in the fixed mindset category. Instead of feeling worthless or helpless, they would approach situations with an attitude of improvement and a stance of I can do better next time.

Mindset and leadership can go hand in hand. Malcolm Gladwell spoke of the *talent mindset* when writing an article for the New Yorker (as cited in Dweck, 2010).

> It was mindset. According to Malcolm Gladwell, writing in the New Yorker, American corporations had become obsessed with talent. Indeed, the gurus at McKinsey & Company, the premier management consulting firm in the country, were insisting that corporate success today requires the "talent mindset." Just as there are naturals in sports, they maintained, there are naturals in business. Just as sports teams write huge checks to sign outsized talent, so too should corporations spare no expense in recruiting talent, for this is the secret weapon, the key to beating the competition. (Dweck, 2010, para. 2)

Dweck (2010) described Gladwell's explanation of the talent mindset and the fall of Enron as an example of fixed mindset at work because like people of a fixed mindset, Enron recruited its employees because of the inherent intelligence and abilities, but those same recruits did not admit and correct their deficiencies when needed, thus leading to the downfall of their company. Dweck went on to state, "Fixed mindset people want to be the only big fish so that

when they compare themselves to those around them, they can feel a cut above the rest" (para. 3).

"Researchers have found in many studies that students with a growth mindset improve more in academics and other skills, and can even be less aggressive and more socially engaged" (Sparks, 2013, p. 1). Sparks (2013) went on to quote another mindset expert, Eduardo Briceno, a co-founder and CEO of Mindset Works:

> When we understand that we can build our intelligence, rather than it being fixed, we take risks; we are interested in learning from mistakes rather than focusing on how people see us and wanting to do things perfectly and quickly. (p. 1)

The Mindset Works company focuses on learning strategies that teaches students strategies of fixed vs. growth mindset so students can reach into their toolbox of strategies when they are faced with a difficult task.

Yettick (2014) described the growth mindset at work with students and motivation. An online intervention program delivered by Stanford tested mindset at work. Teachers were given 15 minutes on the phone to learn about the intervention; students were then provided with two 45-minute sessions in the computer lab. One of the things asked during the lab time of students was how they thought they could grow their intelligence with practice and better strategies. It was stated that

> a randomized, placebo-controlled trial of 1,584 students at 13 high schools found that course failure happened 8% less often for members of the treatment group that received the growth mindset intervention than for [the] control group peers. In total, treatment group students passed 94 more additional courses than students in the control group. (Yettick, 2014, p. 1).

Open-Mindedness and Closed-Mindedness

Hare (2004) defined open-mindedness as follows:

> Open-mindedness is an intellectual virtue that involves a willingness to take relevant evidence and argument into account in forming or revising our beliefs and values, especially when there is some reason why we might resist such evidence and argument, with a view to arriving at true and defensible conclusions. It means being critically receptive to alternative possibilities, being willing to think again despite having formed an opinion, and sincerely trying to avoid those conditions and offset those factors which constrain and distort our reflections. The attitude of open-mindedness is embedded in the Socratic idea of following the argument where it leads and is a fundamental virtue of inquiry. (p. 1)

Moorman and Pomerantz (2010) stated that performance is viewed as competence which can be threatening because of the fear of failure. Principals strive for consistency in handling situations with students and staff, which means that making considerations such as the definition explains might mean stepping outside of ones' comfort zone thus the fear of performance mentioned above (Vandevalle, 2012). Dweck (2006) shared open-mindedness means considering the thoughts or opinions of others. It might mean obtaining input from a teacher, dean or an assistant principal before settling on a decision. It might mean absorbing the information and thinking it through for a day. Dweck indicated sometimes inaction for a short time is a factor of open-mindedness. Inaction could be considered a weakness and therefore may hinder the decision-making process for some.

Closed-mindedness is the opposite of open-mindedness. A principal gathers information or input and makes a decision in isolation probably based on policy, procedure or past practice

(Nye & Capelluti, 3003). This in theory is an accepted strategy; however, every situation in a school setting is different even if it appears to be similar. Hence, a principal can fall into a trap of consistency. Dweck (2006) reiterated this, too, could be considered a weakness and may hinder the decision-making process.

Cloud (2005) defined both closed mindedness and open mindedness:

> A closed mind filters out and blocks off new or different ideas, information, and beliefs. A person can be generally or specifically closed-minded. A few people have fixed and final opinions on pretty much everything. Most of us are closed-minded only in specific areas or only on specific beliefs, ideas, and matters. We may be unwilling to listen to and even-handedly consider ideas different from our own in matters of religion, morality, sex or politics. (p. 1)

Cloud went on to define open mindedness as follows:

> An open mind is receptive to new or different ideas, information, and beliefs. It welcomes and invites the new or different. It is willing to impartially consider new possibilities. An open mind is willing, able, and eager to hear out and intelligently evaluate other people's beliefs, information and ideas. (p. 1)

Sherman (2009) recognized that closed mindedness versus open-mindedness is a balancing act. He says that one must live between the two and often makes the statement, "I like to keep an open mind but I don't want my brains to spill out" (Sherman, 2009, p. 2). He went on to describe the balancing act as represented by the yin yang symbol. He says the yin symbol stands for open mindedness and the yang represents closed-mindedness. "The line of contact between the two in the middle where they meet shows that in reality they depend upon each

other meaning that it takes both open and closed-mindedness to make the world function normally" (Sherman, 2009, p. 2).

Self-Efficacy

Bandura (1997) described self-efficacy as "belief in ones' capabilities to organize and execute the courses of action required to produce given attainments. Self-efficacy can have diverse effects based on one's beliefs" (p. 3). Self-efficacy in the principalship is important as principals continually analyze and reflect on decisions daily. Tschannenn-Moren and Gareis (2004) stated, "Self-efficacy beliefs are content-specific, however, people do not feel equally efficacious for all situations" (p. 573). They further stated that principals may feel a good sense of efficacy in making certain decisions in various contexts, but may not be able to transfer those same feelings to other tasks. Principals have strengths and weaknesses and that will show in terms of their self-efficacy and how they make decisions (Tschannen-Moran & Gareis, 2004).

Bandura (1997) indicated that positive leader self-efficacy is important to school success because these leaders tend to set more appropriate goals and have an increased ability to adapt to change. Confidence in a decision made would project a high or strong self-efficacy. Bandura went on to state,

> Self-efficacy theory acknowledges the diversity of human capabilities. Thus, it treats the efficacy belief system not as an omnibus trait but as a differentiated set of self-beliefs linked to distinct realms of functioning…efficacy beliefs are concerned not only with the exercise of control over action but also with the self-regulation of thought processes, motivation, and affective and physiological states. (pp. 36-37)

Similarly, Pajares (1996) described self-efficacy as the manner in which people internalize their performances and how that impacts their self-beliefs. He said, "Individuals engage in a

behavior, interpret the results of their actions, use these interpretations to create and develop beliefs about their capability to engage in subsequent behaviors in similar domains, and behave in concert with the beliefs created" (Pajares, 1996, p. 2). An example he shared is provided from Bandura (1984), where students' beliefs in their abilities are related to the outcomes in their academic performances. The specific example shared is with regard to a student who knows a good score on the Graduate Records Examination (GRE) will secure a spot in a desired graduate school, yet the student believes he is not good at math and therefore does not register for the math classes that would actually prepare him properly for the GRE. The outcome of his performance is thus derived from both preparation and efficacy.

Bandura's (1986) social cognitive theory in which self-efficacy is embedded, discussed the characteristic of self-reflective capability. Bandura said, "Reflective self-consciousness enables people to analyze their experiences and to think about their own thought processes" (p. 21). Reflection causes one to analyze what they know and what is going on around them in their environment. This is where goal setting in an organization comes into play. Goals are important for providing direction for individuals, and Bandura stated that "goals are important for the development of self-efficacy" (p. 470). He said, "Without standards against which to measure their performances, people have little basis for judging how they are doing, nor do they have much basis for gauging their capabilities" (Bandura, 1986, p. 470). Therefore, setting attainable goals will help to improve self-efficacy. The self-reflection discussed above, too, is necessary in order for appropriate goal setting. Principals, as leaders, often set goals for their teachers and in turn encourage their teachers to set goals for students. Goals that are met with success lead to a desired state of being in terms of self-efficacy. For principals, goal attainment is necessary. Leithwood and Reihl (2003) also stated,

> Effective educational leaders promote co-operation and assist others to work together toward common goals. In the past, teachers have often worked under conditions of relative autonomy, but new models of schools as professional learning communities emphasize the importance of shared goals and effort. (p. 6).

Further, McCormick (2001) stated, "It is a principal's self-perceived capability to perform the cognitive and behavioral functions necessary to regulate group processes in relation to goal achievement" (p. 30).

Summary

Chapter 2 summarized the literature relative to the study. Contemporary challenges in education such as increased accountability, state and federal mandates, principal longevity, and stress as well as stakeholder approval were reviewed. A thorough review of principal decision making followed. Next, leadership styles were explored as well as mindset and self-efficacy. Chapter 3 presents the methodology and the parameters of the research. Chapter 4 outlines the finding of the research, and Chapter 5 addresses the implications and suggests further research possibilities.

CHAPTER 3

METHODOLOGY

The purpose of this quantitative study was to better understand the relationship among leadership style, mindset, and self-efficacy regarding their effect on secondary school principals' decision making. It is hoped this study provides principals with tools and insight that encourage good decision-making practices. With the existence of research supporting leadership style, mindset, and self-efficacy, additional research into their impact on decision making should guide professional development and self-opportunities for school principals. This chapter describes the research methodology, the associated participants in the sample, the procedure used for the instrument design, and collection of data as well as the method employed for statistical analysis.

Design

Quantitative research was utilized and described by Fraenkel, Wallen and Hyun (2012): "Research in which the investigator attempts to clarify phenomena through carefully designed and controlled data collection and analysis" (pp. 6-7). Creswell (2014) stated, "A survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population. From sample results, the researcher generalizes or draws inferences to the population" (pp. 155-156).

A cross-sectional, web-based survey methodology was used. Fraenkel et al. (2012) defined a cross-sectional survey as "a survey that collects information from a sample that has

been drawn from a predetermined population. Furthermore, the information is collected at just one point in time" (p. 394). Fraenkel et al. (2012) stated with regard to web-based surveys, "Other advantages of Internet-based surveys include greater convenience, lower costs, faster turnaround, multimedia interface, mobile administration, and reduced data entry. Disadvantages can include lower response rates and erroneous data entry due to speedy responding facilitated by computers" (p. 397). This study used a design where survey questions were presented in an electronic format using a web-based program called Qualtrics. The survey was posted on the Internet through a Qualtrics account. This survey methodology provides insight into the sample population. An invitation to participate in the survey was electronically sent to all public secondary school principals in middle schools and high schools serving Grades 6 through 12 in Indiana.

Research Questions

1. What are the current levels of self-efficacy among secondary school principals?
2. What is the current mindset among secondary school principals?
3. What is the predominant leadership style exhibited among secondary school principals?
4. Do factors of self-efficacy, leadership style, and mindset serve as significant predictors of secondary school principals' decision making?
5. Do principal characteristics of gender, years of experience, and locale serve as significant predictors of secondary school principals' decision making?

Null Hypotheses

1. The factors of self-efficacy, leadership style, and mindset serve do not serve as significant predictors of secondary school principals' decision making.
2. The principal characteristics of gender, years of experience, and locale do not serve as significant predictors of secondary school principals' decision making.

Population and Sample

Participants in the study were public secondary (Grades 6–12) principals in Indiana. Respondents were limited to public school principals in Indiana only, excluding charter and private school principals, to ensure that all principals are operating under the parameters of the IDOE's rules, regulations, and expectations. All 697 public school secondary principals (Grades 6–12) were recruited to participate in the study. Excluding principals in the Vigo County School Corporation, the sample came from those principals who chose to participate in the survey and thus contributed to the study.

Recruitment

The Indiana public school principals who met the criteria for the study were invited to participate. E-mail addresses obtained from the IDOE's Public Records Department were used to contact the population sample (Appendix A). Invited principals received an e-mail that outlined the purpose of the research and university affiliation, the methodology involved, the potential for risk or non-risk, an explanation of informed consent as well as my contact information and that of my faculty sponsor (Appendix B). One week into the data collection period, a follow-up e-mail was sent thanking those who had participated and reminded others of the time frame left for submission (Appendix C). Following the closing of the data collection period, a thank you e-mail was sent (Appendix D).

Data Collection Process

Data collection occurred in a survey format using Qualtrics, a web-based program after approval from Indiana State University's Institutional Review Board (IRB) was granted. The respondents answered survey questions (Appendix E) regarding whether factors of self-efficacy, fixed mindsets, growth mindsets, and leadership styles showed perceptions of levels of significance in a principal's final decision in the decision-making process. The data collection period began when the participants received the survey e-mail and closed two weeks thereafter. One week following the opening of the survey, I sent a follow-up e-mail offering thanks for participation or a reminder of the opportunity to respond. Upon completion of the data collection period, survey results were tabulated, imported, and coded into SPSS Version 20.

Instrumentation

The survey (Appendix E) used in this study collected basic demographic information about the respondent and then offered questions with a focus on decision making, leadership style, mindset, and self-efficacy. Respondents rated Questions 5 through 43 along a 5-point Likert scale that ranged from 1 = *not at all* to 5 = *very often*. Questions 1 through 4 asked basic demographic questions in order to obtain information about the respondent, including gender, years of experience, locale where the respondent worked as well as the school grade range. Questions 5 through 22 addressed decision making. In this section respondents were asked questions related to objectivity, risks, consequences, or even the processes used to determine a final answer when making a decision. The questions were obtained from http://www.mindtools.com/pages/article/newTED 79.htm. Permission to use these decision-making questions is found in Appendix F. Questions 23 through 29 addressed leadership style. The questions sought to determine if the respondent had tendencies toward authoritarian,

democratic, or laissez-faire leadership styles. The questions were developed by me. Questions 30 through 33 addressed mindset and were created by me based on the work of Dweck (2006). The items helped to determine whether the respondent had tendencies toward a fixed or growth mindset. Questions 34 through 43 addressed self-efficacy and were obtained from the General Self-Efficacy Scale (GSE; http://userpage.fu-berlin.de/-health/self/selfeff_public.htm). Permission to use these self-efficacy questions is found in Appendix G.

Survey Validity

> Creswell (2014) shared three forms of validity to look for in a survey instrument: (a) content validity (Do the items measure the content they were intended to measure?) (b) predictive or concurrent validity (Do scores predict criterion measure? Do results correlate with other results?), and (c) construct validity (Do items measure hypothetical constructs or concepts?). (p. 160)

In order to establish content validity, the survey was reviewed by a cohort of secondary principals in the Vigo County School Corporation. The group was asked (a) Are the directions clear and easy to understand, (b) How long did the survey take to complete, (c) Did the questions make sense, and (d) Do you have any suggestions for improvement? Based on the feedback received, changes were made to the survey to accommodate suggestions provided. The survey was reviewed on July 28, 2015. Changes were made after the first round of feedback and resubmitted to principals for a final review on August 3, 2015. The surveys were reviewed by secondary principals in the Vigo County School Corporation, five middle school principals (Grades 6–8), and five high school principals (Grades 9–12). Construct and predictive validity were measured by using the Pearson product moment correlation (PPMC). Fraenkel et al. (2012) described the PPMC as follows:

> When variables are correlated, a correlation coefficient is produced. This coefficient will be a decimal, somewhere between 0.00 and +1.00 or –1.00. The closer the coefficient is to +1.00 or -1.00, the stronger the relation. If the sign is positive, the relationship is positive, indicating that high scores on one variable tend to go with high scores on the other variable. If the sign is negative, the relationship is negative, indicating that high scores on one variable tend to go with low scores on the other variable. Coefficients that are at or near .00 indicated that no relationship exists between the variables involved. (p. 340)

Survey Reliability

Creswell (2014) suggested looking "for whether authors report measure of internal consistency (Are the items' responses consistent across constructs?), and test-retest correlations (Are scores stable over time when the instrument is administered a second time?)" (p. 160) as a measure of reliability. In other words, reliability is the consistency of survey responses over time. This study ensured reliability as measured by Cronbach's alpha. Tavakol and Dennick (2011) defined Cronbach's alpha as follows:

> Alpha was developed by Lee Cronbach in 1951, to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1. Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test. Internal consistency should be determined before a test can be employed for research or examination purposes to ensure validity. In addition, reliability estimates show the amount of measurement error in a test. Put simply, this interpretation of reliability is the

> correlation of test with itself. Squaring this correlation and subtracting from 1.00 produces the index of measurement error. (p. 53)

Higher values of alpha are better and a reliability of 0.70 or higher is the most desirable. An alpha test was run for each of the different areas within the survey.

Study Variables

Creswell (2014) stated, "The variables need to be specified in an experiment so that it is clear to readers what groups are receiving the experimental treatment and what outcomes are being measured" (p. 169). This study had independent and dependent variables. Fraenkel et al. (2012) defined independent variables as "those that the researcher chooses to study in order to assess their possible effect(s) on one or more other variables" (p. 80). Fraenkel et al. defined a dependent variable as "the variable that the independent variable is presumed to affect is called a dependent variable" (p. 80). The independent variables in this study were gender, years of experience, locale, leadership style, mindset, and self-efficacy and the dependent variable was decision making.

Data Analysis

Simultaneous multiple regression was used in this study. Multiple regression allows for the examination of how multiple predictor variables relate to a criterion variable. Regression tests whether the predictor variables explain a significant amount of variance within the criterion variable. Once the relationship has been identified, predictions can be made (Higgins, 2006). Brace, Kemp and Snelgar (2012) indicated that in simultaneous multiple regression there is no particular basis for considering any variable before another. The variables can be considered at the same time because one is not more relative than another. Rubinfeld (2011) provided the following definition:

> Multiple regression analysis is a statistical tool for understanding the relationship between two or more variables. Multiple regression involves a variable to be explained, called the dependent variable, and additional explanatory variables that are thought to produce or be associated with changes in the dependent variable. (p. 419)

Multiple regression is used when several possible relationships between variables should be explored. Rubinfeld stated,

> Multiple regression also may be useful (1) in determining whether or not a particular effect is present; (2) in measuring the magnitude of a particular effect; (3) in forecasting what a particular effect would be, but for an intervening event. (p. 420)

In a multiple regression equation, Rubinfeld (2011) noted the regression line signified the best prediction of the dependent variable (Y) as it related to the independent variable (X). If the predictor is significant and less than the alpha level, it can be used to create an equation to predict the criterion variable by examining the coefficients output. The assumptions in multiple regression that must be taken into consideration include independence, homogeneity, normality, linearity, fixed X, and no multicollinearity. When assumptions are not met, the results may be subject to error. Assumptions of multiple regressions that are not robust to violation or the normal distribution of errors are normality, linearity, reliability, and homoscedasticity (Osborne & Waters, 2002).

In multiple regression, standardized coefficients are measured on one scale with a mean of 0 and a standard deviation of 1. Standardized coefficients are compared against each other thus determining the strongest predictor in the model. Non-standardized coefficients indicate the direction of the relationship, but because they might be on different measures, they do not allow for the same predictions that standardized coefficients do (Rubinfeld, 2011). The multiple

predictor variables in this study were leadership style, mindset, and self-efficacy. For the first null hypothesis, the dependent criterion variable was decision making. For the second null hypothesis, gender, years of experience, and locale were the predictor variables and decision making was the criterion variable.

Summary

Chapter 3 rendered the method of design, research questions, null hypotheses, and population in sample size. Additionally, recruitment, data collection process, instrumentation including study variables, and the data analysis were described. It is hoped this quantitative study leads to a better understanding of the relationship among self-efficacy, leadership style, and mindset regarding their effect on secondary school principals' decision making, and select demographic variables.

CHAPTER 4

ANALYSIS OF DATA

This quantitative study sought to better understand the relationship among self-efficacy, leadership style, and mindset regarding their effect on principal decision making. The predictor variables in the study were gender, years of experience, locale, leadership style, mindset, and self-efficacy and the criterion variable was decision making. Cronbach's alpha was used to determine reliability. Fraenkel et al. (2012) stated, "A check on the internal consistency of an instrument is to calculate an alpha coefficient, frequently called Cronbach alpha" (p. 158). Higher values of alpha are better and a reliability of 0.70 or higher is the most desirable. The Cronbach alpha scores ranged from .73 to .85. All were above the .70 minimum requirement for internal consistency.

The survey instrument contained five sections: demographic information about the respondent, decision making, leadership style, mindset, and self-efficacy. There were a total of 33 questions (Appendix E) using a 5-point Likert scale. The decision-making section had a scale ranging from 1 = *not at all* to 5 = *very often*, and the leadership portion had a scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The third section regarding mindset had a scale ranging from 1 = *strongly disagree* to 5 = *strongly agree* and the final section of general self-efficacy had a scale ranging from 1 = *not at all true* to 5 = *exactly true*. The first section asked basic demographic information such as gender, years of experience as an administrator, locale of

the respondent's school, and the school's developmental level. The second section of the survey offered 18 questions on decision making; the third section of leadership styles offered seven questions; the fourth section on mindset consisted of four questions, and the final section of self-efficacy contained four questions.

This chapter offers a description of the presented data and shares the results of the study. It is arranged into these subsequent sections: research questions, descriptive data, inferential analysis, and summary of findings.

Research Questions

In an effort to better understand the relationship among self-efficacy, leadership style, and mindset regarding their effects on secondary school principals' decision making, the following research questions were addressed by the study:

1. What are the current levels of self-efficacy among secondary school principals?
2. What is the current mindset among secondary school principals?
3. What is the predominant leadership style exhibited among secondary school principals?
4. Do factors of self-efficacy, leadership style, and mindset serve as significant predictors of secondary school principals' decision making?
5. Do principal characteristics of gender, years of experience, and locale serve as significant predictors of secondary school principals' decision making?

Descriptive Analyses

Participants of this study were public secondary (Grades 6–12) principals in Indiana. An electronic survey was e-mailed to 730 principals with 171 (n = 171) principals responding. Of the 730 principals who received the survey, 23.4% responded.

Of the 171 total respondents who participated in this study, there were 136 (79.5%) male respondents and 35 (20.5%) female respondents. When asked what best described one's locale, 101 (59.1%) of the respondents indicated rural, 40 (23.4%) stated suburban/ metro, and 30 (17.5%) responded urban. In describing the school's developmental level, 60 (35.1%) of the 171 total respondents chose junior high/ middle school (Grades 5/6–8), 33 (19.3%) indicated junior high/high school (Grades 6/7–12) and 78 (45.6%) stated high school (Grades 9–12). Participants also reported total years as an educator and as an administrator rounded to the nearest year. Within the sample, the number of years within the field of education ranged from six to 38 years with an average of 22.53 (*SD* = 7.75) and the years reported as an administrator ranged from one to 29 with an average of 11.6 (*SD* = 6.22).

Table 1 shows the descriptive statistics regarding decision making for the whole group sample. When asked, "I evaluate the risks associated with each alternative before making a decision," respondents chose *often* 50.9% (*n* = 87). The next most frequent response was *very often* 42.7% (*n* = 73). In response to the statement, "After I made a decision, it's final because I know my process is strong," *often* was selected by 58.5% (*n* = 100) of the respondents. The next most frequent answer was *sometimes* at 25.1% (*n* = 43). When participants responded to the statement, "I try to determine the real issue before starting a decision-making process," 52% (*n* = 89) felt that was done *very often*, 44.4% (*n* = 76) indicated it occurred *often*, and only 3.5% (*n* = 6) stated *sometimes*.

Table 1

Mean Score of Whole Group Responses to Decision Making

Topic Statement	*M*	*SD*
I evaluate the risks associated with each alternative before making a decision.	4.36	.619
After I make a decision, it's final because I know my process is strong.	3.77	.760
I try to determine the real issue before starting a decision-making process.	4.49	.567
I rely on my own experience to find potential solutions to a problem.	3.82	.765
I tend to have a strong gut instinct about problems, and I rely on it in decision making.	3.58	.780
I am sometimes surprised by the actual consequences of my decisions.	2.28	.635
I use a well-defined process to structure my decisions.	3.74	.814
I think that involving many stakeholders to generate solutions can make the process more complicated than it needs to be.	2.90	1.04
If I have doubts about my decision, I go back and recheck my assumptions and my process.	3.76	.816
I take the time needed to choose the best decision-making tool for each specific decision.	3.84	.850
I consider a variety of potential solutions before I make my decision.	4.36	.570
Before I communicate my decision, I create an implementation plan.	3.56	.826
In group decision making, I tend to support my friends' proposals and try to find ways to make them work.	2.92	1.010

Table 1 Continued

Topic Statement	*M*	*SD*
When communicating my decision, I include my rationale and justification.	4.20	.694
Some of the options I've chosen have been much more difficult to implement than I had expected.	3,13	.711
I prefer to make decisions on my own, and then let other people know what I've decided.	2.25	.781
I determine the factors most important to the decision, and then use those factors to evaluate my choices.	4.95	.615
I emphasize how confident I am in my decision as a way to gain support for my plans.	3.13	.874

The next statement, "I rely on my own experience to find potential solutions to a problem," had 45.6% (*n* = 78) of respondents who chose *often*, and 32.7% (*n* = 56) chose *sometimes*, which left only 2.3% (*n* = 4) who chose *rarely*. The survey asked respondents to respond to the statement, "I tend to have a strong gut instinct about problems, and I rely on it in decision making," which had 45.6% (*n* = 78) who stated *sometimes* and 36.3% (*n* = 62) who stated *often* with 13.5% (*n* = 23) who indicated *very often*.

Next the statement, "I am sometimes surprised by the actual consequences of my decisions," had 62.6% (*n* = 107) who responded *rarely* followed well behind by 27.5% (*n* = 47) who stated *sometimes*. "I use a well-defined process to structure my decisions" had 52.6% (*n* = 90) respondents who chose *often*, 26.3% (*n* = 45) who chose *sometimes,* and 8.8% (*n* = 15) indicated *not at all*. Next, participants were asked the following: "I think that involving many stakeholders to generate solutions can make the process more complicated than it needs to be."

Respondents chose *sometimes* 46.8% (*n* = 80) of the time, and *rarely* was chosen 23.4% (*n* = 40) of the time.

Respondents next were asked, "If I have doubts about my decision, I go back and recheck my assumptions and my process." The highest percentage of respondents chose *often* at 57.3% (*n* = 98) of the time, and *sometimes* was the next closest response at 19.9% (*n* = 34). Responding to the statement "I take the time needed to choose the best decision-making tool for each specific decision," 50.9% (*n* = 87) indicated *often*, 22.2% (*n* = 38) stated *sometimes,* and 20.5% (*n* = 35) chose *very often*. Participants were asked, "I consider a variety of potential solutions before I make my decision;" 55% (*n* = 94) indicated *often* and 40.4% (*n* = 69) stated *very often*.

Next, respondents were asked, "Before I communicate my decision, I create an implementation plan." Participants chose *often* with the most frequency at 46.2% (*n* = 79) and *sometime*s next at 32.2% (*n* = 55). The next statement indicated, "In group decision making, I tend to support my friends' proposals and try to find ways to make them work;" 40.4% (*n* = 69) reported *sometimes* followed closely by *rarely* at 23.4% (*n* = 40), and *often* 22.2% (*n* = 38) of the time. Respondents were next asked, "When communicating my decision, I include my rationale and justification;" 49.7% (*n* = 85) responded *often* and 35.7% (*n* = 61) responded *very often*. Participants were asked, "Some of the options I've chosen have been much more difficult to implement than I had expected." *Sometimes* was the most frequent response at 58.5% (*n* = 100) followed by 23.4% (*n* = 40) who indicated *often*.

Next respondents were asked, "I prefer to make decisions on my own, and then let other people know what I've decided." *Rarely* was chosen 50.9% (*n* = 87) followed by *sometimes* 28.1% (*n* = 48), and finally *not at all* at 15.2% (*n* = 26). Responding to the statement, "I determine the factors most important to the decision, and then use those factors to evaluate my

choices," 65.5% (*n* = 112) indicated *often* followed distantly by *very often* 21.1% (*n* = 36). The final question in the decision-making section of the survey was "I emphasize how confident I am in my decision as a way to gain support for my plans." Respondents chose *sometimes* 41.5% (*n* = 71), *often* 33.3% (*n* = 57), and *rarely* 18.7% (*n* = 32) of the time.

Table 2 shows the descriptive statistics regarding leadership styles for the whole group sample. These descriptive statistics address Research Question 3: What is the predominant leadership style exhibited among secondary school principals? The statement, "As a leader, I allow some flexibility in decision making by the team," was asked of respondents with *agree* chosen 71.3% (*n* = 122) of the time, followed by *strongly agree* 22.8% (*n* = 39). The statement, "As a leader, I often praise employees for a job well done," was asked and 53.8% (*n* = 92) of the respondents indicated *strongly agree* and 39.8% (*n* = 68) of the respondents stated *agree*. When asked the level of agreement to the following statement, "As a leader, I believe it is necessary to make decisions for the group," 40.9% (*n* = 70) stated that they *agreed*, and 29.8% (*n* = 51) indicated that they were *neutral*.

Table 2

Mean Score of Whole Group Responses to Leadership Style

Topic Statement	*M*	*SD*
As a leader, I allow some flexibility in decision making by the team.	4.18	.516
As a leader, I often praise employees for a job well done.	4.49	.618
As a leader, I believe it is necessary to make decisions for the group.	3.34	.944
As a leader, I believe it is necessary to share decision-making responsibilities with employees. Their feedback and input is important.	4.40	.570
As a leader, I trust the team to set their own goals and to problem solve for themselves.	3.67	.791
As a leader, I know my team well and provide them with support when necessary while understanding the tasks they are capable of handling without much direction.	4.17	.655
As a leader, I demonstrate devotion to the organization's purpose and people.	4.57	.564

The next leadership style statement, "As a leader, I believe it is necessary to share decision-making responsibilities with employees. Their feedback and input is important," had respondents who chose *agree* with the most frequency 50.9% (n = 87) followed closely by *strongly agree* at 43.9% (n = 75). *Agree* 52.6% (n = 90) was chosen with the most frequency on the next statement, "As a leader, I trust the team to set their own goals and to problem solve for themselves," distantly followed by *neutral* at 27.5% (n = 47). The next statement, "As a leader, I know my team well and provide them with support when necessary while understanding the tasks they are capable of handling without much direction," had respondents who chose *agree*

57.3% (*n* = 98) with the most frequency, *strongly agree* next at 29.8% (*n* = 51), and 10.5% (*n* = 18) chose *neutral*. For the final leadership statement, "As a leader, I demonstrate devotion to the organizations purpose and people," respondents marked *strongly agree* 59.1% (*n* = 101), 37.4% (*n* = 64) indicated *agree,* and only 0.6% (*n* = 1) marked *disagree*. Table 3 shows the descriptive statistics regarding mindset for the whole group sample. When asked, "Given a task, I believe that when the odds are against me, I cannot succeed," respondents chose *disagree* 59.6% (*n* = 102) of the time and 29.2% (*n* = 50) indicated *strongly disagree* in response. The next statement, "I like the challenge of taking on something new," had 53.8% (*n* = 92) of respondents who marked *agree* and 24.6% (*n* = 42) marked *neutral*. Table 3 shows mean and standard deviation of the whole group responses to mindset. The descriptive statistics that will follow address Research Question 2: What is the current mindset among secondary school principals?

Table 3

Mean Score of Whole Group Responses to Mindset

Topic Statement	*M*	*SD*
Given a task, I believe that when the odds are against me, I cannot succeed.	1.83	.696
I like the challenge of taking on something new. EX: Bring on the new testing program.	3.78	.785
I am the kind of person who would volunteer to transfer to the most difficult building in the district.	3.46	1.010
I am the kind of person who would be upset if transferred to the most difficult building in the district.	2.06	.829

The next statement, "I am the kind of person who would volunteer to be transferred to the most difficult building in the district," had 36.8% (*n* = 63) of the respondents who marked *agree,*

followed closely by 29.8% (*n* = 51) of respondents who marked *neutral,* and only 14.6% (*n* = 25) stated that they *disagreed* with this statement. The final statement in the mindset section of the survey, "I am the kind of person who would be upset if transferred to the most difficult building in the district. How can I succeed when others did not," showed 47.4% (*n* = 81) respondents who *disagreed* with this statement, followed by 25.1% (*n* = 43) who stated that they *strongly disagreed,* and 22.8% (*n* = 39) who felt that they were *neutral* on the question. Table 4 shows the descriptive statistics regarding self-efficacy for the whole group sample. The first statement of the self-efficacy portion of the survey asked respondents to rate, "I can always manage to solve difficult problems if I try hard enough." Respondents chose *frequently true* 59.1% (*n* = 101) of the time, 21.1% (*n* = 36) of respondents indicated *exactly true,* and 17% (*n* = 29) stated *sometimes true*. Table 4 shows the mean score of the whole group responses to self-efficacy. This descriptive statistics section address Research Question 1: What are the current levels of self-efficacy among secondary school principals?

Table 4

Mean Score of Whole Group Responses to General Self-Efficacy

Topic Statement	*M*	*SD*
I can always manage to solve difficult problems if I try hard enough.	4.01	.683
If someone opposes me, I can find the means and ways to get what I want.	3.23	.804
It is easy for me to stick to my aims and accomplish my goals.	3.87	.634
I am confident that I could deal efficiently with unexpected events.	4.29	.581

Next, "If someone opposes me, I can find the means and ways to get what I want," was asked of respondents, 45.6% (*n* = 78) marked *sometimes true* and 35.7% (*n* = 61) marked *frequently true*. *Frequently true* 68.4% (*n* = 117) was the most popular response to the statement, "It is easy for me to stick to my aims and accomplish my goals," and a distant second choice was *sometimes true* at 18.1% (*n* = 31). The last statement in the survey, "I am confident that I could deal efficiently with unexpected events," had 62% (*n* = 106) of respondents who indicated *frequently true* as their answer, followed by 32.7% (*n* = 56) who stated *exactly true,* and only 2.9% (*n* = 5) chose *sometimes true*. Table 5 shows the comparison of the mean and standard deviation of respondents' locale to the whole group. Of the total 171 respondents, 59.1% (*n* = 101) indicated they worked in a rural school, 23.4% (*n* = 40) reported they worked in a suburban/metro school, and 17.5% (*n* = 30) indicated they worked in an urban school. The responses for the decision-making section of the survey for the whole group sample as compared to the sample split by locale were very similar in general.

Table 5

Responses to Decision Making Split by Locale (Rural)

Topic Statement	*M*	*SD*
I evaluate the risks associated with each alternative before making a decision.	4.33	.618
After I make a decision, it's final because I know my process is strong.	3.80	.788
I try to determine the real issue before starting a decision-making process.	4.44	.573
I rely on my own experience to find potential solutions to a problem.	3.85	.792

Table 5 Continued

Topic Statement	*M*	*SD*
I tend to have a strong gut instinct about problems, and I rely on it in decision making.	3.62	.773
I am sometimes surprised by the actual consequences of my decisions.	2.33	.618
I use a well-defined process to structure my decisions.	3.67	.896
I think that involving many stakeholders to generate solutions can make the process more complicated than it needs to be.	2.96	.989
If I have doubts about my decision, I go back and recheck my assumptions and my process.	3.92	.731
I take the time needed to choose the best decision-making tool for each specific decision.	3.82	.888
I consider a variety of potential solutions before I make my decision.	4.30	.558
Before I communicate my decision, I create an implementation plan.	3.52	.820
In group decision making, I tend to support my friends' proposals and try to find ways to make them work.	2.98	1.070
When communicating my decision, I include my rationale and justification.	4.20	.693
Some of the options I've chosen have been much more difficult to implement than I had expected.	3.15	.684
I prefer to make decisions on my own, and then let other people know what I've decided.	2.41	.790
I determine the factors most important to the decision, and then use those factors to evaluate my choices.	4.11	.598
I emphasize how confident I am in my decision as a way to gain support for my plans.	3.23	.859

There were a few responses that differed slightly. The statement, "After I make a decision, it's final because I know my process is strong," had 58.5% (n = 100) of the whole sample who chose *often* and 51.5% (n = 52) of rural who chose the same response. This was the greatest percentage difference of 7.0% between the groups in this section of the survey. The statement, "If I have doubts about my decision, I go back and recheck my assumption," had a response difference of 6.1 percentage points when respondents chose the response of *often*. The response from the whole group was 57.3% (n = 98) and the rural sample respondents reported 63.4% (n = 64). The next statement, "I consider a variety of potential solutions before I make my decisions," showed a response difference of 5.4% when groups chose the response of *often*. The whole group sample was 55.0% (n = 94) and the rural sample was 60.4% (n = 61). Finally, the statement "I try to determine the real issue before starting a decision-making process," had the whole group of 52.0% (n = 89) indicate *very often* and the rural sample with a higher percentage who chose *often* at 48.5% (n = 43). Table 6 shows the descriptive statistics regarding responses to leadership styles as split by locale for the rural group.

Table 6

Responses to Leadership Styles Split by Locale (Rural)

Topic Statement	*M*	*SD*
As a leader, I allow some flexibility in decision making by the team.	4.18	.541
As a leader, I often praise employees for a job well done.	4.49	.629
As a leader, I believe it is necessary to make decisions for the group.	3.31	.933
As a leader, I believe it is necessary to share decision-making responsibilities with employees. Their feedback and input is important.	4.40	.570
As a leader, I trust the team to set their own goals and to problem solve for themselves.	3.73	.753
As a leader, I know my team well and provide them with support when necessary while understanding the tasks they are capable of handling without much direction.	4.18	.612
As a leader, I demonstrate devotion to the organization's purpose and people.	4.58	.536

When comparing the whole group sample to the rural sample as illustrated in Table 6, respondents indicated very similar answers. The greatest difference reported by respondents was a percentage difference of 2.3% in agreement to the statement, "As a leader, I believe it is necessary to make decisions for the group." The whole group sample, 40.9% (n = 70), responded *agree* and the rural sample, 38.6% (n = 39), also responded *agree*. Table 7 shows the descriptive statistics regarding responses to the mindset survey statements as split by locale for the rural group.

Table 7

Responses to Mindset Split by Locale (Rural)

Topic Statement	*M*	*SD*
Given a task, I believe that when the odds are against me, I cannot succeed.	1.88	.689
I like the challenge of taking on something new. EX: Bring on the new testing program.	3.67	.808
I am the kind of person who would volunteer to transfer to the most difficult building in the district.	3.49	1.000
I am the kind of person who would be upset if transferred to the most difficult building in the district.	2.14	.892

The largest difference in responses between the whole group and the rural group for the survey section of mindset occurred with the statement, "I am the kind of person who would be upset if transferred to the most difficult building in the district. How can I succeed when others did not?" The whole group, 47.4% (n = 81), reported *disagree* and the rural group, 43.6% (n = 44), indicated *disagree* for an overall percentage difference of 3.8%. With next largest percentage difference of 2.1%, the whole group, 36.8% (n = 63), responded *agree* to the statement, "I am the kind of person who would be upset if transferred to the most difficult building in the district," and the rural group, 34.7% (n = 35), also indicated *agree*. Table 8 shows the descriptive statistics regarding responses to the self-efficacy survey statements as split by locale for the rural group.

Table 8

Responses to General Self-Efficacy Split by Locale (Rural)

Topic Statement	*M*	*SD*
I can always manage to solve difficult problems if I try hard enough.	4.05	.691
If someone opposes me, I can find the means and ways to get what I want.	3.24	.744
It is easy for me to stick to my aims and accomplish my goals.	3.89	.569
I am confident that I could deal efficiently with unexpected events.	4.27	.550

When comparing the mean difference between the whole group and the rural group for the survey section of self-efficacy, there was little to no change. The greatest percentage difference at 1.9% occurred for the statement, "If someone opposes me, I can find the means and ways to get what I want." The whole group, 45.6% (n = 78), responded *sometimes true* and the rural group, 47.5% (n = 48), responded the same. All other questions from the self-efficacy section had a percentage difference less than 1.0%. Table 9 shows the descriptive statistics regarding responses to the decision-making survey statements as split by locale for the suburban/ metro group.

Table 9

Responses to Decision Making Split by Locale (Suburban/ Metro)

Topic Statement	*M*	*SD*
I evaluate the risks associated with each alternative before making a decision.	4.30	.608
After I make a decision, it's final because I know my process is strong.	3.78	.577
I try to determine the real issue before starting a decision-making process.	4.53	.599
I rely on my own experience to find potential solutions to a problem.	3.83	.712
I tend to have a strong gut instinct about problems, and I rely on it in decision making.	3.40	.744
I am sometimes surprised by the actual consequences of my decisions.	2.15	.700
I use a well-defined process to structure my decisions.	3.88	.723
I think that involving many stakeholders to generate solutions can make the process more complicated than it needs to be.	2.70	1.018
If I have doubts about my decision, I go back and recheck my assumptions and my process.	3.63	.838
I take the time needed to choose the best decision-making tool for each specific decision.	3.85	.802
I consider a variety of potential solutions before I make my decision.	4.50	.555
I consider a variety of potential solutions before I make my decision.	3.73	.716
In group decision making, I tend to support my friends' proposals and try to find ways to make them work.	2.93	.888

Table 9 Continued

Topic Statement	*M*	*SD*
When communicating my decision, I include my rationale and justification.	4.38	.628
Some of the options I've chosen have been much more difficult to implement than I had expected.	3.10	.778
I prefer to make decisions on my own, and then let other people know what I've decided.	2.05	.677
I determine the factors most important to the decision, and then use those factors to evaluate my choices.	3.95	.714
I emphasize how confident I am in my decision as a way to gain support for my plans.	2.88	.911

As compared to the whole group sample (n = 171), there were only (n = 40) respondents who marked *suburban/metro* as their locale. Five statements stood out in this section all with a percentage difference of greater than 5% between the whole group and the suburban/metro group. The statement with the largest percentage difference (11.5%), "After I make a decision, it's final because I know my process is strong," had the whole group 58.5% (n = 100) who chose *often* and the suburban/metro group 70.0% (n = 28) chose *often*. Next was the statement "Before I communicate my decision, I create an implementation plan," 46.2% (n = 79) respondents from the whole group chose *often*, and the suburban/metro group had 57.3% (n = 23) who chose *often* for a percentage difference of 11.3%. The next statement with a 9.4 percentage difference, "I rely on my own experience to find potential solutions to a problem," indicated 45.6% (n = 78) from the whole group sample who marked *often*, and 55.0% (n = 22) from the suburban/metro group marked *often*. The statement, "I tend to have a strong gut instinct about problems, and I

rely on it in decision making," had a 6.9 percentage point difference between the whole group and the suburban/metro group. The whole group, 45.6 % (*n* = 78), marked *sometimes* and the suburban/metro group, 52.5% (*n* = 21), marked *sometimes*. Finally, the whole group sample, 52.0% (*n* = 89), marked *very often* for the statement, "I try to determine the real issue before starting a decision-making process," and the suburban/metro group, 57.5% (*n* = 23), marked the same response. Table 10 shows the descriptive statistics regarding responses to the leadership styles survey statements as split by locale for the suburban/ metro group.

Table 10

Responses to Leadership Styles Split by Locale (Suburban/Metro)

Topic Statement	*M*	*SD*
As a leader, I allow some flexibility in decision making by the team.	4.23	.530
As a leader, I often praise employees for a job well done.	4.50	.506
As a leader, I believe it is necessary to make decisions for the group.	3.55	.959
As a leader, I believe it is necessary to share decision-making responsibilities with employees. Their feedback and input is important.	4.30	.608
As a leader, I trust the team to set their own goals and to problem solve for themselves.	3.60	.810
As a leader, I know my team well and provide them with support when necessary while understanding the tasks they are capable of handling without much direction.	4.18	.747
As a leader, I demonstrate devotion to the organization's purpose and people.	4.55	.677

Only one statement from the leadership style section split by suburban/metro had a large percentage difference from the whole group sample. The statement, "As a leader, I believe it is necessary to make decisions for the group," showed a percent difference of 9.1% between the whole group and the split file suburban/metro group as in the whole group sample, 40.9% (*n* = 70), *agreed* and in the suburban/metro group 50.0% (*n* = 20) marked *agree*. The only other statement that differed by more than a 4% difference was, "As a leader, I believe it is necessary to share decision-making responsibilities with employees. Their feedback and input is important." In the whole group sample, 50.9% (*n* = 87) indicated *agree* and 55.0% (*n* = 22) respondents from the suburban/metro group marked *agree*. Table 11 shows the descriptive statistics regarding responses to the mindset survey statements as split by locale for the suburban/ metro group.

Table 11

Responses to Mindset Split by Locale (Suburban/Metro)

Topic Statement	*M*	*SD*
Given a task, I believe that when the odds are against me, I cannot succeed.	1.68	.797
I like the challenge of taking on something new. EX: Bring on the new testing program.	3.93	.694
I am the kind of person who would volunteer to transfer to the most difficult building in the district.	3.40	1.128
I am the kind of person who would be upset if transferred to the most difficult building in the district.	1.88	.723

The statement "I am the kind of person who would volunteer to transfer to the most difficult building in the district," had 36.8% (*n* = 63) respondents who indicated agreement while

similarly in the suburban/metro group 40% (*n* = 16) respondents indicated agreement. This statement had the slightest percentage difference of all questions in the section at 3.2%. The statement with the greatest change in percent between the whole group and the suburban/metro group at 12.1 % was, "Given a task, I believe that when the odds are against me, I cannot succeed." This statement had 59.6% (*n* = 102) respondents who indicated *disagreement*, and in the suburban/metro group, 47.5% (*n* = 19) indicated *disagreement*. The statement with the next greatest difference in this section had a 7.6 percentage point difference. This difference occurred in the statement "I am the kind of person who would be upset if transferred to the most difficult building in the district." This statement had the whole group 47.4% (*n* = 81) who reported *disagreement,* and in the suburban/metro group, 55% (*n* = 22) *disagreed*. Finally, with a 6.2% difference between the whole group 53.8% (*n* = 92) and the suburban group 60.0% (*n* = 24) was the statement, "I like the challenge of taking on something new. Ex: Bring on the new testing program." Table 12 shows the descriptive statistics regarding responses to the self-efficacy survey statements as split by locale for the suburban/metro group.

Table 12

Responses to General Self-Efficacy Split by Locale (Suburban/Metro)

Topic Statement	*M*	*SD*
I can always manage to solve difficult problems if I try hard enough.	3.90	.788
If someone opposes me, I can find the means and ways to get what I want.	3.31	.893
It is easy for me to stick to my aims and accomplish my goals.	3.85	.489
I am confident that I could deal efficiently with unexpected events.	4.33	.478

The survey statement with the greatest percentage difference of 14.1% between the whole group and the split group stated, "I can always manage to solve difficult problems if I try hard enough." The whole group, 59.1% (*n*= 101), marked *frequently true* and the suburban/metro group, 45.0% (*n* = 18), marked *frequently true*. The next closest percentage difference in this section was a difference of 5.6% for the statement, "If someone opposes me, I can find the means and ways to get what I want." The whole group, 45.6% (*n* = 78), responded *sometimes true* and the suburban/metro group, 45% (*n* = 16), responded *frequently true*. Table 13 shows the descriptive statistics regarding responses to the decision-making survey statements as split by locale for the urban group.

Table 13

Responses to Decision Making Split by Locale (Urban)

Topic Statement	*M*	*SD*
I evaluate the risks associated with each alternative before making a decision.	4.53	.629
After I make a decision, it's final because I know my process is strong.	3.67	.884
I try to determine the real issue before starting a decision-making process.	4.60	.498
I rely on my own experience to find potential solutions to a problem.	3.70	.750
I tend to have a strong gut instinct about problems, and I rely on it in decision making.	3.70	.837
I am sometimes surprised by the actual consequences of my decisions.	2.30	.596
I use a well-defined process to structure my decisions.	3.80	.610

Table 13 Continued

Topic Statement	*M*	*SD*
I think that involving many stakeholders to generate solutions can make the process more complicated than it needs to be.	2.97	1.245
If I have doubts about my decision, I go back and recheck my assumptions and my process.	3.40	.932
I take the time needed to choose the best decision-making tool for each specific decision.	3.90	.803
I consider a variety of potential solutions before I make my decision.	4.37	.615
Before I communicate my decision, I create an implementation plan.	3.47	.973
In group decision making, I tend to support my friends' proposals and try to find ways to make them work.	2.70	.952
When communicating my decision, I include my rationale and justification.	4.00	.743
Some of the options I've chosen have been much more difficult to implement than I had expected.	3.13	.730
I prefer to make decisions on my own, and then let other people know what I've decided.	1.97	.765
I determine the factors most important to the decision, and then use those factors to evaluate my choices.	4.07	.521
I emphasize how confident I am in my decision as a way to gain support for my plans.	3.17	.834

Compared to the whole group sample (n = 171), there were only (n = 30) respondents who marked *urban* as their locale. The greatest percentage difference between the whole group and the urban locale occurred in the statement, "If I have doubts about my decision, I go back

and recheck my assumptions and my process." The whole group, 57.3% (*n* = 98), responded *often* and the urban group, 40% (*n* = 12), responded *often*. There was a 17.3 % difference between the groups. The next greatest percentage difference occurred in the statement, "Before I communicate my decision, I create an implementation plan." The whole group, 46.2% (*n* = 79), indicated *often*, and the urban group, 30.0% (*n* = 9), stated *often* with a percent difference of 16.2 percentage points. The next closest difference in percentage points was a tie at 8.2 with two questions. The first statement in the tie, "After I make a decision, it's final because I know my process is strong," had the whole group, 58.5% (*n* = 100), who responded *often* and the urban group, 66.7% (*n* = 20), responded the same. For the next statement in the tie, "Some of the options I've chosen have been much more difficult to implement than I had expected," the whole group, 58.5% (*n* = 100), marked *sometimes* and the urban group, 66.7 % (*n* = 20), marked the same. The only other statement with a percent difference above 8.0% was the following, "I try to determine the real issue before starting a decision-making process," for which the whole group, 52.0% (*n* = 89), responded *very often*, and 60.0% (*n* = 18) of respondents in the urban group choose *often* as well. Table 14 shows the descriptive statistics regarding responses to the leadership styles survey statements as split by locale for the urban group.

Table 14

Responses to Leadership Styles Split by Locale (Urban)

Topic Statement	*M*	*SD*
As a leader, I allow some flexibility in decision making by the team.	4.10	.403
As a leader, I often praise employees for a job well done.	4.43	.728
As a leader, I believe it is necessary to make decisions for the group.	3.13	.937
As a leader, I believe it is necessary to share decision-making responsibilities with employees. Their feedback and input is important.	4.53	.507
As a leader, I trust the team to set their own goals and to problem solve for themselves.	3.60	.894
As a leader, I know my team well and provide them with support when necessary while understanding the tasks they are capable of handling without much direction.	4.13	.681
As a leader, I demonstrate devotion to the organization's purpose and people.	4.57	.504

With the greatest percent difference for this survey section of 12%, the statement, "As a leader, I allow some flexibility in decision making by the team," had the whole group, 71.3% (*n* = 122), *agree* with the statement, and the urban group, 83.3% (*n* = 25), had the higher *agreement* percentage rate. The next closest percentage difference occurred in the statement, "As a leader, I believe it is necessary to make decisions for the group," with the whole sample, 40.9% (*n* = 70), who marked *agree* and in the urban sample, 36.7% (*n* = 11), indicated the same. The final statement of note in this section was with the question, "As a leader, I know my team well and provide them with support when necessary while understanding the tasks they are capable of

handling without much direction." The whole group, 57.3% (*n* = 98), responded *agree* and the urban group, 53.3% (*n* = 16), responded *agree*. Table 15 shows the descriptive statistics regarding responses to the mindset survey statements as split by locale for the urban group.

Table 15

Responses to Mindset Split by Locale (Urban)

Topic Statement	*M*	*SD*
Given a task, I believe that when the odds are against me, I cannot succeed.	1.90	.548
I like the challenge of taking on something new. EX: Bring on the new testing program.	3.93	.785
I am the kind of person who would volunteer to transfer to the most difficult building in the district.	3.43	.898
I am the kind of person who would be upset if transferred to the most difficult building in the district.	2.03	.718

There was not much variation in the percent difference between the whole group and the urban group in general for the mindset survey section. The greatest percentage difference was 10.4% which was rather large in comparison to the other statements. Two statements had a percent difference of around 3% and the fourth statement had a percent difference just below 3%. The statement with the greatest difference, "Given a task, I believe that when the odds are against me, I cannot succeed," had the whole group, 59.6% (*n* = 102), who indicated *disagree* when responding to the statement, and the urban group, 70.0% (*n* = 21), also indicated *disagree*. Table 16 shows the descriptive statistics regarding responses to the self-efficacy survey statements as split by locale for the urban group.

Table 16

Responses to General Self-Efficacy Split by Locale (Urban)

Topic Statement	*M*	*SD*
I can always manage to solve difficult problems if I try hard enough.	4.03	.490
If someone opposes me, I can find the means and ways to get what I want.	3.10	.885
It is easy for me to stick to my aims and accomplish my goals.	3.83	.950
I am confident that I could deal efficiently with unexpected events.	4.27	.785

There were two statements with a percent difference of greater than 5% in this general self-efficacy section of the survey. The statement with the greatest difference of 17.6% was, "I can always manage to solve difficult problems if I try hard enough." The whole group, 59.1% (n = 101), responded *frequently true* to that statement, and the urban group, 76.7% (n = 23), also indicated *frequently true*. The next most noteworthy statement was, "If someone opposes me, I can find the means and ways to get what I want." The whole group, 45.6% (n = 78), marked *sometimes true*, and the urban group, 53.3% (n = 16,) responded in the same manner,

Inferential Analyses of the Null Hypotheses

Null Hypothesis 1

The first null hypothesis of this study discerned whether self-efficacy, leadership style, and mindset had a significant impact on secondary school principals' decision making. The explanation below addresses Research Question 4: Do factors of self-efficacy, leadership style, and mindset serve as significant predictors of secondary school principals' decision making? A

simultaneous multiple regression was administered to determine if the criterion variable of decision making could be predicted from the predictor variables which included leadership style, mindset, and self-efficacy. The following assumptions (independence of residuals, linearity, homoscedasticity, multicollinearity, detecting outliers, and normality of residuals) for multiple regression were tested and met.

A Durbin-Watson test was conducted to test the assumption of independence of residuals. Lomax & Hahs-Vaughn (2012) stated, "The procedure for assessing independence is to examine residual plot versus the predicted values of the dependent variable" (p. 381). The test indicated an outcome of 1.89 which fell within the expected range to relay that the assumption had been met. The result of the Durbin-Watson test should be a value ranging between 0-4. A result of approximately two is an expected value to show the assumption has been met.

To test for linearity, scatterplots were reviewed. In order for this assumption to be met, once the partial regression plots for each of the predictor variables are graphed, there should be a horizontal band indicating a general positive linear relationship between the predictor variables and the criterion variable (Field, 2013) Based on the scatterplots, this assumption was met.

Next, homoscedasticity was reviewed. When plotted, if all residuals are equal for predicted variables, or the variables have the same variance without the spread increasing or decreasing then the assumption was met (Field, 2013). This was the case in this study.

Multicollinearity seeks to ensure the predictors are not too correlated with one another. It is necessary to tell which predictor variable explains the variance in the criterion variable. If the predictor variables have a high level of correlation, then I would not be able to determine which predictor variable had the most bearing on the criterion variable. Lomax and Hahs-Vaughn (2012) stated, "Detecting multicollinearity can be done by reviewing the VIF and tolerance

statistics" (p. 406). Tolerance levels should be above .2 in order to indicate that assumptions have been met. In this case, the assumptions were met as tolerance levels were .89 and above.

Next, outliers were examined by reviewing the standardized residuals. An outlier is a data point that falls well outside of the rest of the plotted data points (Field, 2013). The assumption was met as no standardized residual fell outside of the +1.5 or -1.5 standard deviations.

Normality of residuals was checked by "examining the unstandardized residuals," (Lomax & Hahs-Vaughn, 2012, p. 412). In order for the assumption to be met, it is expected that the residuals fall within the normal distribution of the model. A normal p-plot of regression of standardized residuals was run to ensure that data points fells within the diagonal line when plotted. The assumption was met. Table 17 reviews the model summary statistics for Null Hypothesis 1.

Table 17

Model Summary Statistics Null Hypothesis 1

Criterion Variable	*R*	R^2	Adjusted R^2	Shrinkage	*SE* of the Estimate
Decision Making	.515	.265	.252	.013	.25269

Reviewing the model summary statistics for the Null Hypothsis 1 (Table 17), it was noted that the multiple correlation coefficient (*R*) which represents the strength of the relationship between the criterion variable, and the predictor variables were .52 indicating a strong relationship as a number between 0 and 1 and closer to 1 determined a strong linear relationship. The coefficient of multiple determination (R^2) defines the amount of explained variance in the criterion variable by the linear combination of the predictor variables. There was 26.5% (.265)

of the variance in the decision-making score which was explained by the predictors as shown in Table 16. The adjusted *R* square, or the adjusted multiple determination coefficient, explained the variance after considering the sample size. Lomax and Hahs-Vaughn (2012) stated, "Adjusted *R* square adjusts for the number of independent variables and sample size. When sample size is small, . . . the difference between R^2 and adjusted R^2 will be large to compensate for a large amount of bias" (p. 396). In the model summary above, the adjusted R^2 was .252 or 25.2%. The shrinkage was .013 or 1.3% of the variance being explained was lost due to the adjustment. The standard error of estimate was the average residual distance of each data point from the regression line. The standard error of estimate was .25.

The results of the regression test analyzed the variance between predictor variables of leadership styles, mindset, and self-efficacy as compared to the criterion variable of decision making. The predictor variables within the regression model explained a significant amount of variance within the decision-making score, $F(3, 164) = 19.71$, $p < .001$. Table 18 shows the model summary statistics for the coefficients.

Table 18

Model Summary for Coefficients

Variable	*B*	*SE*	*Beta*	*t*	*Sig.*
Constant	1.380	.287		4.808	.000
Leadership Style	.316	.060	.374	5.298	.000**
Mindset	.165	.058	.192	2.856	.005*
Self-Efficacy	.111	.045	.173	2.455	.015*

*$p < .05$; **$p < .001$

Through the employment of the regression model, it was determined that the three predictor variables of leadership style, mindset, and self-efficacy all explained a significant amount of variance in the criterion variable of decision making. The leadership composite score was significant, $t = 5.30$, $p < .001$. The mindset composite score was also significant, $t = 2.86$, $p < .005$; and finally, the self-efficacy composite score was significant, $t = 2.46$, $p < .015$ (Table 18).

Leadership style had an unstandardized partial regression score of .32 which meant a one unit increase in leadership style is predicted to increase the decision-making score by .32 while keeping all other predictors constant. Next, mindset had an unstandardized partial regression score of .17 so a one unit increase in mindset was predicted to increase the decision-making score by .17 while keeping all other predictors constant. Last, self-efficacy had an unstandardized partial regression score of .11 so a one unit increase in self-efficacy was predicted to increase the decision-making score by .11 when the effects of other predictors are removed.

Standardized partial regression coefficients, or beta weights needed to be reported. The standardized partial regression coefficient for leadership was .374. For mindset the standardized partial regression coefficient was .192, and for self-efficacy, it was .173. These standardized partial regression coefficients or beta weights showed the amount of influence of each predictor variable with regard to decision making. Through the examination of the beta weights, it was determined that the leadership score was the strongest predictor within the regression model. The mindset score was also significant and served as the second strongest predictor. Finally, the self-efficacy score was also significant, but was the least effective predictor.

Null Hypothesis 2

The second null hypothesis of this study discerned whether principal characteristics of gender, years of experience, and locale had a significant impact on secondary school principals' decision making. This null addressed Research Question 5: Do principal characteristics of gender, years of experience, and locale serve as significant predictors of secondary school principals' decision making? The necessary tests were run to determine if assumptions were met in the multiple regression for Null Hypothesis 2. To test for independence of residuals, a Durbin-Watson test was conducted. The outcome produced a score of 1.871 which fell within the range of around 2 needed to indicate the assumption was met. In order for linearity to be met, the residuals must almost all fall within the 95% confidence band on the scatterplot. This was the case with this multiple regression model. Homoscedasticity was also met as the plots of the residuals fell within the expected spread. The assumption of multicollinearity was met as all tolerance levels were above .2, and there were no outliers as all residuals fell within +1 or -1 1.5 standard deviations. Finally, based on examination of the normal p-plot for testing the normality of residuals, because the residuals fell within an expected range of the diagonal, one can assume the assumption had been met. Table 19 shows the model summary statistics for Null Hypothesis 2.

Table 19

Model Summary Statistics Null 2

Criterion Variable	*R*	R^2	Adjusted R^2	Shrinkage	*SE* of the Estimate
Decision making	.206	.042	.025	.017	.29529

In reviewing the model summary statistics for the Null Hypothesis 2, it was noted that the multiple correlation coefficient (R) which represented the strength of the relationship between the criterion variable and the predictor variables was .206 which indicated a small relationship as a number between 0 and 1 and closer to 1 determined a strong relationship. The coefficient of multiple determination (R^2) defined the amount of explained variance in the criterion variable by the linear combination of the predictor variables. There was 4.2% (.042) of the variance in the decision-making score as explained by the predictors as shown in Table 19. The adjusted R square, or the adjusted multiple determination coefficient, explained the variance after the sample size and the number of predictors was considered. In the model summary above, the adjusted R^2 was .025 or 2.5%. The shrinkage was .017 or 1.7% of the variance was lost due to the adjustment. The standard error of estimate was the average residual distance of each data point from the regression line. The standard error of estimate was .295.

The results of the regression test analyzed the variance between predictor variables of gender, years of experience, and locale as compared to the criterion variable of decision making. The predictor variables within the regression model did not explain a significant amount of variance within the decision-making score, $F(3, 166) = 2.44$, $p = .066$.

Summary

This chapter used quantitative data to determine if relationships existed between the predictor variables of leadership style, mindset, self-efficacy, gender, years of experience, or locale and the criterion variable of decision making. There were two null hypotheses that were tested. The first null discerned whether leadership style, mindset, and self-efficacy had a significant impact on secondary school principals' decision making. A simultaneous multiple regression was administered. Following all necessary tests, it was determined that the three

predictor variables of leadership style, mindset, and self-efficacy all explained a significant amount of variance in the criterion variable of decision making. Leadership style was the strongest predictor followed by mindset and then finally by the self-efficacy score.

The second null hypothesis focused on the characteristics of gender, years of experience, and locale and whether or not these predictor variables had a significant impact on the criterion variable of decision making. Again, simultaneous multiple regression was employed. The results of the regression test analyzed the variance between the predictor variables of gender, years of experience, and locale as compared to the criterion variable of decision making.The predictor variables did not explain a significant amount of variance within the decision-making score.

CHAPTER 5

FINDINGS, IMPLICATIONS, AND FUTURE RESEARCH

Chapter 5 contains the results, implications, and future research recommendations of this study. This chapter is divided into the following sections: introduction, summary of findings, implications, recommendations for further research, and summary. Principal decision making can be extremely difficult at times. Daily decisions are made along a wide spectrum of issues all of which impact students in some way, shape, or form (Wiseman, 2005). Principals must consider all stakeholders in nearly all decisions made on a daily basis and bear in mind what is in the best interest of students (Queen & Queen, 2005). Decisions can be quick and simple or complex and stressful. Whether completely defined or not, principals have a leadership style, a particular mindset, and a sense of self-efficacy that knowingly or unknowingly impacts his or her decisions.

A survey was employed in conducting this quantitative study. The survey population included all public secondary school principals in the state of Indiana and the sample included the 171 respondents from the population. Respondents were asked questions relative to decision making, leadership styles, mindset, and self-efficacy. The survey followed a 5-point Likert scale and was separated into five sections. The first section focused on demographic statements necessary to determine basic information about the respondents, the second section contained general statements regarding decision making, and the third section shared statements on

leadership styles. The fourth survey section contained statements regarding mindset followed by the last section which focused on self-efficacy.

Summary of Findings

Research Question 1

What are the current levels of self-efficacy among secondary school principals? Of the 171 respondents participating in this study, 168 responded to the statements regarding self-efficacy. The first statement of the self-efficacy portion of the survey asked respondents to rate, "I can always manage to solve difficult problems if I try hard enough." Respondents chose *frequently true* 59.1% (*n* = 101) of the time, 21.1% (*n* = 36) of respondents indicated *exactly true,* and 17% (*n* = 29) stated *sometimes true*. Next, "If someone opposes me, I can find the means and ways to get what I want" was asked of respondents, 45.6% (*n* = 78) of whom marked *sometimes true,* and 35.7% (*n* = 61) marked *frequently true*. *Frequently true,* 68.4% (*n* = 117), was the most popular response to the statement, "It is easy for me to stick to my aims and accomplish my goals," and a distant second choice was *sometimes true,* 18.1% (*n* = 31). The last statement in the survey, "I am confident that I could deal efficiently with unexpected events," had 62% (*n* = 106) of respondents who indicated *frequently true* as their answer followed by 32.7% (*n* = 56) who stated *exactly true* and only 2.9% (*n* = 5) chose *sometimes true*.

In general, when the top two responses for each question regarding self-efficacy were combined, respondents overwhelmingly displayed a strong sense of self-efficacy in decision making. Manz and Sims (2001) stated,

> Research shows that self-efficacy beliefs become self-fulfilling prophecies; that is, positive beliefs about our ability to perform successfully enhances the probability of

> actually doing it. Conversely, negative beliefs decrease the probability. Our state of mind about ourselves clearly has an impact on ultimate performance. (p. 110)

Given the definition of Manz and Sims, the data analysis suggested that respondents felt confident in decision making and problem solving.

Research Question 2

What is the current mindset among secondary school principals? Of the 171 respondents participating in this study, 169 responded to the statements regarding mindset. When asked, "Given a task, I believe that when the odds are against me, I cannot succeed" respondents chose *disagree* 59.6% (*n* = 102) of the time and 29.2% (*n* = 50) indicated *strongly disagree* in response. The next statement, "I like the challenge of taking on something new," had 53.8% (*n* = 92) of respondents who marked *agree* and 24.6% (*n* = 42) marked *neutral*. The final statement in the mindset section of the survey, "I am the kind of person who would be upset if transferred to the most difficult building in the district. How can I succeed when others did not," showed 47.4% (*n* = 81) respondents who *disagreed* with this statement followed by 25.1% (*n* = 43) who stated that they *strongly disagreed,* and 22.8% (*n* = 39) who felt that they were *neutral* on the question.

In general, principals showed a growth mindset approach to decision making. The preceding statements regarding taking on something new and not getting discouraged when the odds are against them evidenced a growth mindset mentality. In each of these scenarios, respondents agreed with the growth mindset answer by nearly 50% or greater than 50%. However, the statement, "I am the kind of person who would volunteer to be transferred to the most difficult building in the district," had 36.8% (*n* = 63) of the respondents who marked *agree* followed closely by 29.8% (*n* = 51) of respondents who marked *neutral,* and only 14.6% (*n* = 25)

stated that they *disagreed* with this statement. This was the lowest response percentage indicating more of a fixed mindset mentality. Additionally, this was the only statement, where the majority did not choose a growth mindset approach; however, relative to the statement suggesting a transfer to the most difficult building, 72.5% *agreed* or *strongly agreed* he or she would go. This evidences the growth mindset mentality in that he or she would go if asked even if they did not volunteer. It is difficult for some to leave a position they love; however, if it is best for the school district, they will comply. Of the 169 respondents, the growth mindset seemed to prevail in decision making. Dweck (2008) explained the power of the growth mindset over fixed mindset:

> The fixed mindset limits achievement. It fills people's minds with interfering thoughts, it makes effort disagreeable, and it leads to inferior learning strategies. What's more, it makes other people into judges instead of allies. Whether we're talking about Darwin or college students, important achievements require a clear focus, all-out effort, and a bottomless trunk full of strategies. Plus allies in learning. This is what the growth mindset gives people, and that's why it helps their abilities grow and bear fruit. (p. 67)

Research Question 3

What is the predominant leadership style exhibited among secondary school principals? Of the 171 respondents participating in this study, 169 responded to the statements regarding leadership style. The statement, "As a leader, I allow some flexibility in decision making by the team," was asked of respondents with *agree* chosen by 71.3% (n = 122), followed by *strongly agree* 22.8% (n = 39). The statement, "As a leader, I often praise employees for a job well done," was asked with 53.8% (n = 92) of the respondents who indicated *strongly agree* and 39.8% (n = 68) of the respondents stated *agree*. When asked the level of agreement to the

following statement, "As a leader, I believe it is necessary to make decisions for the group," 40.9% (*n* = 70) stated that they *agreed*, and 29.8% (*n* = 51) indicated that they were *neutral*. The next leadership style statement, "As a leader, I believe it is necessary to share decision-making responsibilities with employees. Their feedback and input is important," had respondents who chose *agree* with the most frequency, 50.9% (*n* = 87), followed closely by *strongly agree* at 43.9% (*n* = 75). *Agree*, 52.6% (*n* = 90) was chosen with the most frequency on the next statement, "As a leader, I trust the team to set their own goals and to problem solve for themselves," distantly followed by *neutral* at 27.5% (*n* = 47). The next statement, "As a leader, I know my team well and provide them with support when necessary while understanding the tasks they are capable of handling without much direction," had respondents who chose *agree* 57.3% (*n* = 98) with the most frequency and *strongly agree* next, 29.8% (*n* = 51), 10.5% (*n* = 18) responded *neutral*. The final leadership statement, "As a leader, I demonstrate devotion to the organization's purpose and people," had respondents who marked *strongly agree,* 59.1% (*n* = 101), 37.4% (*n* = 64) indicated *agree,* and only 0.6% (*n* = 1) marked *disagree*.

In reviewing the leadership styles presented in the survey, the greatest number of responses by survey participants was in agreement with the statement representing the transformational leadership style. In this statement, 71.3% (*n* = 122) agreed with the statement, "As a leader, I allow some flexibility in decision making by the team." Kowalski and Reitzug (1993) discussed the transformational leadership style:

> For leadership to be transformational, the substance of organizational beliefs and values must show a concern for higher-order, intrinsic, and moral motives. Transformation implies change. To engender commitment, the change must be an improvement over current affairs that appeals to the heart as well as the head. (p. 234)

With such a high percentage rate of respondents in agreement with the transformational statement in the survey, it would seem that principals must be in agreement with Kowalski and Reitzug's assessment of the style.

Greenleaf (1970) shared the idea of the servant-leader as one who leads by meeting the needs of those around him and also serving as leader in mind and spirit. Sergiovanni (1991) offered,

> One of the great secrets of leadership is that before one can command the respect and followership of others, she or he must demonstrate devotion to the organization's purposes and commitment to those in the organization who work day by day on the ordinary tasks that are necessary for those purposes to be realized. (p. 334)

The next highest response rate, 59.1% (n = 101), was in the statement representing the servant leadership style. This statement was, "As a leader, I demonstrate devotion to the organization's purpose and people." This indicated that the respondents of the survey valued the organizations they represent and truly cared about the others around them.

Rubin (2013) stated, "Situational leadership entails implementing a style of leadership suited to a particular set of circumstances. Those who practice it must be masters of flexibility" (p. 62). Situational leadership requires the leader to be totally aware of possible outcomes given all circumstances of a particular situation. "In situational leadership, three factors affect the leader's decisions: the situation, the capability of the followers, and the capability of the leader" (Rubin, 2013, p. 62). Following the servant leadership style statement was the statement representing the situational leadership style, "As a leader, I know my team well and provide them with support when necessary while understanding the tasks they are capable of handling without much direction," 57.3% (n = 98) indicated agreement. The situational leadership style

tends to lend itself to effective decision making in schools in that often there is a different set of circumstances to be considered with every decision. This style also dictates that leaders will use their teams effectively.

Research Question 4

Do factors of self-efficacy, leadership style, and mindset serve as significant predictors of secondary school principals' decision making? A simultaneous multiple regression was conducted following the collection of data and all assumptions were met. Results of the statistical analysis were presented in Chapter 4. Results indicated that the predictor variables of leadership styles, mindset, and self-efficacy all explained a significant amount of variance in the criterion variable (i.e., decision making). The predictor variable of leadership style had an unstandardized partial regression score of .32 which meant a one unit increase in leadership style is predicted to increase the decision-making score by .32 while keeping all other predictors constant. The same score for the predictor variable of mindset was .17, and the score for the predictor variable of self-efficacy was .11. The standardized partial regression coefficients, or beta weights, showed the amount of influence of each predictor with regard to decision making. The standardized partial regression coefficient for leadership style was .374. For mindset, the standardized partial regression coefficient was .192 and for self-efficacy it was .173.

Literature and study findings support the outcome that leadership style, mindset, and self-efficacy inform decision making. Bandura (1997) addressed two of the three predictors, mindset and self-efficacy, when he stated, "People who lack confidence in their judgement have difficulty making decisions and sticking with them even if they have been taught the strategies for doing so" (p. 427). In addition, leadership, mindset and self-efficacy were addressed by Hannah, Avolio, Luthans and Harms (2008),

> Positive psychological states such as efficacy directly promote effective leader engagement, flexibility and adaptability across the varying challenges characterizing complex organizational contexts. This is because higher levels of self-efficacy provide internal guidance and drive to create the agency needed to pursue challenging tasks and opportunities. (p. 1)

Research Question 5

Do principal characteristics of gender, years of experience, and locale serve as significant predictors of secondary school principals' decision making? The study sought to determine if there was a significant amount of variance for the predictor variables of gender, years of experience, and locale. The multiple correlation coefficient (*R*) which represented the strength of the relationship between the criterion variable and the predictor variables was .206 which indicated a small relationship. Therefore, the predictor variables of gender, years of experience, and locale did not explain a significant amount of variance with regard to the decision-making score.

These demographic characteristics were selected because the literature and study findings indicated the need to study whether or not the characteristics impacted decision making (Beteille, Kalogrides, & Loeb, 2012; M. Coleman, 2003; Fuller & Young, 2009; Johnson, 2005). It is possible that a significant amount of variance could not be explained because the nature of the decision-making questions was based on situational context and practices, delving deeper into behaviors and emotions. It is also possible the high-stakes environment which has given way to statewide accountability expectations has served to minimize decision-making differences across the selected demographics (Queen & Queen, 2005; Stevenson, 2006). In other words, gender,

locale, and years of experience may no longer significantly impact decision making in an era of accountability.

Limitations of the Study

Limitations in research are those factors beyond the researcher's control that could potentially increase the possibility for error in the conclusions, interpretations, or outcomes of the study. In this study, limitations included the following:

1. Principals rated/analyzed themselves and may not have been completely open or honest in their evaluation of personal performance. Respondents may have been unable to rate themselves negatively and, therefore, may not have responded as honestly as possible. Standardized questions made measurement more precise and thus mollified this effect by ensuring similar data were collected from all respondents.
2. Principals may have had unintentional bias toward what they considered to be best practice in terms of decision making and leadership. If bias were present, it may have caused respondents to answer questions without considering other best practice options and therefore, not allowing for an open, honest evaluation. An adequate sample size of respondents were surveyed in order to achieve balance.
3. A determination of closed-minded or fixed mindset decision making vs. open-minded or growth mindset decision making was somewhat subjective. Respondents may not have fully understood the mindset from which they were operating and, therefore, may not have responded in an appropriate manner. Reduction in a negative effect was addressed with an opportune sample size.
4. My own potential, personal bias toward what I deem to be considered best practice in terms of decision making could potentially have impacted my approach toward

development and analysis for the study findings, causing me to lean in a particular direction during analysis. Research design counteracted this possibility as the results of tests run drove my analysis with an expectation that statistical assumptions be met.

Implications

The significance of this study was that its findings have the potential to offer principals insight into their decision-making practices. The goal was to see which predictor variable most impacted principals' decisions so as to allow principals to think about how a decision is approached and what constructs to use. In understanding which predictor has the most influence, a principal has a greater sense of direction with which to self-reflect for improved practice.

Leadership Style and Decision Making

This study found that leadership style had the most significance in principal decision making. Northouse (2010) stated,

> The style approach reminds leaders that their actions toward others occur on a task and a relationship level. In some situations, leaders need to be more task oriented, whereas in others they need to be more relationship oriented. Similarly, some subordinates need leaders who provide a lot of direction, whereas others need leaders who can show them a great deal of nurturance and support. The style approach gives a leader a way to look at his or her own behavior by subdividing in two dimensions. (p. 77)

This suggested that principals need to recognize how their own behavior relates to the task at hand as well as the behavior of those around them. Northouse (2010) also shared, "The style approach works not by telling leaders how to behave, but by describing the major components of their behavior" (p. 77). Leadership styles of principals are not static. Northouse (2012) further noted, "It is important to note that these styles of leadership are not distinct

entities; it is best to think of them as occurring along a continuum, from high leader influence to low leader influence" (p. 58). Principals who recognize their own personal leadership style and how it affects their staff and who have the ability to understand which individuals need more guidance and direction or less, are more effective (Kowalski & Reitzug, 1993). Effectiveness in this regard will have an impact on decision making according to this study.

Mindset and Decision Making

Next, this study found that mindset followed leadership styles in terms of its significance with regard to decision making. Leaders need to have an understanding of their own personal mindsets in order to be able to grow (Dweck, 2008). Dweck (2008) went on to state, "You have a choice. Mindsets are just beliefs. They're powerful beliefs, but they're just something in your mind, and you can change your mind" (p. 16). This study indicated that because the predictor variable of mindset does explain a significant amount of variance in decision making, one could conclude that if principals gain an understanding of their own personal mindset capabilities, it is possible that their approach to decision making could be impacted. Recognizing a fixed mindset approach to decisions and changing that approach could be powerful for a principal. Also, cultivating a culture of growth mindset creates improvement in schools. Sparks (2013) stated, "Researchers have found in many studies that students with a growth mindset improve more in academics and other skills, and can even be less aggressive and more socially engaged" (p. 1). The importance of this information is for principals to recognize how knowing this can play into their process of self-reflection and ultimately improve leadership.

Self-Efficacy and Decision Making

Finally, this study found that the least significant predictor regarding decision making was self-efficacy. Bandura (1997) indicated that positive leader self-efficacy is important to

school success because leaders tend to set more appropriate goals and have an increased ability to adapt to change. Confidence in a decision made would project a high or strong self-efficacy" (p. 36). Tschannen-Moran and Gareis (2004) indicated that principals may feel a good sense of efficacy in making certain decisions in various contexts but may not be able to transfer those same feelings to other tasks. Principals have strengths and weaknesses and that will show in terms of their self-efficacy and how they make decisions. This may be why this particular indicator showed the least impact as efficacy can vary from situation to situation. Principals should evaluate strengths and weaknesses as a part of the self-reflection process in an effort to increase effectiveness.

Select Demographics and Decision Making

The next set of predictor variables for review included gender, years of experience, and locale. Interestingly, none of these variables had a significant impact on the criterion variable of decision making. Although it is not surprising that locale did not have an effect on decision making, it is surprising that gender and years of experience did not.

Although there is not much research to be found on gender and its impact to decision making among principals, there has been quite a bit of research on gender and the attainment of leadership positions in schools. M. Coleman (2003) surveyed men and women in the principalship. She found,

> One of the clearest messages to emerge from the responses of the principals in my surveys is that the women feel 'noticeable' in their position as a leader, they feel that they have to justify themselves as women and as leaders and that they have to prove their worth and work harder than the men. Gender is often not an issue for men in a society where they are still seen as the natural leaders. (p. 4)

M. Coleman (2003) concluded, “The role of leader in a secondary school, is still seen as being naturally a male one, and that a women in the role therefore deals with prejudice” (p. 17).

Hoff and Mitchell (2008) indicated that women are not represented in leadership roles to the extent that men are. They went on to say, “Since authority and decisiveness are traits associated with leadership, it follows that men are often viewed more positively as leaders” (p. 3). Hoff and Mitchel (2003) also reported, “The result of these established gender norms is that women often hold lower expectancies for careers in administration” (p. 3). They discovered through their research that timing was a factor as well and that women often teach longer than men prior to entering the field of administration which has a “negative effect on advancement opportunities” (p. 5).

When discussing the impact of years of experience with regard to decision making, the first concept that comes to mind is mentorship. In supporting new classroom teachers, often principals pair a rookie teacher with a veteran teacher in a mentoring partnership. The goal is for the teacher with many years of experience to provide support and guidance to the new teacher. Likewise, superintendents, too, will pair new principals with a practicing principal. Because of this practice, it is surprising that the years of experience of respondents did not have an impact on decision making. Mentorship programs and partnerships would support the opposite stance. Moir and Bloom (2003) shared of the importance of principal mentorship programs in the success of new principals. Holloway (2004) stated, “Mentoring programs can provide the collegial support that new principals need. Unfortunately, such programs are not available to most new principals. Fewer than half of the districts in Educational Research Service’s (2000) survey had formal principal mentoring programs” (p. 87). This could be one reason why years of

experience did not impact decision making. In theory, mentorship is a useful practice, but interestingly, did not show up as a factor in this study.

Fields (2015) conducted a narrative study regarding decision making of assistant principals. The findings indicated assistant principals rely heavily on collaboration for decision making. However, this is more difficult when there is only one assistant principal in the building and access to peers is limited. This tends to happen in smaller more rural districts as schools with a greater enrollment tend to employ additional staff which may include more than one assistant principal. Fields stated, "In conclusion, based on the findings of this study, assistant principals utilize training, personal experience, experience of other assistant principals, their relationship with their principal and collaboration with other assistant principals in their decision making" (p. 74). Generalizing the preceding evidence to other administrative positions may partially explain why locale did not surface as a significant factor in this study.

Recommendations for Further Research

Recommendations for further study can be suggested based on the outcome of this research. The first option would be to expand the participants and conduct the same study. A larger sampling might yield different relationships among the demographic variables and decision making. Although this study focused on secondary school principals, a new study could include elementary and middle-level principals so that all levels are considered for relational connections. This would allow a researcher to determine relationships among and between the varying developmental levels.

Additionally, the study could be replicated by increasing the number of states included in the research. This study was limited to the state of Indiana and a new study might include surrounding states to better understand the Midwest as a region as well as other regions of the

continental United States. Increasing the number of principals involved would potentially improve the validity and reliability of survey results as well.

Another study could examine the leadership styles more closely. Analyzing which leadership style in particular had the most impact on decision making could be useful. This type of study might help principals understand how an individual style could either hinder or help their decision-making practices.

Additionally, mindset as a predictor variable by itself could be analyzed more closely with regard to decision making. Studying the concepts of growth mindset along with fixed mindset and how they separately impact decision making would be noteworthy. It would be interesting to see if results correspond with existing research on student achievement when looking at growth mindset and fixed mindset.

Another approach could be a mixed-method sequential study that might be considered in which data are collected from the survey instrument, then follow-up interviews are conducted with a random sampling of participants. This would contribute to a better understanding of the data analysis and more deeply probe factors related to leadership decision making. In particular, this might provide a richer analysis of the relationship between select demographic variables (i.e., gender, locale, and years of experience) and decision making.

Finally, conducting a qualitative case-study design in which the focus group is broadened to other stakeholders might deepen understanding around this dissertation topic. A focus group consisting of all key-decision makers in the building such as the assistant principal, dean, counselor, athletic director or other administrative team members whom may have input in the decision-making process should be considered. Question protocol might focus on how decisions

are made, whether a particular mindset or leadership style prevails, and whether the group functions effectively in the decision-making process.

Summary

In summary, five research questions were addressed. These questions related to select demographic variables, leadership styles, mindset, and self-efficacy and their relationship with decision making among secondary school principals. Both descriptive and inferential statistics were utilized. Interestingly, the select demographics of locale, gender and years of experience did not yield a strong relationship, which explained a significant amount of variance in decision making. However, the significance of this study was that its findings have the potential to offer principals insight into improved decision-making practices. This study will allow principals to think about how they approach a decision and then reflect upon the decision for improved practice through the lens of leadership style, mindset, and self-efficacy. A guide for reflection outside of the pressures and rigors of the school day when principals are immersed in decision making would be ideal.

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APPENDIX A: E-MAIL SENT TO IDOE REQUESTING E-MAILS OF INDIANA PUBLIC SCHOOL PRINCIPALS

Indiana Department of Education
Office of Legal Affairs
South Tower, Suite 600
115 W. Washington Street
Indianapolis, IN 46204

July 13, 2015

RE: Data request of current Indiana public secondary school (Grades six through twelve) principal e-mail addresses

To Whom It May Concern:

I am a current PhD candidate in the Department of Educational Leadership at Indiana State University. I am working under the direction of my chair and faculty advisor Dr. Brad Balch. I am conducting a quantitative study to better understand the relationship among leadership style, mindset, and self-efficacy regarding their effect on secondary school principals' decision making. I plan to survey current public school principals in secondary schools serving Grades 6 through 12.

I would like to request access to your records in order to obtain e-mail addresses of current public middle school and high school principals serving Grades six through twelve.

Sincerely,

Stacy Mason

APPENDIX B: CONSENT TO PARTICIPATE IN RESEARCH

[Date]

RE: Principal decision-making survey

Dear Principal [Name entered from Qualtrics database],

You are invited to participate in a research study relative to principal decision making. The purpose of this quantitative study is to better understand the relationship among leadership style, mindset, and self-efficacy regarding their effect on secondary school principals decision making. All Indiana public school principals of secondary schools serving Grades 6 through 12 are being invited to participate. This study is being conducted by Stacy Mason, current PhD candidate under the direction of Dr. Brad Balch, faculty advisor from the Department of Educational Leadership at Indiana State University.

You are invited to participate by responding to the survey located at [survey URL]. Questions can be directed to me at (812) 239-3943 or smason1@sycamores.indstate.edu. The survey will take approximately 15 minutes. The survey will be available for completion between now and [Date].

This survey is voluntary and anonymous. There is no financial cost for participating. There are no known risks if you decide to participate. All responses will remain confidential and participants will not be identified. The information collected will be stored securely on a password protected computer. The information provided may not benefit the respondent directly, but it is hoped that information learned because of this study will help benefit future leaders.

Qualtrics requires the use of a login by respondents which will be unique to each participant; however, participant information will remain confidential. All responses and information gained will be used only for the purpose of this study.

Should there be any questions about the study, please contact me at smason1@sycamores.indstate.edu or (812) 239-3943 or Dr. Brad Balch by e-mail at brad.balch@indstate.edu or by phone at (812) 237-2802. Should you have any questions about your rights as a research subject, you are welcome to contact the Indiana State University Institutional Review Board (IRB) by mail at 114 Erickson Hall, Terre Haute, IN 47809, by phone at (812) 237-8217, or by e-mail at irb@indstate.edu. IRB has approved this study [IRB number] on [Date]. Thank you in advance for your willingness to participate and assistance with this study.

Sincerely,

Stacy Mason
Doctoral Candidate
Indiana State University
(812) 239-3943
smason1@sycamores.indstate.edu

Dr. Brad Balch
Dissertation Chair
Indiana State University
brad.balch@indstate.edu

APPENDIX C: FOLLOW UP E-MAIL TO INDIANA PUBLIC SCHOOL PRINCIPALS

GRADES 6 THROUGH 12

[Date]

RE: Principal decision-making survey

Greetings [Name from Qualtrics database],

> Thank you to the respondents who have chosen to participate in the survey regarding principals' decision making. Your support is greatly appreciated.
>
> If you have not completed the survey, but would like to, the link [URL here] will continue to be active through [Date]. Your cooperation will be very beneficial to this study. Thank you for your consideration.

Sincerely,

Stacy Mason
Doctoral Candidate
Indiana State University
(812) 239-3943
smason1@sycamores.indstate.edu

Dr. Brad Balch
Dissertation Chair
Indiana State University
brad.balch@indstate.edu

APPENDIX D: THANK YOU E-MAIL TO INDIANA PUBLIC SCHOOL PRINCIPALS

GRADES 6 THROUGH 12

[Date]

RE: Principal decision-making survey

Greetings [Name from Qualtrics database],

Thank you very much for your participation in my study regarding secondary school principals and their decision making. Your willingness to participate is greatly appreciated. Have a fantastic rest of the school year!

Sincerely,

Stacy Mason
Doctoral Candidate
Indiana State University
(812) 239-3943
smason1@sycamores.indstate.edu

Dr. Brad Balch
Dissertation Chair
Indiana State University
brad.balch@indstate.edu

APPENDIX E: SURVEY SENT TO INDIANA PUBLIC SCHOOL PRINCIPALS GRADES 6 THROUGH 12

Directions:

Thank you for your participation in this survey. It will take approximately 10 minutes to complete. The survey is divided into two sections. Section 1 contains demographic questions and Section 2 contains questions on decision making, leadership styles, mindset, and self-efficacy. Survey headings may change at each new section so please take note as you move through the survey. The entire survey must be completed for data to be tabulated.

Section 1: Demographic Information

1. What is your gender?
   _____Male

   _____Female

2. Please enter your years of experience:
   _____Total Years as an Educator

   _____Total Years as an Administrator

3. Select the locale that best describes your school's setting:
   _____Rural

   _____Suburban/ Metro

   _____Urban

4. Which best describes your school's developmental level?
   _____Junior High/Middle School (5/6-8)

   _____Junior High/High School (6/7-12)

   _____High School (9-12)

Section 2: Survey

Please answer the following questions according to your beliefs. Select only one rating for each question.

	Decision Making	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I evaluate the risks associated with each alternative before making a decision.					
2	After I make a decision, it's final because I know my process is strong.					
3	I try to determine the real issue before starting a decision-making process.					
4	I rely on my own experience to find potential solutions to a problem.					
5	I tend to have a strong *gut instinct* about problems, and I rely on it in decision making.					
6	I am sometimes surprised by the actual consequences of my decisions.					
7	I use a well-defined process to structure my decisions.					
8	I think that involving many stakeholders to generate solutions can make the process more complicated than it needs to be.					
9	If I have doubts about my decision, I go back and recheck my assumptions and my process.					
10	I take the time needed to choose the best decision-making tool for each specific decision.					

11 I consider a variety of potential solutions before I make my decision.					
12 Before I communicate my decision, I create an implementation plan.					
13 In a group decision-making process, I tend to support my friends' proposals and try to find ways to make them work.					
14 When communicating my decision, I include my rationale and justification.					
15 Some of the options I've chosen have been much more difficult to implement than I had expected.					
16 I prefer to make decisions on my own, and then let other people know what I've decided.					
17 I determine the factors most important to the decision, and then use those factors to evaluate my choices.					
18 I emphasize how confident I am in my decision as a way to gain support for my plans.					
Leadership Styles	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
19 As a leader, I allow some flexibility in decision making by the team.					
20 As a leader, I often praise employees for a job well done.					
21 As a leader, I believe it is necessary to make decisions for the group.					

22 As a leader, I believe it is necessary to share decision-making responsibilities with employees. Their feedback and input is important.					
23 As a leader, I trust the team to set their own goals and to problem solve for themselves.					
24 As a leader, I know my team well and provide them with support when necessary while understanding the tasks they are capable of handling without much direction.					
25 As a leader, I demonstrate devotion to the organizations purpose and people.					
Mindset	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
26 Given a task, I believe that when the odds are against me, I cannot succeed.					
27 I like the challenge of taking on something new. Ex: Bring on the new testing program.					
28 I am the kind of person who would volunteer to be transferred to the most difficult building in the district.					
29 I am the kind of person who would be upset if transferred to the most difficult building in the district. How can I succeed when others did not?					

General Self-Efficacy Scale	Not at all true	Occasionally true	Some-times true	Fre-quently true	Exactly true
30 I can always manage to solve difficult problems if I try hard enough.					
31 If someone opposes me, I can find the means and ways to get what I want.					
32 It is easy for me to stick to my aims and accomplish my goals.					
33 I am confident that I could deal efficiently with unexpected events.					

Resources:

http://www.mindtools.com/pages/article/newTED 79.htm (Decision-making questions) – Permission to use received

http://userpage.fu-berlin.de/~health/faq_gse.pdf (General Self-Efficacy Scale) – Permission to use received

APPENDIX F: PERMISSION TO USE MINDTOOLS SURVEY QUESTIONS

Jag Saluja, Jun 15, 4:21 PM:

Dear Stacy,

Thank you for your enquiry, and for your interest in Mind Tools.

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If you have any further questions or need any more help please just click 'reply' to this e-mail.

Best wishes!

Jag

Stacymason42, Jun 11, 4:24 PM:

Permissions Request from Public Site

Name: Stacy Mason
Job Title: PhD Candidate
Department: Department of Educational Leadership
E-mail: stacymason42@gmail.com
Organization: Indiana State University
Organization type: Education
Article title: How Good is Your Decision Making? by Ruth Hill
URL of article: http://www.mindtools.com/pages/article/newTED 79.htm
Purpose: I would like to use the survey in my PhD study.
Media: I would use the MindTools survey as part of a survey sent to principals. The survey and the results will be as part of the dissertation.
URL of website if applicable:
Quantity: The survey will be sent to all licensed secondary principals in the State of Indiana.
Extra info: To Whom It May Concern:
My name is Stacy Mason and I am a current PhD candidate in the Department of Educational Leadership at Indiana State University. My faculty advisor is Dr. Brad Balch, Professor and Dean Emeritus. A portion of my study would benefit greatly by the use of your survey regarding decision making as located on MindTools.com. I would like to request permission to use it as a part of my doctoral design. Please let me know if this will be permissible. Thank you for your consideration. My e-mail address is stacymason42@gmail.com.