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The Principal And School Culture: An Exploration Of Principals Strengths Of Personality And The Collaborative Characteristics Of Schools

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THE PRINCIPAL AND SCHOOL CULTURE: AN EXPLORATION OF PRINCIPALS'

STRENGTHS OF PERSONALITY AND THE COLLABORATIVE CHARACTERISTICS OF

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ABSTRACT

The search for the factors that define an effective school have proved elusive. A look at the inputs of school (Coleman et al., 1966), the outputs of schools (Fund, 1961; National Manpower Council, 1964), and the schools themselves, have led to a lot of research but not to a formula proven to result in an effective school for all kids. Although the research has yet to land on a formula for school improvement, the building principal and the culture of the school are mentioned often as factors that just may lead to the improvement in schools so often sought out.

This quantitative study attempted to close the gap in the research by examining the potential relationship between the strength of principal personality and the collaborative nature of a school's culture. Data analysis involved correlation and ANOVA. The inferential analysis revealed a statistically significant relationship between principal strength in Imaginer and the school culture factor of Teacher Collaboration. This study will benefit principals, district human resource officials, and anyone else who is charged with making hiring decisions for leadership positions within K–12 schools.

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CHAPTER 1

INTRODUCTION

The work of the school principal is more convoluted than ever (Crow, 2006). The principal is now expected to manage the operations of increasingly larger schools and lead the improvement of not only overall test scores, but also the academic growth of individual students from one testing year to the next. Increased complexity, and in turn accountability, has ultimately meant a sharper focus from external constituents on the school principal and the internal workings of schools across the country (Tirozzi, 2001). In spite of the increased attention, no agreement exists among researchers on a singular factor that explains why some schools outperform others (Hallinger & Murphy, 1986; Purkey & Smith, 1982).

Researchers have proposed many factors as potentially impacting the performance of a school. High expectations, strong administrative leadership, an orderly environment, allocation of resources, and progress-monitoring tools have all been pointed to as differentiating effective schools from their less effective counterparts (Edmonds, 1979). Yet, researchers have not advocated for the implementation of these characteristics without reference to context (Hallinger & Murphy, 1986; Purkey & Smith, 1982). Researchers have specifically questioned the generalizability of the characteristics (Purkey & Smith, 1982; Rosenholtz, 1985) and advocated against a formulaic approach to school improvement (Hallinger & Murphy, 1986).

While no formula exists for school improvement, it has been proposed that the key to improving schools lies not in the characteristics sought out in effective schools, but rather in the cultures of the schools themselves (Purkey & Smith, 1982). Every school has a culture that is its own (Waller, 1963), and understanding, assessing, and working within a school's unique culture has been pointed to as the "primary tool with which a leader fosters change" (Marzano et al., 2005, p. 48). However, impacting the culture of a school is an arduous task that can take several years of committed effort. Although not easily impacted, a positive school culture has been correlated with higher achieving schools (Gruenert, 2005). With several years of effort being needed to impact a school's culture, understanding what concepts may be used as leverage in the change process is important. Using correlation and ANOVA, this quantitative study explored how the principal may play a role in defining culture by examining the potential relationship between the personality of the school principal and a school's culture.

Statement of the Problem

From a quantitative perspective, schools have many outputs through which comparisons can be made. The comparison most often made is based on standardized assessments, both at the state and national level. While the scores do provide a simple way to differentiate schools, determining why some schools score higher than others is an endeavor that is more complex than it may appear. From the Coleman Report in 1966, to the meta-analyses conducted by Witziers et al. (2003) and Marzano (2003), many different angles have been pursued with regard to what factors explain the differences in standardized test scores across the state, nation, and world. Socioeconomic status, family background, school spending, curriculum, and a host of other factors have been examined in the search for the ultimate formula for a great school (Coleman et

al., 1966; Edmonds, 1979; Jencks, 1972). Although the factors vary from study to study, two things have been mentioned on several occasions throughout those studies and are worth examining further. Those concepts are school leadership and culture (Marzano, 2003; Purkey & Smith, 1982; Witziers et al., 2003).

Leadership in a school matters (Marzano, 2003; Witziers et al., 2003). Witziers et al. confirmed this finding in a 2003 meta-analyses, and in 2005 Marzano et al. conducted their own meta-analyses additionally confirming significant effect sizes in the general area of leadership. Marzano et al. (2005) and Witziers et al. (2003) found that in most schools the person providing this crucial leadership is the principal.

As far back as 1970 the school principal was identified as the most important person in a school (United States Congress, 1974). With the previous discussion regarding the importance of leadership, it is easy to see why. The principal is solely responsible for "all activities in and around the school building" (United States Congress, 1974, p. 56). With accountability at the forefront of education, growth in student achievement is one activity of which the school principal has to be keenly aware. Studies examining the relationship between the school principal and student achievement have found the relationship not to be linear and filled with confounding factors that cause ambiguity. Hallinger (2003) looked at the relationship between the school principal and student achievement and concluded that no direct impact existed. Instead Hallinger and Heck (1998) advocated for a mediated-effects model, a model that looks at the principal as impacting other intermediary factors, and in turn, indirectly impacting student achievement. If the principal does not directly impact student achievement, then the question becomes, "What

things mediate that relationship, and how does the principal impact those items in order to produce increases in student learning?"

Like leadership, school culture is another topic that has presented itself throughout the literature on effective schools. Returning to the work of Hallinger and Heck (1998), culture has been explored as one of the factors mediating the relationship between the principal and student achievement. Furthermore, Deal and Peterson (1990) asserted that culture impacts all parts of a school; Marzano et al. (2005) and Leithwood (2005) both pointed to strengthening school culture as an important behavior of the school principal; and Scribner et al. (1999) even used reculturing as an action verb when describing the school-improvement process. Culture is important and unique in that it has been explored from both a principal behavior perspective (Marzano et al., 2005) as well as from a student achievement angle (Gruenert, 2005), making it a primary mediating factor to explore.

Researchers have stated leadership and culture matter in schools (Gruenert, 2005; Marzano et al., 2005; Purkey & Smith, 1982). The concepts of leadership and culture also have a direct relationship, as Witziers et al. (2003) stated that the leader's contributions are mediated by cultural factors. Some research has been done on the direct impact of the leader on culture via leadership behaviors exhibited (Lucas & Valentine, 2002), but to date nothing has addressed the principal as a person in relation to a school's culture.

Gruenert and Whitaker (2015) referred to culture as a school's personality. Schein (2004) also alluded to the concept of a school having a personality when he stated that a leader's personality becomes embedded in the culture of an organization. If culture is the personality of an organization and an organization takes on the personality of its leader, taking a quantitative

look at these two concepts could further our understanding of the construct of culture and how it is impacted by the leader.

Purpose of the Study

The purpose of this study was to examine the potential relationship between strength of principal personality and the collaborative aspects of a school's culture. By assessing the personality of principals, this study hoped to create a better understanding of how perception, communication style, psychological needs, and distress sequences of the principal impact a school's culture. Findings from this study may help principals understand how to recognize their primary distress patterns and how those distress patterns impact their schools' cultures. In addition, the findings of this study could also allow principals to better understand their perceptions and preferred styles of communication and how those characteristics impact the culture of their schools.

Research Questions

The primary question addressed in this study was "Does a relationship exist between a principal's strength of personality and the aspects of a school's collaborative culture?" Investigating this relationship required looking at all six Personality Types (Kahler, 2008) as well as both the Base and Phase Personalities of principals to uncover their preferred modes of communication, perceptions, psychological needs, and distress patterns.

Descriptive Subquestions

1. What percentage of principals represent each of the six Base Personalities?

2. What percentage of principals represent each of the six Phase Personalities?

3. How many principals have been in their current school for more than five years?

4. How many principals have been in their current school for less than five years?

5. How many principals represent schools with a grade configuration that includes grades six and above?

6. How many principals represent schools with a grade configuration that includes grades five and below?

Inferential Subquestions

1. What relationship, if any, exists between a principal's strength in all six personalities and the aspects of a school's collaborative culture?

2. What relationship, if any, exists between a principal's Base Personality and the aspects of a school's collaborative culture?

3. What relationship, if any, exists between a principal's Phase and/or strength of Phase Personality and the aspects of a school's collaborative culture?

4. Does any combination of personality strengths predict a significant proportion of variance among the aspects of a school's collaborative culture?

5. Do years of principal experience in their current school, grade configuration, and strengths of personality predict a significant proportion of variance among the aspects of a school's collaborative culture?

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Null Hypotheses

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$H_0$1: Inferential Subquestion 1. There is no relationship between the strength in any of the six personalities and the aspects of a school's collaborative culture.

$H_0$2: Inferential Subquestion 2. There is no relationship between strength of a principal's Base Personality and the aspects of a school's collaborative culture.

H_03: Inferential Subquestion 3. There is no relationship between the strength of a principal's Phase and/or strength of Phase Personality and the aspects of a school's collaborative culture.

H_04: Inferential Subquestion 4. Combination of personality strengths do not predict a significant proportion of variance among the aspects of a school's collaborative culture.

H_05: Inferential Subquestion 5. Principal experience in their current school, grade configuration, and strengths of personality does not predict a significant proportion of variance among the aspects of a school's collaborative culture.

Significance of the Study

The search for the qualities of effective schools that are correlated with an increase in student achievement have led researchers to explore several different possibilities. One quality that has been associated with positive effects on student achievement is culture (Gruenert, 2005). In addition to student achievement, culture is often highlighted as the primary tool utilized by effective leaders to elicit change (Marzano et al., 2005). After all, policies may be developed and enforced by district leadership, but change occurs at the building level, and as Kathy Peckron (2001) astutely pointed out, "Principals are the catalyst" (p. 44).

The significance of this study lies in the fact that the "catalyst" of change, the building principal, is the focus. The potential relationship between the principal and the development of a positive and collaborative school culture could lead to an alternative way of viewing how change occurs. An understanding of how a school leader may inherently impact school culture could help both the principal, in determining how to properly approach the change process, and a district, in choosing which principal may be a good fit based on the current culture of a school.

Delimitations of the Study

Delimitations, set by the researcher, create the boundaries of the research and are implemented into the study's design in order for both the scope and the parameters of the study to be controlled (Leedy & Ormrod, 2005). Delimitations in this study were set to ensure generalizability of the results. In turn, populations selected for the study were looked at to ensure some consistency among job description and school type.

This study was confined to 1,795 public school principals in the state of Indiana. George Conway (1994) noted culture in a private school can look very different from a public school because of personal loyalties, shared purpose, and common sentiments that are inherent within a private school setting. Limiting this study to only public school principals ensured the data were collected from a sample in which participants have similar job responsibilities and the culture of their schools is less impacted by the inherent factors pointed out by Conway. By not including private, charter, and virtual charter schools, the results from this study may not be generalizable to those institutions. In addition, narrowing the population of the study may impact the breadth of the data collected and will only include information from one sector of educational administration.

Confining the study to only principals in the state of Indiana also ensures commonalities among institutions with regard to state assessment and school accountability measures. In contrast, limiting the study to an entire state fails to control for social factors that may impact school culture. Hallinger and Leithwood (1998) pointed out, "A principal of a small rural elementary school in Kentucky thus operates in a very different institutional context than a

principal of a large secondary school in Los Angeles" (p. 135). In much the same way, a principal in rural Indiana may operate very differently than a principal in a large urban area.

This study was also limited to only principals from K–12 schools. Focusing on all K–12 schools allow the results to be generalizable among the most common grade level configurations across the state of Indiana. On the other hand, focusing on all grades may impact the generalizability of the results as elementary school cultures have been noted to be very different from high school cultures (Gruenert, 2005). The data was also disaggregated by grade-level configuration to help control for this confound.

<div align="center">**Limitations of the Study**</div>

The limitations of a study are items and situations encountered in the study that were beyond the researchers' control and can have an effect on the application or analysis of the results of the study (Leedy & Ormrod, 2005). In this study, the amount of research done on the Process Communication Model (PCM), the use of the model by the researcher, as well as the survey instruments used all are potential limitations.

To date, modest research has been done on the PCM. Stansbury (1990) found that the Personality Pattern Inventory (PPI) "is a consistent predictor of personality" (p. 3) and found that measures correlated at 80.8% or higher on four of six sub-measures. In addition, a 2013 revalidation study found the survey associated with the model to be valid and reliable (Ampaw et al., 2013). In spite of this, evidence, when compared to other models of personality the research on PCM and subsequently the PPI, is still limited.

As a practitioner, I have studied the use of the PCM, and I believe that its use can reasonably predict the distress sequence individuals experience. Every effort was made to control

for that bias in the design of the study. The use of quantitative methods prevented interviewer bias by using only survey instruments. In addition, each survey was used unaltered preventing research bias from appearing in both the instructions and method of completion.

When using surveys as research instruments, Krosnick (1999) noted a respondent's tendency to satisfice when the task is difficult or the respondents lack the motivation to optimize their answers. The length of the surveys utilized in this study may have led to respondents selecting an answer that is outright false or a selected answer that fits the expected criteria of the research. Another common limitation to survey research is representative sampling (Krosnick, 1999). Every attempt was made sure to ensure that the sample size was large and that the sample obtained was representative of the population as whole.

Definition of Terms

In an effort to maintain clarity around key ideas used throughout the study, the following terms are defined:

Base Personality is the strongest personality in an individual and is located at the bottom of an individual's personality structure. The Base Personality is determined a few months after birth. Once the Base Personality is established, it does not change (Lefeuvre, 2007). An individual's predominant strengths, characteristics, communication Channel, and most probable reactions under stress is determined by his/her Base Personality (Collignon et al., 2012; Kahler, 2008).

Collaborative Leadership is defined as "the degree to which school leaders establish and maintain collaborative relationships with school staff" (Gruenert & Valentine, 2006, para. 1).

Culture is a learned pattern of shared assumptions used by a group to solve problems and is taught to new members of the group as a way to think, perceive, and feel about those problems (Schein, 2004).

Distress Sequence refers to a "discrete and highly predictable" (Collignon et al., 2012, p. 149) sequence in which each personality enters distress. Kahler (2008) defines three degrees of distress, which include Drivers, Second-Degree Distress, and Third-Degree Distress. These degrees of distress are also referred to as the doorway to distress (Drivers), the basement (Second-Degree Distress), and the cellar (despair, or Third-Degree Distress).

Modes of Communication are the preferences of each personality in terms of communication. These preferences are determined by both the Perception and Channel associated with that personality (Kahler, 2008). Communication only occurs when "the listener understands the message in the same way the speaker intended it to be understood" (Gilbert, 2012, p. 26).

PCM is defined as "a model for discovering and understanding our own personality as well as those of the people with whom we interact" (Collignon et al., 2012, p. 17). The model was developed by Dr. Taibi Kahler and was based on Berne's Transactional Analysis (Berne, 1964) as well as Kahler's discovery of mini-scripts and Drivers (Kahler, 2008).

Perceptions are filters by which we experience the world. Each personality has a primary Perception that becomes the way we contact others and prefer they contact us (Kahler, 2008).

Personality is defined as individual's personality structure. Each individual has a specific ordering of his or her personality structure, the uniqueness of which will be 1 of 720 combinations (Collignon et al., 2012; Kahler, 2008).

Phase Personality is defined as the floor of an individual's personality structure that houses their most important psychological need as well as the distress sequence the person would experience when those psychological needs are not met (Kahler, 2008).

Psychological Needs, according to Kahler (2008), determine what motivates a person. Specifically, the Phase Personality is the floor of a person's personality structure which houses their current and most important psychological needs. Kahler (2008) identified "eight mutually exclusive and statistically significant psychological needs" (p. 114) that are correlated with each of the six Personality Types.

Strength of Personality is defined as an individual's energy score for each personality. An energy score of 40 or more shows that an individual is able to demonstrate and experience the positive characteristics associated with that personality (Kahler, 2008)

Teacher Collaboration is defined as "the degree which teachers engage in constructive dialogue that furthers the educational vision of the school" (Gruenert & Valentine, 2006, para. 2).

Summary

This chapter presented a general outline of the study, including the statement of problem, purpose, and research questions. In addition, personality and culture were explored as key concepts in effective schools, and a general outline was presented for how these two concepts will be explored throughout this study. Chapter 2 will present a review of the literature on school research. Specifically, the literature on effective schools, culture, and personality will be reviewed for significant findings. Chapter 3 will review the design of the study, including methodology research questions, null hypotheses, and procedures used.

CHAPTER 2

LITERATURE REVIEW

Over 55 million students will walk into American schools this year (National Center for Education Statistics, 2016). The 55 million students will represent different races and religions, have unique language and learning needs, and come from homes of varying socioeconomic backgrounds (National Center for Education Statistics, 2016). Regardless of the unique factors students bring with them to school, every student in the United States should be walking into not just any school, but an effective school (U.S. Department of Education, 2014). From reports initiated by politicians within the federal government (Coleman et al., 1966; Gardner, 1983) to independent researchers (Edmonds, 1979), the search for the key components of effective schools has proven to be extensive and elusive. Although elusive, the researchers involved in the search for the key components of effective schools have led us to a plethora of empirical literature. Yet the problem persists, as some of the 55 million students still enter ineffective schools on a daily basis (Executive Office of the President, 2015). The move from theory to action is still sought in a system that needs to respond to the needs of students sitting in classrooms right now.

Review of Research on Schools

The research into what works in schools has been partly shaped by historical events occurring throughout American history (Johanningmeier, 2010). Each event, and thus period of research, led to a slightly different look at schools and the work being done deemed effective by legislators, private entities, and the general public. Several events, the subsequent time periods that followed, and the varied findings are reviewed here to provide insight into the work currently being done in schools both by researchers and practitioners.

Post-Sputnik Research

The Post-Sputnik era in American education led to an increased focus on schooling. The research on schools, which included the curriculum each school offers as well as the outcomes of students, had been underway since the end of World War II. However, the launch of Sputnik created a national platform which led to the recruitment of new scholars to revise and update curricula in American schools (Johanningmeier, 2010). Two such collections of scholars came in the form of The Rockefeller Panel (Fund, 1961) and the National Manpower Council (1964).

Initiated with invitations to scholars across the country in 1956, the Rockefeller Panel (Fund, 1961) was created to define the major problems of America, clarify the objectives to drive the meeting of the defined problems, and develop a framework on which future policy could be based. The result was six separate reports on foreign policy, military, economic policy, social aspects, democracy, and education (Fund, 1961). The education report, entitled "The Pursuit of Excellence: Education and the Future of America," saw scholars covering topics that exemplified the fears of the American people post-World War, Cold War, and post-Sputnik (Johanningmeier,

2010). A focus on a growing population, a move to automation, and a lack of highly trained workers led to a discussion regarding teachers, curriculum, and science education (Fund, 1961).

The panel's report was short on recommendations, and the authors stated as much. The issues presented simply represented the state of education at the time of the report. Birth rates had increased and our education system, as well as the educators employed in that system, were tasked with preparing the ever-growing population for careers that were yet to be developed. Overall, the authors of the Rockefeller Reports (Fund, 1961) were concerned not with what schools were doing internally, but rather with the outputs schools were producing. Specifically, the authors of the report were concerned with whether the education system was creating a pool of capable trained workers for jobs that would keep the United States competitive on a global scale (Johanningmeier, 2010).

The National Manpower Council (1964) report was developed around the same time and published several years after. The report addressed four main areas of public policy, including science, health, education, and employment. Although not mentioned in the report by name, the sentiments of the Rockefeller Panel (Fund, 1961) were echoed very early in the National Manpower Council literature. A growing population, a lack of skilled workers in the areas of science and engineering, and an inability to project the jobs of the future became the basis of the education discussion that occurred in the later stages of the National Manpower Council report (National Manpower Council, 1964). The focus on the outputs of schools was very similar to the Rockefeller Panel. However, in contrast to the Rockefeller Panel (Fund, 1961), much of the policy discussion that followed centered on federal versus local control of education. While the authors refused to jump to endorsing complete federal control of education, it was pointed out

that Russia at the time had clearly stated national goals for its education system and that the local control of education in America may be preventing similar goals from being developed and implemented (National Manpower Council, 1964).

Both the Rockefeller Panel (Fund, 1961) and the National Manpower Council (1964) researchers saw similar issues arising in the world of American education. While empirical evidence was lacking or non-existent, the ideas were founded in the current fears brought on by the launching of Sputnik and the perceived increase in competition from other countries. The authors of both reports saw limitations in the number of scientists and engineers American schools were producing (Fund, 1961; National Manpower Council, 1964). The launching of Sputnik defined educational literature during this particular period. The result was a keen focus on the outputs of American schools.

School Research and the Brown Decision

Three years prior to Sputnik, the landmark case of *Brown v. Board of Education* (1954) was decided. While the fallout from Sputnik was immediately seen in the educational literature (Fund, 1961; National Manpower Council, 1964), it would take several years and the Civil Rights Act of 1964 before the educational impact of Brown would be seen in the form of the *Equality of Educational Opportunity* report (Coleman et al., 1966). The *Equality of Educational Opportunity* report, better known as the Coleman Report, was the product of surveys requested by the Civil Rights Act of 1964. Involving 4,000 different schools, 570,000 students, and 60,000 teachers, the Coleman Report is one of the largest research projects of its kind (Mosteller & Moynihan, 1972). Whereas the authors of the Post-Sputnik era reports focused on the outputs and the perceived inability to produce enough skilled workers (Fund, 1961; National Manpower

Council, 1964), the Civil Rights Era *Equality of Educational Opportunity* report's author, James Coleman, and his colleagues looked at mostly inputs of the American education system.

In terms of inputs, Coleman et al. (1966) found that, in spite of the Brown decision, most children attended schools where almost all students were of the same racial background. In addition, Coleman et al. collected data on educational background and aspirations of the students within each school. Coleman et al. did examine the characteristics of each school but stopped short of an intensive look as he examined only class size, curriculum offerings, facilities, and background of the teaching staff. While some patterns did emerge, such as facilities and extra-curricular offerings were less in majority black schools, Coleman et al. made the controversial assertion that the school a student attended led to very little of the variation in a student's achievement. Specifically, Coleman et al. contended that schools themselves do not matter as much as the educational background and aspirations of the peers each student attends school with. In other words, the inputs mattered much more than the school itself.

Investigating the relationship between race, student background, school characteristics, and achievement, Coleman et al. (1966) designed a study that would be lauded (Jencks, 1972), replicated (Kain & Singleton, 1996), and criticized (Cain & Watts, 1970). The result of the attention the Coleman Report (Coleman et al., 1966) received was a wave of effective schools' research that marks the next era in the investigation into effective schooling, an era that focused not on the inputs or outputs of schools but rather on the schools themselves.

Schools Matter

In 1971, George Weber published *Inner City Children Can Be Taught to Read,* a study that stands in direct contrast of the Coleman et al. (1966) findings. Weber knew that reading

achievement in inner city schools was low, but he had also heard of inner city schools that achieved at the national average and higher. Over the course of two years, Weber found four such schools which became the basis of his report. Coleman et al.'s variables of background, facilities, race, and teacher characteristics, which are often deemed to be out of a school's control, were replaced with leadership, expectations, atmosphere, reading personnel, emphasis on reading, individualization, use of phonics, and careful assessment of student progress, which a school can control (Weber, 1971). According to Weber, inner-city schools existed which were effectively teaching students to read, and it was because of specific variables that Weber termed success factors. Based on the success factors found, Weber (1971) stated, "The failure in beginning reading typical of inner city schools is the fault not of the children or their background but of the schools" (p. 2).

Much like Weber (1971), the New York Office of Education Performance (1974) looked at factors influencing reading achievement. Whereas Weber looked at four high achieving schools, the New York Office of Education Performance looked at only two schools, one low achieving and one high achieving. To ensure meaningfulness of comparison, the New York Office of Education Performance matched the two schools on several factors, including income level, welfare enrollment, percentage of students with language difficulties, eligibility for free lunches, and mobility rates. The findings of the New York Office of Education Performance echoed the basic sentiments of Weber, the differences in reading achievement in low achieving and high achieving schools is primarily attributable to things that are under the control of the schools themselves. Although the overall findings of the two studies were similar in scope, the New York Office of Education Performance focused considerably more on the impact of school

administration on the achievement of the school. In fact, four key differences were seen between the low and high achieving school; three were directly attributed to the work, or lack thereof, by the administrative staff in the two buildings (New York Office of Education Performance, 1974).

Wilbur Brookover and Lawrence Lezotte (1979) looked at elementary schools to determine which factors lead to increasing and declining student achievement. In contrast to the previous two studies, Brookover and Lezotte did not match schools on the background factors such as socioeconomic status. Like the Weber (1971) and New York Office of Education Performance (1974) studies, the scope of Brookover and Lezotte's findings were centered around factors that were in a school's control. Staff beliefs in regard to accountability, responsibility, and influence accompany a focus on basic skills and strong administrative support as the main differences between positively and negatively trending schools (Brookover & Lezotte, 1979).

Weber (1971), The New York Office of Education Performance (1974), and Brookover and Lezotte (1979) all conducted similar studies that stood in contrast to the work of Coleman et al. (1966). The authors of one additional study also took a stance in opposition to Coleman et al., albeit a little more directly. Ronald Edmonds and John Frederiksen (1978) took the data from the Coleman Report and conducted a reanalysis of the schools contained in the data. Edmonds and Frederiksen found at least 55 effective schools in the data set. What was significant about the data was that on measures of pupil social background, the instructionally less effective schools did not differ from the instructionally effective schools (Edmonds & Frederiksen, 1978). Edmonds and Frederiksen pointed to the difference in performance as a proof that, in contrast to the Coleman et al. findings, schools do matter.

The 1970s came to a close with researchers heading in a direction that clearly stated that schools do matter (Brookover & Lezotte, 1979; Edmonds & Fredericksen, 1978; New York Office of Education Performance, 1974; Weber, 1971). From the post-Sputnik era output concerns (National Manpower Council, 1964; Fund, 1961) to the civil rights-era school versus background argument (Edmonds, 1979), researchers in the field of education had taken many turns, partly shaped by the historical events of the time. Another shift was coming as in April of 1983 a report would be published that would shape the research into present day (Johanningmeier, 2010).

A Nation at Risk

A Nation at Risk was the product of the National Commission of Excellence in Education, which was created by Secretary of Education T. H. Bell in August of 1981 (Gardner, 1983). The commission was created to address the "widespread public perception that something was seriously remiss in our educational system" (Gardner, 1983, para. 2). Benefitting from a well-designed and executed marketing plan (Johanningmeier, 2010), Gardner outlined indicators of risk which showed a percentage of adults were functionally illiterate; the United States was falling behind other industrialized nations in international comparisons of student achievement; SAT scores were steadily declining; and there was a steady rise in the need for remedial courses in colleges and in the armed services. The authors' use of language was persuasive, and the report has long been thought to be politically motivated (Good, 2010). Regardless, the authors of *A Nation at Risk* publicly advanced the research that finished the previous decade (Johanningmeier, 2010). The next quarter century of research would focus on what effective schools do and how the factors found in effective schools may be replicated.

The Effective Schools Movement

The work of effective schools was synthesized by several different researchers after *A Nation at Risk* was published. Strong leadership, shared decision making, clear goals, orderly environments, support for improved teaching, positive reinforcement, home-school partnerships, and high expectations were all pointed to as characteristics of effective schools (Purkey & Smith, 1982; Rosenholtz, 1985; Sammons et al., 1995). Each researcher had pointed to almost identical key characteristics while also including a cautionary note. Purkey and Smith (1982), Rosenholtz (1985), and Hallinger and Murphy (1986) all warned that the characteristics identified were important but should not be viewed as prescriptive and indicated that the results were simply not generalizable among different schools. Hallinger and Murphy, in particular, attacked the generalizability of the results by looking at each of the characteristics in both effective high socioeconomic schools and effective low socioeconomic schools.

Looking at characteristics of effective schools in different social contexts, Hallinger and Murphy (1986) were able to look specifically at the generalizability of the characteristics. Hallinger and Murphy's results showed that while the characteristics identified show up in both types of highly effective schools, the characteristics were implemented quite differently. The staff of both types of schools, for example, had high expectations for students. The source and nature of the expectations, by contrast, were substantially different, as the staff in the low socioeconomic schools felt responsible for creating the high expectations, while the staff in the high socioeconomic schools inherited the high expectations from the families of the students (Hallinger & Murphy, 1986). The differences in effective schools from different social contexts corroborates the statements of other researchers that generalizing the characteristics is difficult,

and each factor should be looked at within the context of individual schools. Purkey and Smith (1982) agreed and asserted that focusing on one or two of the characteristics was unlikely to have much effect. The authors clearly point to the school as the focus of change, but point to the ultimate policy target as the school's culture. The focus on culture has remained present in much of the work today. Marzano et al. (2005) refers to culture in reference to collegiality and professionalism when discussing school level factors and again in his research on leadership and stated that developing and sustaining a positive culture is the most critical thing with which a leader is tasked. The key factors of effective schools remain ever present in school research. The addition of school culture as a predominant factor has moved the factors of effective schools from context dependent to generalizable.

Summary

Partially guided by key historical events, the researchers of schools have taken many turns over the past 50 years. From the post-Sputnik era look at the outputs of schools (National Manpower Council, 1964; Fund, 1961) to the Coleman et al. (1966) reports focus on the influence of inputs, to the effective schools' movement, American education has been looked at from many different angles. The caution of the generalizability of the effective school characteristics provided by Purkey and Smith (1982) and others (Hallinger & Murphy, 1986; Rosenholtz, 1985) still remains relevant today as researchers use the concept of school culture as a link between the characteristics of effective schools and the context that each individual school brings to the table. In turn, school culture has become a key component in describing effective schools.

School Culture: Historical Origins and Development

A myriad of researchers have looked at the topic of culture over the past 35 years. From anthropology (Geertz, 1973; Goodenough, 1981), to sociology (Waller, 1963), to organizational behavior (Islam & Zyphur, 2009; Schein, 1988), to educational administration, (Deal & Peterson, 1990; Gruenert, 2005; Hoy, 1990; Lucas & Valentine, 2002), the breadth of work on the topic is vast. Although culture has not been universally defined (Deal & Kennedy, 1982), a look at how the term has been adapted from its anthropological beginnings to its current use in school research provides a foundation for a later look at how leadership, and specifically the school leader, may impact the culture of a school.

Anthropological Views

The study of culture appears to have started in the field of anthropology (Deal & Peterson, 1990; Ouchi & Wilkins, 1985). In 1903, anthropologist E. B. Tylor coined the term "most complex whole" when referring to culture. Tylor's (1903) definition was designed to assess the degree to which a particular civilization shared the general culture of society. The general culture, according to Tylor, encompassed the knowledge, beliefs, morals, art, law and customs acquired by individuals of a particular society. In other words, Tylor looked at how cultured a civilization was in comparison to everyone else, a hierarchical view of history that measured human progress from savagery to civilization. The more a society acquired, in terms of knowledge, beliefs, morals, art, law, and customs, the more cultured it was. According to Stocking (1966), Tylor's definition of culture was one based on an ethnocentric view. According to Tylor, culture was not differentiated from society to society based on individual beliefs but rather on the level to which each society had assimilated to the general beliefs of mankind.

Anthropologist Franz Boas' (1904) agreed with Tylor (1903) on the idea of culture being made up of knowledge and beliefs passed on from individual to individual within a society. However, in contrast to Tylor's views, Boas saw knowledge and beliefs not as generally held but as being different from society to society. In Boas' eyes, one society was not more cultured than another. On the contrary, each society had a culture of its own. There was no hierarchy in Boas' theory. Each culture was unique with its own set of beliefs and values.

Boas' (1904) move from the general to a specific view of culture has led some to consider him a transitional figure in the development of the modern research on culture (Stocking, 1966). Boas did not publish a definition of culture in his early work but did help transition the term from the general culture of mankind, written about by Tylor (1903), to an individualized notion that each society had a unique culture (Goodenough, 1981; Stocking, 1966). These ideas can be seen in the works that follow, and they provide the groundwork for the study of culture today (Goodenough, 1981).

In more recent anthropological works, the most cited of articles, according to Ouchi and Wilkins (1985), is Geertz's (1973) *The Interpretation of Cultures*. In this collection of essays, Geertz looked at culture from a semiotic standpoint, the view of culture through symbols. The semiotic view, according to Geertz (1973), allows us to "gain access to the conceptual world in which our subjects live so that we can, in some extended sense of the term, converse with them" (p. 24). Anthropologists can then use the conversations to move the work from descriptive to interpretive. The interpretive view of a society and its people is required because the researcher must avoid bringing his or her individual culture into the description. The interpretive view

requires culture to be visible, and hence comprised of symbols and ultimately behavior (Geertz, 1973).

The conceptual world identified by Geertz (1973) was also the basis of the work of Ward Goodenough (1981). Goodenough, in contrast to Geertz, used an approach often labeled ethnoscience (Ouchi & Wilkins, 1985), which involved studying the different ways the world is perceived and categorized by different cultures. Whereas Geertz's work concentrated on identifying and interpreting the visible, Goodenough (1981) looked at culture as in the "hearts and minds of men" (p. 51) and looked at the standards that govern the visible. To Goodenough, a symbol or behavior was only symbolic if we know how to interpret them. Therefore, culture is not defined by the symbols but rather by the concepts and ideas that are learned in order to "meet the standards of others" (Goodenough, 1981, p. 50).

The difference between Goodenough (1981) and Geertz (1973) is minute. Geertz (1973) himself attested to the fact that "culture is public because meaning is" (p. 4). The differences are not the focus of this study or relevant to the development of school culture. However, it must be discussed that schools are not small primitive tribes as are so often studied in the anthropological world (Erickson, 1987). Thus, some doubt has been cast on whether the anthropological conception of culture is applicable to schools. To further explore the ideas expressed by Tylor (1903), Boas (1904), Geertz, and Goodenough and their applicability to schools, we turn to a look at culture not in primitive tribes but rather in organizations.

Organizational Culture

Organizational culture is a concept established fairly recently (Schein, 1988). Developed from the field of organizational psychology, the concept of culture began to be applied to

organizations as researchers sought for a way to differentiate patterns of behaviors in organizations as a predictor of company success (Schein, 1988). The search for the distinguishing factors of success and failure made sense as the perception of decreasing American production was put front in center, as some began to view the Japanese style of management as the solution (Deal & Kennedy, 1982). Culture became a key component of studying successful businesses with authors such as William Ouchi (1981) exploring culture as an absolute distinguishing factor when exploring business productivity and success.

While Erickson (1987) spoke of the potential inability to translate the anthropological concept of culture to education, Edgar Schein (1988), often considered one of the leading experts in the field of organizational culture (Gruenert, 1998), saw the concept of culture as potentially proving more useful for the analysis of groups and organizations because of the "relatively greater homogeneity of the smaller units" (Schein, 1988, p. 3). Organizational psychologists tended to agree with this assertion, attributing the development of the organizational culture to its anthropological beginnings (Barley, 1983; Schein, 1988; Smircich, 1983). In fact, many of the ideas proposed by anthropologists Goodenough (1981) and Geertz (1973) can be found in the theories of organizational behavior. Linda Smircich (1983), in her analysis of culture and organizations, termed these two anthropological-organizational connections the cognitive and symbolic perspective.

The cognitive view, according to Smircich (1983), has roots in Goodenough's (1981) view of culture as a system of knowledge and beliefs that are passed down through a society and provide a roadmap of how one should behave. In the cognitive view, culture is a system of ideas and symbols that are simply a product of that system (Allaire & Firsirotu, 1984). In terms of

organizational culture, this concept can be seen in the work of Linda Harris and Vernon Cronen (1979). Harris and Cronen asserted that an organization is analogous to a culture. Viewing each organization as a unique culture, Harris and Cronen defined systems of knowing and doing as a master contract. In any particular situation, similar to the work of Goodenough, the master contract and its contained knowledge and beliefs guide behavior within an organization. Allaire and Firsirotu (1984) concurred with this idea, pointing out that the roadmaps, or master contracts as stated by Harris and Cronen, that exist in an organization are "enactments of the 'collective mind' that is not merely a replication of the minds of individual participants" (p. 204). Through both of these works, it can be seen that the cognitive view of culture sees thought as linked to action and as a set of rules that can be defined and logically laid out to explain behavior within an organization (Smircich, 1983). The rules are shared, common, held in the minds of employees, and acted out frequently.

The symbolic perspective of organizational culture aligns very closely with the semiotic view undertaken by anthropologist Clifford Geertz (Geertz, 1973; Smircich, 1983). The symbolic view is linked to a culture's shared symbols and meanings (Smircich, 1983). In contrast to the cognitive view, which sees culture as "something an organization is" (Smircich, 1983, p. 347), the symbolic perspective identifies culture as "something an organization has" (Smircich, 1983, p. 347). A researcher analyzing an organization from a symbolic standpoint would be concerned with deciphering the patterns of symbolic action that create meaning within an organization, again standing in contrast to a cognitive theorist who would be concerned with the unwritten rules that lead up to the behavior and actions of those in an organization (Smircich, 1983). Stephen Barley's (1983) work analyzing a funeral home illustrated the use of a symbolic view

when exploring culture. Barley used structured interviews over several weeks to uncover semiotic data, termed codes, for each of the major processes that occur within a funeral home. Barley concluded that each process within the funeral home had a code, driven by signs or symbols, that had relevance within the funeral home. For example, Barley found the furnishings of the funeral home to be driven by the symbolic code of a home-like appearance over that of the appearance of a church. Therefore, in this particular instance, the funeral director, as a member of this particular organization, organized his work experiences through each of the symbols or codes and would ensure that furnishings of the funeral home reflected a home-like feel. Organization of one's work in this way sums up the symbolic perspective of organizational culture.

The amount of literature on organizational culture is vast and the resulting definitions large in number. In fact, in their analysis of organizational culture instruments, Jung et al. (2009) found well over 100 dimensions of culture. Although many factors, definitions, and descriptions of organizational culture appear in the literature, a common thread appears to be the cognitive and symbolic perspectives. Both the cognitive and symbolic views show up in isolation and paired together in many of the definitions of organizational culture and provide a theoretical lens through which the various working definitions of organizational culture can be viewed. One such definition was developed by Edgar Schein in 2004:

> The culture of a group can now be defined as a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be

taught to new members as the correct way to perceive, think, and feel in relation to those

problems. (p. 18)

Schein further defined culture by breaking it down into three levels, with each level designed to

represent how visible the phenomenon is to the observer. The three levels were artifacts,

espoused beliefs and values, and underlying assumptions (Schein, 2004). Schein used artifacts to

describe the surface level that would be observable to anyone inside or outside the organization.

Artifacts include rituals, ceremonies, and any other symbols that may be present within the

buildings and offices within an organization. This level of Schein's definition highlights the

symbolic view taken by Geertz (1973) and explored in terms of organizational culture by

Smircich (1983) and Barley (1983). Revisiting Barley's work on funeral home directors, the set-

up of the funeral home is a symbolic artifact when viewed using Schein's definition of culture.

Moving to the second and third levels of culture—espoused beliefs and underlying

assumptions—reflect the deeper parts of culture, according to Schein (2004), and begin to

explore the cognitive perspective of culture. Espoused beliefs and underlying assumptions speak

to group learning that eventually is taught to new employees. As an example, Schein described a

story of a young executive faced with decreasing sales who offered up a strategy of increased

advertising as a solution to the problem the group was facing. According to Schein's theory of

culture, the executive's plan is compared to the existing beliefs, values, and assumptions within

the organization and only becomes shared, and thus a part of the culture, if it is determined that

the strategy was successful. Within these two levels we begin to see the cognitive perspective of

culture touted by Goodenough (1981) and seen in the master contracts described by Harris and

Cronen (1979). In this way, culture is in the hearts and minds of men (Goodenough, 1981) and is learned over time.

Similar to Schein (2004), Terrance Deal and Allan Kennedy (1982) also offered a definition of culture that exhibited both the symbolic and cognitive perspectives of culture. Deal and Kennedy (1982) defined culture as "a cohesion of values, myths, and heroes, and symbols that has come to mean a great deal to the people who work there" (p. 4). In delving further into their definition of culture, Deal and Kennedy proposed that the elements of culture are heroes, values, business environment, cultural network, and rites and rituals. It is through these that the cognitive and symbolic perspectives can be seen. According to Deal and Kennedy (1982), values are the basic beliefs of the organization that defines success for employees and provides "guidelines for their behavior" (p. 21). Together the heroes of an organization and its informal cultural network provide constant teaching of these values through example to new and existing employees alike (Deal & Kennedy, 1982). The teaching of these values becomes a predictable spread of a cognitive road map—or a master contract (Harris & Cronen, 1979)—that defines acceptable behavior. From that comes the symbolic rites and rituals of behavior defined as symbolic action that are simply "dramatizations of the company's basic cultural values" (Deal & Kennedy, 1982, p. 62). Within the work of Deal and Kennedy, very similarly to Schein (2004), the cognitive and symbolic perspectives were paired together to describe the development of culture within an organization.

Beyond the cognitive and symbolic perspectives, further exploration into the various definitions of organizational culture reveals another commonality. Researchers and writers on the topic of organizational culture often attributed human qualities to the organizations they were

studying (Allaire & Firsirotu, 1984). Organizations have been described as human institutions (Deal & Kennedy, 1982), as having a personality (Allaire & Firsirotu, 1984; Carpenter et al., 2009), and as being healthy or unhealthy (Hoy & Woolfolk, 1993). In conjunction with the human characteristics ascribed to an organization, the various definitions of culture lean heavily on the human process of relationships and how things are learned, shared, and passed on (Gruenert, 1998). From this perspective, the organization and its human characteristics metaphorically represent a person. Culture then represents the way that person thinks, organizes thoughts, and feels. This theme of patterns of behavior and relationships can be seen in the descriptions and definitions of organizational culture within the literature. Edgar Schein (1988) defined culture as a "pattern of shared basic assumptions" (p. 7), Robbins and Coulter (2014) as a "system of shared meaning" (p. 512), Bower (1966) as "the way we do things around here" (p. 22), and Deal and Kennedy (1982) as "a cohesion of values, myths, heroes, and symbols that has come to mean a great deal" (p. 4). Each description provides a road map for acceptable employee behavior in every situation. Whether it is a "pattern" (Schein, 1988), a "system" (Robbins & Coulter, 2014), or a "cohesion" (Deal & Kennedy, 1982), Deal and Kennedy (1982) described understanding organizational culture as all coming down to "understanding the importance of working with people" (p. 18).

Although there is no agreement on a single definition of organizational culture (Smircich, 1983), commonalities in the literature do exist when looking at the cognitive perspective, symbolic perspective, and the clear focus on relationships and human qualities within an organization. The levels described by Schein (2004) and the elements of culture discussed in Deal and Kennedy's (1982) work exhibited the symbolic and cognitive perspectives discussed by

Smircich (1983), bringing together many of the anthropological views that came before them, specifically Clifford Geertz (1973) and Ward Goodenough (1981). A focus on relationships also represents a similarity as many of the operational definitions rely heavily on the interaction of employees and at times leadership as the vehicle for the development of organizational culture. School culture enjoys an ambiguous existence, but commonalities in the literature exist in the capacities discussed previously. The next section will specifically discuss school culture.

School Culture

School culture has become a standard part of every discussion involving school improvement and effectiveness (Hoy, 1990). Although the quantity of literature on the topic of school culture is immense, the term, much like organizational culture, does not enjoy a common definition. The nebulosity of the term should not be a surprise as the concept of school culture has deep roots in both anthropology and the study of organizational culture (Deal & Peterson, 1990), the various definitions of each having already been covered in previous sections. A review of the literature finds that, when applied to schools, culture is both referred to as school culture and as organizational culture. This section will explore how school culture was introduced as a concept and how both organizational and school culture have been defined within the context of schools.

Willard Waller's (1963) *The Sociology of Teaching* appears to be the first to describe school culture explicitly when he wrote that every school has "a culture that is definitely their own" (p. 103). After Waller, the term culture is noticeably absent in school literature, having been replaced by an increased focus on school climate or ethos. The focus on climate is often attributed to the effective schools movement of the 1970s (Hoy, 1990). Led by the work of

Edmonds (1979), a model for a positive climate, and thus an effective school, included a safe and

orderly environment, strong administrative leadership, a progress monitoring system, and high

performance expectations. Although school climate and school culture are often used

reciprocally (Van Houtte & Van Maele, 2011), there are differences in the two terms that have

been noted in the literature.

Hoy (1990) defined climate as "the relatively enduring quality of the school environment

[that is] experienced by participants, affects their behavior, and is based on their collective

perceptions of behavior in schools" (p. 152). In comparison, the various definitions of culture

refer to underlying assumptions (Schein, 2004) and systems of shared meaning (Robbins &

Coulter, 2014). Van Houtte and Van Maele (2011) asserted that the difference between climate

and culture, which is evident in the two preceding definitions, is in the measurement of

perceptions versus the measurement of underlying assumptions. Gruenert and Whitaker (2015)

agreed that a difference does exist and proposed that culture is the "personality of the building

while climate is the attitude; that culture is part of us whereas climate surrounds us; and that

culture is the way we do things around here while climate is the way we feel around here" (p.

10). For the purpose of this research, culture and climate are treated as separate concepts that

have "real and meaningful differences" (Hoy, 1990, p. 161).

Although the term climate was more popular during the 1970s school effectiveness era of

research, an increased focus on corporate cultures and their application to more effective schools

propelled the study of culture to the forefront of school research (Deal & Peterson, 1990).

Culture is a key predictor of financial success in businesses (Deal & Kennedy, 1982), but

identifying the pieces of business culture that are still relevant when translating the concept to

education is difficult. In spite of the differences between business and education, it is widely agreed that culture is evident in every aspect of a school (Deal & Peterson, 1990; Gruenert & Whitaker, 2015; Maxwell & Thomas, 1991; Turan & Bektas, 2013). It can be felt the minute you walk in, and people who work there sense something unique about their building that is indescribable (Deal & Peterson, 1990). Therefore, Waller's (1963) simple declaration that each school has its own unique culture is still relevant today; however, many relevant definitions have been proposed to add to the idea that every school has its own unique culture.

Fullan and Hargreaves (1991) referred to school culture as "the guiding beliefs and expectations evident in the way a school operates, particularly in reference to how people relate to each other" (p. 51). Deal and Peterson (1990) wrote extensively about culture as an important tool in the school improvement process, defining school culture as "historically rooted, socially transmitted set of deep patterns of thinking and ways of acting that give meaning to human experience, that unconsciously dictate how experience is seen, assessed and acted on" (p. 19). Deal (1985) defined culture simply as "the way we do things around here" (p. 605). Paul Heckman (as cited in Stolp, 1996) defined culture as "the commonly held belief of teachers, students, and principals" (p. 2) Maxwell and Thomas (1991) suggested that culture is the aspects of a person's life that give it meaning. Stolp and Smith (1995) took the previous two definitions and formulated culture as being "historically transmitted patterns of meaning that include the norms, values, beliefs, traditions, and myths understood, maybe in varying degrees, by members of the school community" (p. 23). In summation, culture is guiding beliefs (Fullan & Hargreaves, 1991; Heckman, 1993; Stolp & Smith, 1995), deep patterns of thinking (Deal & Peterson, 1990), and "the way we do things around here" (Deal, 1985, p. 605). Put together,

school culture is a "system of shared orientations that hold the unit together and give it a distinctive identity" (Hoy, 1990, p. 157).

Relying on much of the literature discussed previously, Steve Gruenert and Jerry Valentine (2006) looked at the deep patterns of thinking mentioned by Deal and Peterson (1990), and the operational definition of the way we do things around here, used by Deal (1985), as part of a school's collaborative culture. Whereas the more generic term school culture is used to describe a host of ways a school may operate, a collaborative culture, according to Gruenert and Valentine (2006), is "a culture that is focused on a collective responsibility for student learning" (p. 1). A collaborative culture features teachers who work collaboratively to increase student learning outcomes, high expectations for teachers, and strong, not rigid, leadership (Gruenert & Valentine, 2006). However, a collaborative culture is much more "than simply teachers working with teachers" (Gruenert & Whitaker, 2015, p. 80). A collaborative culture, according to Gruenert and Whitaker (2015), also means the "existence of trust, peer observations, and a compelling mission" (p. 80). According to Gruenert and Valentine, the significance of a school culture that is collaborative is increased student achievement as well as instructional practices that continuously evolve based on student learning levels.

In addition to a more specific definition of culture, Gruenert (1998) also developed an instrument to measure a school's collaborative culture. The School Culture Survey is a 35 item survey separated into six factors and is completed by teachers to measure their school's culture. Specifically, The School Culture Survey is designed to assess a school's culture to ascertain how collaborative it may or may not be. The School Culture Survey is widely recognized as a valid

and reliable tool to measure school culture and has been used in both the United States and abroad (Gruenert, 1998).

The study of culture has a long and complex history. From the ethnographic study of tribes to successful businesses, and on to the study of schools, culture has been defined many different ways and applied in a variety of contexts. The study of culture of schools in particular appears to be directly related to an interest in successful corporate cultures that may have been spurred on by the publishing of various books touting Japanese management styles and their focus on corporate culture (Deal, 1985). Although there is a distinct difference between a business environment and that of a school, in both organizations humans are at the center (Marzano et al., 2005). The concept of culture then focuses on what, as Hoy (1990) stated, "holds the unit together" (p. 157). In this way, business culture and school culture are not different. Although the two exist in separate cultural paradigms, a focus on the interactions, socialization, and values of the group bonds the two terms (Turan & Bektas, 2013). Culture became the focus of corporations due to increased pressure to become more productive. Culture has also become a focus for schools and is a potential link to a positive increase in school effectiveness.

Culture and School Effectiveness

Culture has been consistently cited by researchers as enhancing school effectiveness (Dumay, 2009). Researchers from the late 1970s on frequently described school culture, or ethos, as a guiding principle for effective schools (Maslowski, 2006). Much like the definition, the measurement of culture has been addressed from a variety of angles. The survey, parts of culture looked at, and outcomes addressed all impact the lens by which culture can be looked at.

Whether it is state assessments (Gruenert, 2005), suspension rates, student attendance (Ohlson, 2009), study habits (Van Houtte & Stevens, 2010), math achievement (Cheong Cheng, 1993), or percentage of failures (Van Houtte, 2004), culture has been shown to have a significant relationship with student outcomes.

The authors of two studies conducted 19 years apart both pointed to cultural factors as impacting student achievement. Edmonds (1979), in looking at urban schools, pointed out that the behavior of the school is a key indicator of success. Behavior was defined as having more homogenous views in regards to expectations of student work, a shared orientation within the definition of culture. Sammons et al. (1995) took a similar stance, advocating for 11 factors that were existent in effective schools. Among the 11 factors listed were shared values, environment, and high expectations. The link between school effectiveness and common values among teachers, mentioned by Edmonds, is a concept that can be tied into the strength of school culture mentioned by Cheong Cheng (1993) and others. Cheong Cheng looked at the strength of organizational culture, or how homogenous it is, as related to both perceived effectiveness and student achievement. Conducting a large scale survey that included 54 schools and 588 teachers in Hong Kong, Cheong Cheng found a significant correlation between a strong organizational culture and perceived effectiveness. Cheong Cheng also found that a school with a strong organizational culture, on average, scored higher than the schools with a weak culture.

Researchers have also looked at specific student outcomes in relation to school culture. Gruenert (2005) studied the effect of a collaborative school culture on student achievement as measured by a standardized state assessment. Collecting data from 81 schools in Indiana, Gruenert found that student achievement was positively correlated with culture. Specifically, he

found that the indicators of unity of purpose, professional development, and learning partnership had the strongest correlations. At the end of the study, Gruenert concluded that you cannot look at culture and student achievement as two independent, unrelated variables in schools. To the contrary, culture and student achievement need to be looked at as "complementary, reciprocal, and convergent in nature" (Gruenert, 2005, p. 50).

Using a different student outcome measure, Van Houtte (2004) came to a similar conclusion in his study of general and vocational schools. By examining the school culture in both school types, Van Houtte found that a school's culture was correlated significantly with how often students failed a course. The factors of teachability and academic goals were found to be most significant. Van Houtte and Stevens (2010) continued along that same line of research six years later, finding that the culture of futility in a school impacted a student's study habits regardless of that individual student's beliefs. The school's culture was more powerful, hence overpowering the student's individual beliefs which became visible through study habits (Van Houtte, 2004).

Using yet another measure of student outcomes, Ohlson (2009) looked at the relationship between student absences, suspension rates, and school culture. Ohlson found that the factor unity of purpose, as measured by the The School Culture Survey (Gruenert, 1998), was significantly associated with the number of students who had excessive absences. The reduction in the number of absences may be due to the fact that the student, parent, and teacher goals are aligned because of a very well-communicated and understood mission (Ohlson, 2009).

Regardless of what measure is used, a strong correlation between the culture of a school and student outcomes appears as a consistent theme in the literature. With the impact of culture

evident, the resulting question becomes how does a culture develop, persist, and most importantly how can a school undergo a cultural change. The next section focuses on the principal and their impact on school culture.

The Principal and School Culture

The principal as a figurehead is an important part of the traditional school set-up (Leithwood & Wahlstrom, 2008). In turn, the literature consistently defined the school principal as a key piece in enhancing school effectiveness, specifically student achievement (Short & Spencer, 1989). Researchers have sought for decades to quantitatively define the direct impact of the building principal on student achievement. In a quantitative meta-analysis of studies on the direct impact of educational leadership on student achievement, Witziers et al. (2003) found small effect sizes for all of the leadership behaviors studied. The authors concluded that for the defined leadership behaviors, no evidence existed of a direct effect on student outcomes. The complexity of the relationship and the difficulty of empirically verifying the relationship has led most researchers to move on to finding things present in a school that mediates the impact of leadership (Hallinger & Heck, 1996). To do that, researchers have employed a mediated effects model of school leadership, which looks at the indirect effect principals have on student outcomes (Hallinger, & Heck, 1998). The indirect effect is often mediated through organizational factors, people, and events (Leithwood, 1994). One mediating factor that has been explored is culture. Anderman et al. (1991) found that different principal behaviors led to different school environments and cultures. Several researchers have looked at various impacts of principal behavior on school culture, specifically the leadership practices the principals may employ. The difference in the approach each researcher took was in the independent variable.

Leadership practices (Turan & Bektas, 2013), transformational leadership (Lucas & Valentine, 2002), and instructional leadership (Sahin, 2011) have all been either quantitatively or qualitatively explored as impacting school culture.

Principal Transformational Leadership and School Culture

Transformational leadership has gained widespread attention over the last 15 years (Griffith, 2004). Based on the work of Bass (1990), transformational leaders appeal to the moral and psychological needs of employees through charismatic behaviors that develop a sense of loyalty and commitment from members of an organization (Griffith, 2004). Leithwood and Jantzi (2000) used six dimensions to characterize transformational school leadership, which included "building school vision and goals; providing intellectual stimulation; offering individualized support; symbolizing professional practices and values; demonstrating high performance expectations; and developing structures to foster participation in school decisions" (p. 114). In spite of empirical evidence indicating a positive impact on employee motivation (Kane & Tremble, 2000), goal setting (Leithwood & Jantzi, 2000), and work conditions (Blase, 1986), transformational leadership has not been shown to have a direct impact on performance (Hallinger & Heck, 1998). Some studies, however, have examined the impact of transformational leadership on the mediating effect of school culture.

In a study of 12 schools that had developed highly collaborative relationships, Leithwood and Jantzi (1990) examined transformational behaviors that had a potential relationship with highly collaborative school cultures. Although the authors readily admitted that examining relationships between administrators and school cultures is "neither simple or direct" (Leithwood & Jantzi, 1990, p. 21), they did identify six strategies used by the 12 principals to influence

school cultures. Those strategies were strengthening the school's culture, fostering staff development, developing bureaucratic mechanisms, developing direct and frequent communication, developing cultural values expressed through symbols, and sharing power and responsibilities. In their 1990 research, Leithwood and Jantzi used a qualitative approach that was exploratory in nature, leading to a lot of suggestions for future research but not many answers as to how transformational leadership may impact school culture. However, 10 years later Leithwood and Jantzi (2000) did find the relationship between principal transformational leadership and the culture of a school to be significant and direct.

Utilizing two surveys to collect data on transformational leadership, conditions of the organization, and educational cultures of the families they served, Leithwood and Jantzi (2000) sought to determine what variables may have a direct relationship with transformational leadership. With over 123 schools involved and 800 respondents to all surveys, the researchers determined that while transformational leadership made a disappointing contribution to the variable of student engagement, there were strong and direct effects found between transformational leadership and organizational conditions (Leithwood & Jantzi, 2000). Leithwood and Jantzi's findings are similar to that of Hallinger and Heck's (1996) analysis. While the direct effects of transformational leadership can be looked at as disappointing, both Leithwood and Jantzi and Hallinger and Heck caution against dismissing the impact of transformational leadership behaviors opining that after all, "they do explain a large proportion of variation in organizational conditions" (Leithwood & Jantzi, 2000, p. 125), one of those conditions being school culture.

Barnett et al. (2001) also looked into the direct relationship between principal transformational leadership and school culture. Surveying teachers in 15 schools in Wales, Australia, Barnett et al. classified leaders as transformational, transactional, or laissez-faire and looked for a potential relationship with a school's learning culture. Learning culture was defined as teacher perceptions of the school's emphasis on different aspects of student learning. The results found several correlations between transformational leadership behaviors displayed by the principals in the study and a positive learning culture (Barnett et al., 2001). The authors did caution against a whole-sale view of transformational leadership as a panacea for schools, determining that more investigation is needed to determine how transformational and transactional leadership styles may augment each other in creating a positive school learning culture (Barnett et al., 2001).

Lucas and Valentine (2002) also looked at the effect of principal leadership on school culture. However, in contrast to other studies examined, Lucas and Valentine also used the subsequent mediating variable of leadership team transformational leadership when looking at a potential relationship with school culture. Using mixed methods, Lucas and Valentine found that principals impact culture directly in some cases but more often through a leadership team. Lucas and Valentine found that of the possible relationships between principal transformational leadership and culture, 15 of the 36 possible relationships were significant. However, when the transformational leadership scores of a school's leadership team were added, 23 of the 36 possible relationships became significant (Lucas & Valentine, 2002). Adding the leadership team increased the total significant relationships by eight. Furthermore, when looking solely at the direct relationship between the leadership team and school culture, Lucas and Valentine found 34

of the 36 possible relationships as significant. The results indicated that in some cases the school

leadership team mediates the principal's impact on school culture.

Principal Instructional Leadership and School Culture

In addition to transformational leadership, instructional leadership has also been explored

as an independent variable in studying school culture. The literature on effective schools often

points to instructional leadership as a desired characteristic of effective principals (Short &

Spencer, 1989). Whereas transformational principals lead through developing organizational

capacity, instructional leadership suggests building individual capacity specifically through

direct involvement in curriculum and instruction (Bickmore & Dowell, 2014). The result of

which is what Short and Spencer (1989) described as an "establishment of belief structures and

policies that promote academic press" (p. 2). While determining a causal relationship between

instructional leadership and student achievement is difficult, examining how instructional

leadership impacts belief systems provides insight into a potential relationship with school

culture.

Anderman et al. (1991) were researchers who sought to find potential relationships

between the principal and a school's culture. Using data from a 108 question Likert-style survey,

Anderman et al. specifically explored teacher perceptions with regard to school culture and

principal behaviors. Although instructional leadership and school culture were not found to be

directly linked, Anderman et al. did find that the perceptions the teachers had of the principal

directly impacted their perceptions of the school's culture. Anderman et al. continued on

indicating that teachers' perceptions of the school's culture are related directly to their job

satisfaction. Job satisfaction was then found to be the highest when the principal behaviors of

promoting an instructional climate, managing the curriculum, and working with and supervising

teachers were exhibited most often by the principal (Anderman et al., 1991), all of which are

behaviors that have been described as instructional leadership (Bickmore & Dowell, 2014).

While not a direct look at principal instructional leadership and school culture, Anderman et al.

affirmed the principal's impact on culture through the mediating factor of teacher perception.

Sahin (2011) also explored the potential relationship between instructional leadership and

school culture, taking a much more direct approach than Anderman et al. (1991). Using data

gathered from 16 elementary schools in Turkey, Sahin sought to analyze teacher perception with

regard to both instructional leadership and school culture. Both an instructional leadership survey

and a school culture survey were utilized. Sahin found that teachers had a positive perception of

principal instructional leadership and school culture. The results of which, Sahin determined,

indicated that principal instructional leadership had a positive impact on all aspects of school

culture. In light of the results, Sahin proposed that the principal as an instructional leader brings

purpose to an organization which promotes a positive culture through unity of purpose and

vision.

Although the relationship between instructional leadership and various school variables,

including school culture, has yet to be adequately researched (Blase & Blase, 2000), the

literature on the topic shows that principal instructional leadership behaviors do have an impact

on the culture of a school. Hallinger (2003) described instructional leaders as culture builders,

Blase and Blase (2000) saw effective instructional leadership as ingrained in school culture, and

Heck (1992), saw the principal and instructional leadership behaviors as manipulating many

school process variables, including culture. Instructional leadership is yet another principal

behavior that has shown to potentially have an impact on developing and sustaining a positive school culture.

Other Principal Leadership Practices and School Culture

In addition to transformational and instructional leadership, researchers have also used the overarching term of principal leadership in exploring the potential relationship between principal behavior, student achievement, and various school level variables, including culture. Similar to the findings advocated for by researchers of transformational leadership and instructional leadership, the literature on leadership advocates for the importance of principal behavior in impacting school culture.

Turan and Bektas (2013) utilized the Kouzes and Posner (2003) leadership practices inventory to identify what subcategories of leadership practices, if any, are correlated with school culture. The Kouzes and Posner Inventory subcategories include guidance, creating a vision, questioning the process, enabling others to act, and encouraging the staff and audience. Turan and Bektas found positive and significant relationships between all five of the leadership subcategories and school culture. Further investigation of the significant relationships found that principal leadership practices explained 28% of the variance in school culture. Turan and Bektas viewed the results as confirming that teachers view the principal as a role model for a school's culture.

Dinham (2005) used qualitative methods to explore the role of the principal in educational outcomes. With 30 reports from 50 different schools, Dinham identified over 300 concepts related to principal leadership. The concepts were eventually narrowed down to seven categories, which included external engagement, a bias towards innovation, personal

relationships, a focus on teaching and learning, teacher trust, student support, and an expectation

of a culture of success. With regard to culture, Dinham uncovered several instances of the

principals' perceived impact on culture. The creation of a learning, positive, and supportive

culture were all charged to the principal through specific leadership actions throughout the

interview transcripts. Dinham's overall findings stressed the importance of the principal in

creating and maintaining an environment where both teachers and students can be successful.

Several studies echoed the findings of Dinham (2005) and Turan and Bektas (2013).

Cheong Cheng (1993) found that the principal leadership behavior of charisma can contribute

substantially to predicting the culture of a school. Kythreotis et al. (2010) investigated the direct

and indirect impact of leadership on student outcomes and found principal leadership to have a

significant effect on classroom learning culture. Sammons et al. (2011) also found learning

culture to be directly impacted by principal leadership, concluding that what is needed is a model

of leadership that seeks to impact positively the teachers and ultimately the learning culture of

the school.

Summary

Researchers investigating the principal's direct impact on student achievement have

found that no such relationship exists (Witziers et al., 2003). With the move to a mediated effects

model, school culture has appeared more frequently as a primary variable (Hallinger & Heck,

1998). Examining the relationship between the school principal, school culture, and student

achievement has led researchers to identify several characteristics of the school principal that

have significant relationships with a positive school culture (Barnett et al., 2001; Leithwood &

Jantzi, 2000; Sahin, 2011; Turan & Bektas, 2013). Although various mediating variables exist,

the literature defines principal behavior as important. Whether it is instructional leadership, transformational leadership, charisma, or a curricular focus, the principal acts out through his or her actions what is important (Stolp, 1994). In this way, principal behavior eventually becomes a part of a school's culture through teacher perceptions (Anderman et al., 1991). Leadership is connected with effective schools, although mediated by school culture (Hallinger & Heck, 1998). If the goal of the school principal is to impact student achievement, then, according to literature, the focus must be on the relationships between themselves and all constituents (MacNeil et al., 2009). Ultimately, as eloquently stated by Schein (2004), "Culture is ultimately created, embedded, evolved, and ultimately manipulated by leaders" (p. 3).

The literature has shown that leadership is important in building and sustaining a school's culture (Schein, 2004). If the culture of an organization or school is its personality (Gruenert & Whitaker, 2015), understanding the behavior of the principal is potentially important in understanding why different cultures develop in different schools. The next section will look at the literature on principal personality and the potential impact on school level variables.

Personality and Leadership

In the quest for improved schools, principal behavior matters (Anderman et al., 1991; Marzano et al., 2005). Marzano et al. (2005), in finding a .25 average correlation between student achievement and leadership, stated that "the leadership behavior of the principal can have a profound effect on student achievement" (p. 32). Although leadership has been conceptualized as instructional, transformational, or through various characteristics such as charisma, limited research has been done as to why some principals are more instructional, transformational, or charismatic than others. As stated by Spillane et al. (2001), "Knowing what leaders do is one

thing, but without a rich understanding of how and why they do it, our understanding of leadership is incomplete" (p. 23). Viewing behavior as a function of personality (Strang & Kuhnert, 2009), researchers have sought to connect personality traits to effective leadership.

Although the study of personality and leadership goes back much further, most research on the topic starts with a mention of the meta-analysis conducted by Stogdill (1948). Reviewing 124 studies that included pre-school, elementary school, high school, college, and adult-age subjects, Stogdill reported on 29 different traits that ranged from age to persistence of leadership. Stogdill found that no traits or characteristics were consistently found in non-leaders when compared to those in leadership positions. Specifically, Stogdill concluded that the characteristics of leaders are largely determined by their situation. The situation-dependent assertion made by Stogdill moved much of the research from trait-specific to situation-specific analyses. However, recently researchers have noted that Stogdill's review may have had a shortsighted view of the impact of personality on leadership. Lord et al. (1986) viewed Stogdill's review as being misinterpreted, opining that positive effects were found and that the negative view taken by subsequent researchers has created a negative view of trait research in general. Judge et al. (2002) took issue with the fact that trait research of the time lacked a framework to define personality. In applying both a new set of methodological procedures and defining a framework for personality, researchers sought to take a second look at the potential correlation between personality traits and perception of leadership.

Kenny and Zaccaro (1983) used a rotation design which saw leadership situations altered to determine if leadership traits were stable across situations and found that, in contrast to Stogdill's (1948) work, leadership was much more stable across situations than had previously

been reported. Kenny and Zaccaro's (1983) findings showed that between 49% and 82% of the variance in leadership can be attributed to "some stable characteristic" (p. 678). Kenny and Zaccaro (1983), in using the word characteristic rather than trait, pointed to the ability of the leader to "perceive the needs and goals of the constituency and to adjust one's personal approach to group action accordingly" (p. 678). This idea of consistency across situations was examined further by Zaccaro et al. (1991) eight years later. Using the same rotational design with the addition of a perception survey, Zaccaro et al. found that trait-based characteristics explained 59% of leadership emergence when specifically exploring the characteristics of initiating structure, persuasion, consideration, and production emphasis. Similar to Kenny and Zaccaro's 1983 research, Zaccaro et al. found leadership to be stable across situations; however, the ability of the leader to perceive and meet the needs of the group members appeared to be the reason for that stability. In 2007, Zaccaro took these findings a step further by stating that the move away from a trait based view of leadership was not founded in a "sufficient empirical bedrock" (p. 13) and that growing research argues for "traits as 'significant precursors of leadership effectiveness'" (p. 14).

While defined as traits, Zaccaro et al.'s (1991) look at initiating structure, persuasion, consideration, and production emphasis still had a heavy focus on behaviors taken on by leaders in different situations. This view produces a result of stability across situations but does not define why some leaders are better at those tasks than others. Several researchers have taken a deeper look into the innate qualities of the leader to determine why that may happen. Traits such as intelligence, masculinity-femininity, adjustment, dominance, extroversion-introversion, and conservatism have all been examined by researchers as potentially being connected to leadership

(Judge et al., 2002; Lord et al., 1986; Mann, 1959). Lord et al. (1986), in their meta-analysis, found the traits of dominance, intelligence, and masculinity-femininity to be significantly associated with leadership perceptions, concluding that some traits may "in fact be predictors of leadership perceptions" (p. 408), concurring with the results of Zaccaro et al. (1991) and Judge et al. (2002), in their quantitative and qualitative review of leadership and personality, found conscientiousness, extraversion, and openness to experience as correlates of leadership. The Judge et al. review stands apart from the rest of the literature because of its use of a taxonomic base—The Five Factor Model of Personality—to organize the traits researched.

The lack of consensus in determining traits associated with leadership is often associated with the lack of a common conceptual model used to define personality (Chidester et al., 1991). In addition, much of the work reviewed in this section looked at leadership from an emergent perspective, looking at leaderless situations and determining what traits were associated with those that took on leadership roles (Hogan et al., 1994). In schools, the leader is well defined as the principal. Therefore, the applicability of these studies may not be universal when the discussion turns to schools. The next section will review the specific personality literature related to schools and the school principal.

Personality and the School Principal

Leithwood (2005), in discussing the connection between principal personality and school culture, commented on the lack of studies looking at the internal workings of the school principal, outside of values. While the leadership traits and constructs discussed by personality researchers can generally be applied to schools and their leaders, the role of the school principal provides a context that needs to be explored separately. The literature in the social sciences has

been discussed; what is left is a discussion of leadership and personality within the context of schools and the principals that lead them.

In 1962, John Hemphill published a study on administrative performance and personality. Studying 232 elementary school principals from several districts, Hemphill used a methodology termed simulation to gather his data. The simulation approach was used to standardize the context in which actions and behaviors occurred. According to Hemphill, much of the previous work on the topic was not generalizable because the results were situation dependent. By using simulation, and thus standardizing the situation, Hemphill attempted to eliminate changing situations as a possible confounding variable. In the Hemphill study, each of the 232 principals took the Sixteen Personality Factor Questionnaire (16 PF) one week prior to receiving the simulated situation. Developed by Cattell et al. (1970), the 16 PF rated participants on emotional stability, friendliness, dominance, enthusiasm, character strength, adventurousness, emotional sensitivity, suspiciousness, conventionalism, sophistication, insecurity, radicalism, self-sufficiency, character stability, and nervous tension. Hemphill excluded the factor of general intelligence, opting for another measure of the construct. After the 16 PF was completed, all principals involved in the study received the same situation, a simulated school referred to as the Whitman School. Then, both in written form and orally, the principals responded to the simulation. Hemphill scored the responses based on 68 categories. Later, through factor analysis, the 68 categories were reduced to eight first-order factors. Once the eight first-order factors were established, Hemphill ran a correlation between the eight factors and scores on the personality questionnaire. In describing the results, Hemphill ascertained that while personality constructs do not correlate with the evaluations of superiors, they do correlate with the eight first-order factors.

While one personality construct did not correlate with every one of the factors, Hemphill did find that each of the constructs were strongly correlated with at least one of the first-order factors. Hemphill (1962), in describing the future implications of his work, stated that "personality might make a valuable addition to a battery of tests for selecting principals, providing the school district is able to describe the principal it wants in terms of factors of administrative performance" (p. 338).

Wendel (1991) conducted a study similar to Hemphill (1962) almost 30 years later. Using the same simulation technique as Hemphill, in conjunction with the Myers Briggs Type Indicator Inventory, Wendel sought to see whether a relationship existed between specific personality types and administrator job performance. A sample of 88 aspiring or current administrators were administered the Myers Briggs Type Indicator Inventory and exposed to a simulation developed by the researchers. Similar to Hemphill, Wendel found personality to have only a small relationship with job performance overall, but in discussing the implications, the researchers remarked on the potential of personality measurements when the qualifications of the position are known and exact.

In addition to the Hemphill (1962) study, other studies have been conducted with regard to principal personality. Although these studies do identify personality as a component of the research, personality is not combined with leadership in an attempt to determine possible relationships. Richford and Fortune (1984) looked at the potential relationship between manipulation, locus of control, and job satisfaction. Using a sample of 225 secondary principals and defining manipulation and locus of control as personality constructs, Richford and Fortune sought to determine whether manipulation and locus of control were correlated, and if so

whether the two constructs were related to job satisfaction. The results of the study found

manipulation and locus of control to be positively correlated and manipulation and locus of

control, separately, to be negatively correlated with job satisfaction (Richford & Fortune, 1984).

Similarly, Cooper, et al.'s (1988) study of psychological stress and personality provided some

insight, although absent of a discussion of leadership, into principal personality and its potential

impact on schools. Using a relatively small sample of 12 secondary principals, one focus of B. S.

Cooper et al.'s study was to determine whether Type A Personality principals experienced more

psychological stress than Type B Personality principals. Results of the study found no correlation

between Type A Personality and Stress (Cooper et al., 1988); however, Cooper et al. (1988)

cautioned discarding personality as a variable based on the results, pointing out that personality

can be telling of a principal's "needs and work style" (p. 215). The understanding of those needs

and work styles may assist in developing better self-awareness in principals, which in turn may

allow them to better manage the complex environments of the schools they lead (Cooper et al.,

1988).

Approaching the dynamic of personality from the counseling angle, two studies

completed in the 1960s looked at whether the personality structures of counselors and

administrators varied (Donnan & Harlan, 1968; Kemp, 1962). Kemp (1962) utilized the Edwards

Personal Preference Scale (Edwards, 1954), which measured participants on the factors of

endurance, achievement, deference, order, aggression, intraception, exhibition, and affiliation.

Kemp used a sample of 45 principals and 45 counselors from Ohio to determine in what ways, if

any, the two differed. Kemp found that principals had more need for achievement and endurance

at the .01 level whereas counselors showed a greater need for intraception at a level of .001. In

reporting on potential implications, Kemp pointed out that need structures should be considered when screening candidates for an administrative position and that candidates, once placed in a position, should be keenly aware of their own needs structure.

Correspondingly, Donnan and Harlan (1968), using the 16 PF, looked for differences in personality between counselors and administrators. However, in contrast to Kemp (1962), Donnan and Harlan used aspiring counselors and administrators enrolled in graduate courses, rather than subjects who are currently in the profession, for their sample. The results gathered were similar to that of Kemp. Administrators and counselors differed on five factors, including emotionally vs. emotionally stable, expedient vs. conscientious, tough-minded vs. tender-minded, trusting vs. suspicious, and forthright vs. rude (Donnan & Harlan, 1968). In their results, Donann and Harlan attempted to build a profile and identify principals and counselors from results only. In this case, they correctly identified 31 out of 41 principals and 30 out of 41 counselors, while attempting to build a case for a specific personality profile for each respective position.

Kosar et al. (2014) looked at principal personality style and organizational factors, specifically the organizational factor of perceived teacher professionalism. Unlike the personality questionnaires used in the Hemphill (1962) and Wendel (1991) studies, Kosar et al. used power styles to describe principal personality. Robbins and Coulter describe power styles "as the skill an administrator possesses to influence organizational actions and decisions" (as cited in Kosar et al., 2014, p. 324). To closer look at principal personality, the five power styles used by Kosar et al. were broken into two parts. Three power styles, legitimate, coercive, and reward, were used to describe positional power, or those powers that come naturally with the position. Two power

styles, charisma and expert, were used to describe personality power, and the two were not separated in the results and were referred to in conjunction as personality power. The results of the study showed that the relationship between teacher professionalism and personality power was positive and statistically significant. When combined with Anderman et al.'s (1991) assertion that teacher perception directly impacts the perception of a school's culture, Kosar et al. provided some insight into the potential relationship between principal personality and school culture.

In contrast to Richford and Fortune (1984), Cooper et al. (1988), and Kosar et al. (2014), Engels et al. (2008) took a more direct route in looking at personality style and school culture. Using a questionnaire to determine decision-making styles, personality traits, leadership style, and general socioeconomic data, Engels et al. sought to determine whether, among other things, a particular personality profile was associated with schools with an exceptionally positive culture. It must be noted that, like other pieces of literature on personality, Engels et al. did not use a conceptual model of personality, rather choosing to focus only on locus of control, self-efficacy, and Type A behavior. In combining both qualitative and quantitative data collected, Engles et al. found that while self-efficacy did not appear to impact school culture, both a Type A academic-focused personality and an internal locus of control had positive and significant associations with the variable of school culture. Although the study completed by Engels et al. lacked a well-formed construct of personality, the ideas presented confirm that the personality attributes of principals appear to be positively correlated with a positive school culture.

The study of personality, in terms of the school principal, has been explored in terms of job performance (Hemphill, 1962; Wendel, 1991), job satisfaction (Richford & Fortune, 1984),

psychological stress (Cooper et al., 1988), perceived teacher professionalism (Kosar et al., 2014), and school culture (Engels et al., 2008). In spite of the various angles from which principal personality has been explored, only one study focused attention on the potential relationship between principal personality and school culture (Engels et al, 2008), a study that ultimately lacked the utilization of a well-developed personality construct. To further investigate the potential of principal personality within schools, the problem of operationalizing personality must be addressed (Chidester et al., 1991). The following sections will review the history of personality psychology as a science and explore the major conceptual models of personality and the leadership research associated with each.

Personality Psychology

The scientific study of personality has roots in the work of Gordon Allport in the early 20th century. Allport was not the first to study the topic but did make the initial push to establish personality as a research category in American psychology (Nicholson, 1998). Allport's (1921) paper, "Personality and Character," took the concepts of personality and character and moved to evaluate both concepts as two separate entities. Reviewing the literature on personality and character, Allport (1921) viewed character as "personality evaluated according to prevailing standards of conduct" (p. 443). In turn, Allport believed that character belongs not in the study of psychology but in the study of social ethics. Further differentiating character and personality, Allport took the topic of character and ascribed it as a problem of human nature, whereas personality moves the study to a problem of individual nature. To study the individual, and thus the visible differences in behavior, Allport presented traits that he believed were fundamental to every personality. The traits developed by Allport would become an important part of

personality, as from that point studying the individual became the hallmark of personality

psychology (Caprara & Van Heck 1992). Cervone and Pervin (2008) summed up the

individualistic view, describing personality as "psychological qualities that contribute to an

individual's enduring and distinctive patterns of feeling, thinking, and behaving" (p. 8). Looking

at the individual has led researchers to dissect personality in a variety of ways since the work of

Allport (Caprara & Van Heck, 1992). The field of personality psychology is as rife with activity

today as at any point in its history (Funder, 2001). Psychoanalytics, person-centered theories,

trait analysis, behaviorism, cognitive theories, and biological factors have all been explored as

possible explanations for individual differences as described through personality (Cervone &

Pervin, 2008). For each of the aspects comes assessments used to identify and measure

personalities.

Personality Theories and Related Assessments

As the field of personality psychology evolved, new theories were introduced, older

theories were refined, and assessment instruments were developed to test those theories.

Personality assessments seek to determine the important characteristics that constitute individual

differences in personality (Ozer & Reise, 1994). Personality theories and their associated

assessments have been separated and subsequently defined in a variety of ways. In 1935, Kurt

Lewin saw personality as developing from Aristotelian or Galilean modes. Hall and Lindzey

(1957) divided personality theories into psychoanalytic, analytic, and social and branched out

into covering the individual theories developed by Lewin, Allport (1921), as well as several other

researchers. The description of a psychoanalytic theory of personality appeared in the literature

again in Bischof's (1964) and Burton's (1974) work, probably because the concept ties to

Sigmund Freud. However, the same concept is referred to as psychosocial six years after

Burton's work was published (Maddi, 1989). With entire books dedicated to discussing the

development, application, and interpretation of personality instruments and disagreement among

psychologists as to how the varying concepts should be defined (Burger, 1986), an exhaustive

review of every instrument and theory is not possible. However, with personality psychologists

returning to traits to assess individual differences (Hogan et al., 1997), a review of those

assessments derived from trait theories is warranted. The Myers-Briggs Type Indicator (Myers,

1962), which is not considered to be based in trait theory, has been included due to its

widespread use in education (Wheeler, 2001).

Myers Briggs Type Indicator

Developed from C. G. Jung's theory of psychological types, the Myers-Briggs Type

Indicator was created by Katherine Briggs and Isabel Briggs Myers in the early 1940s (Myers,

1962) and is the most common test for measuring Jungian concepts (Cloninger, 1996). Using a

forced choice questionnaire, the Myers-Briggs Type Indicator is centered on four bipolar

preferences in the areas of perception, judging, environment, and attitude (McCaulley, 1990).

The survey offers two options for each area. A person either perceives through sensing or

intuition, judges by thinking or feeling, experiences the environment as an introvert or extrovert,

and has a perceptive or judging attitude. The resulting choices lead to one of 16 personality types

and placement into a type category (Myers, 1962). This concept is in contrast to trait theory

which seeks out individual differences, often along a continuum (Burger, 1986). Since its

inception, the Myers-Briggs Type Indicator has received considerable professional support

(Pittenger, 1993) and has been used in the military (Gailbreath et al., 1997), in leadership (Brown

& Reilly, 2009), and in therapy (Nelson & Stake, 1994). The assessment has also been widely used in education, often with students and to examine student-teacher differences as it relates to achievement (Cooper & Miller, 1991). Although the questionnaire has been found to be reliable (Carlson, 1985) and has been used extensively (Gardner & Martinko, 1996), the Myers-Briggs Type Indicator is not without its criticisms. Barbuto (1997) argued that because the Myers-Briggs Type Indicator is dichotomous and non-continuous, it would not be capable of explaining the discrepancies in behavior between individuals with the same personality type. Also, lamenting on the dichotomous and non-continuous nature of the Myers-Briggs Type Indicator, Pittenger (2005) argued that presenting the data as a four-letter formula rather than as a scale score is a misrepresentation and proposed using a more traditional magnitude assessment of personality.

Pittenger's (2005) discussion of the use of a magnitude assessment provides a path into a discussion of the various models associated with trait theories. Assessments that include a magnitude measurement of personality are designed to separate out individual differences (Burger, 1986), thus addressing both the methodological concerns of Barbuto (1997) and Pittenger.

Cattell's Sixteen Factor Theory

As a trait theorist, Raymond Cattell looked at personality from a language standpoint (Digman, 1990) and aimed to treat the study of personality "by the same scientific standards as are maintained in experimental psychology" (Cattell, 1950, p. v). In fact, Cattell opined that if personality could not be quantitatively measured, it should be called a philosophy or art (Bischof, 1964). To Cattell (1950), personality permitted a prediction of what someone would do in a

given situation. Cattell's (1943) work began with a list of 17,953 terms for personality produced by Allport and Odbert (1936). Cattell (1950) knew the list of traits used to describe a person to be unlimited and sought to narrow the broad list of traits used by Allport and Odbert to what he termed trait-elements, or narrower traits or behavior fragments (Cattell, 1950). Cattell (1943) and his colleagues first used a process of classification to cut down the terms to 161 categories and then ran a separate factor analysis to further reduce the categories down. The result was Cattell's 16 personality factors (Cervone & Pervin, 2008). At the time, Cattel's use of factor analysis was called the most sophisticated use of a process to attempt to bring together all of the major personality findings of the time (Hall & Lindzey, 1957). Bischof (1964) described the process as so complex "that entire volumes and series of lectures must be given to provide even a rudimentary grasp of their intricacies" (p. 460). Cattell's (1943) model was met with criticism due to the high number of personality factors contained within it. The multivariate approach used by Cattell would pull 16–20 factors whereas the bivariate approach preferred by Eysenck and others would pull two to three factors (Bischof, 1964). The criticism of Cattell's work can be seen in separate studies conducted by Banks (1948) and Fiske (1949). Utilizing Cattell's model and taking a different perspective on his work, Banks was highly critical of Cattell's model, finding the system to be overly complex and containing too many factors. In the end, Banks was only able to extract three factors from the same data set as Cattell. Fiske, in his study of clinical trainees, found nothing more than a five-factor solution.

Regardless of the criticism of the number of factors obtained, Cattell's work led him to develop the 16 PF (Catell et al., 1970), a measure of personality that has been found to be effective in a variety of settings (Cattell & Mead, 2008). This varied usage makes 16 PF one of

the most widely used personality instruments (Newmark, 1985). Based on Cattell's research, five

forms of the 16 PF have been produced. The 16 PF utilizes a three-point answer format to

provide ratings on three bipolar scales (Cattell & Mead, 2008). Due to its strong scientific

background, the 16 PF has been used in educational, industrial, clinical, and counseling settings.

Eysenck's Three Factor Model

Hans Eysenck is one of the most cited psychologists of the 20th century (Haggbloom et

al., 2002). Similarly to Cattell (1943), Eysenck was concerned with discovering the underlying

structure of personality; however, in contrast to the trait theorists of the time, Eysenck felt there

was a large biological determinant to the development of personality (Burger, 1986). In addition,

Eysenck felt that most theories were overly complicated. This disdain for the large number of

factors in theories, such as Cattell's (1943), led to Eysenck's use of factor analysis. Eysenck,

following the theoretical lead of Jung, took personality ratings and classified them (Hall &

Lindzey, 1957). After an initial factor analysis, Eysenck (1950) took another step and ran a

secondary analysis. This second step, which bypassed the first-order and second-order factors,

led to Eysenck identifying and extracting far fewer factors than Cattell (Hall & Lindzey, 1957).

The initial result was two broad factors of personality, neuroticism and extraversion/introversion.

A third factor, psychoticism, was added, setting forth a view of three super-factors of personality

(Digman, 1990).

Two subsequent measures were created by Eysenck to assess personality at the three

super-factor level, the Eysenck Personality Profiler (EPP) and the Eysenck Personality

Questionnaire (EPQ-R) (Jackson et al., 2000). Referred together as the Eysenckian scales, both

the EPP and the EPQ-R are designed to measure the three personality dimensions, neuroticism,

extraversion, and psychoticism. The EPQ-R contains 100 items in which participants select yes

or no to each question. The EPP spans 440 items and includes "yes," "no," and "cannot decide"

as response options. The EPP also includes a lie scale to control for socially desirable

responding. Both assessments have been used in a variety of settings, including organizational,

clinical, and for occupational selection (Hersen, 2004).

Like the 16 PF (Cattell et al., 1970) and Myers-Briggs assessments (Myers, 1962),

Eysenck (1950) was met with opposition from fellow researchers who advocated not for three

super-factors but rather for another number of factors. One such example of an alternative to the

three factor model is the 5-factor model of personality (Costa & McCrae, 1995). The following

section explores the Five Factor Model.

Five-Factor Model

When Cattell (1943) released his data on the 16 personality factors, several researchers

attempted to factor the data and replicate his results (Goldberg, 1981). Donald Fiske (1949)

carried out three separate factor analyses; in each study, five factors were located. Tupes and

Christal (1961) took six samples, four from the Air Force and two from the Fiske (1949) study,

and also found five moderately strong factors. By the time Warren Norman (1963) conducted his

own factoring of the data, even arriving at a three-tiered level of abstraction of personality

descriptors, three separate researchers had all analyzed personality traits and come to the same

five-factor solution to characterize personality (Digman, 1990). Five factors were much less than

the 16 of Cattell and more than the three-factor solution of Eysenck (1950). Since then the five-

factor model of personality structure has become one of the predominant representations of

personality used by psychologists (Ozer & Reise, 1994). Although the factors varied in

terminology over the years, the representation of the factors has remained similar from Tupes and Christal (1961) to the researchers who are advancing the model today (Costa & McCrae, 1995; Digman, 1990; Goldberg, 1990). The five factors included in the model are neuroticism, extraversion, openness, agreeableness, and conscientiousness. The model is frequently referred to as the OCEAN model, an acronym deriving from the first letter of each of the factors (Cervone & Pervin, 2008).

Assessing personality with the Five-Factor Model is done through questionnaires. The NEO Personality Inventory (Costa & McCrae, 1985) is driven by factor analytics in line with the work of Eysenck (1950). Comprised of 240 items, the NEO Personality Inventory originally tested for the personality factors of extraversion, neuroticism, and openness to experience but was later expanded to include agreeableness and conscientiousness (Cohen et al., 1996). The NEO Personality Inventory provides participants the option to agree or disagree with an item on a five-point scale (McCrae & Costa, 2003). Consistency estimates show the factors measured to be consistent at a level greater than .85, and test-retest studies exceed .80 over a six-year period (Cohen et al., 1996). In addition, research on the five-factor model has shown cross-cultural implications (McCrae & Costa, 1997) and a potential connection to predictable behavior (Digman, 1990).

Minnesota Multiphasic Personality Inventory

Developed by J. Charnley McKinley and Starke R. Hathaway for use in medical or psychiatric clinics (Butcher & Williams, 2009), the Minnesota Multiphasic Personality Inventory (MMPI) is one of the most utilized psychological tests in the United States (Lubin et al., 1984) and has been adapted to other languages and cultures (Butcher & Williams, 2009). The sheer

popularity and frequent mentions warrant the inclusion of the MMPI in a review of personality

inventories. However, the purpose of the MMPI is very different than that of any of the other

instruments previously mentioned in that it seeks to separate out a norm group from clinical

patients (Butcher, 1999). The inventory includes clinical scales for hypochondriasis, depression,

hysteria, psychopathic deviate, masculinity-femininity, paranoia, psychasthenia, schizophrenia,

hypomania, and social introversion (Hilsenroth & Segal, 2004). In addition, Hathaway and

McKinley created three validity scales to assess test-taking attitudes on the MMPI to avoid under

or over reporting of psychological problems (Butcher & Williams, 2009). The popularity of the

MMPI is undeniable (Buchanan, 1994; Butcher & Williams 2009; Lubin et al., 1984). Despite its

popularity, the inventory remains in use predominantly in medical or psychiatric settings

(Butcher & Williams, 2009).

Personality Pattern Inventory

Developed by Dr. Taibi Kahler (1982a), the PPI is the personality assessment associated

with the PCM. In 1977, Kahler was asked by Dr. Terry McGuire, a psychiatric consultant for

NASA, to "consult in the selection of astronauts, to help answer important questions as: Who

naturally works well with whom? Who does not work well with whom? How will each

individual probably behave under stress?" (Collignon et al., 2012, p. 18). Through his work with

NASA, Kahler developed and validated the PPI (Collignon et al., 2012). The PPI was

subsequently revalidated by Ampaw et al. in 2013. The PCM and PPI are unique in that the core

belief of the model is that individuals consist of the positive characteristics of all six Personality

Types identified within PCM. The PPI provides the order of an individual's Personality Types,

an ordering that has the possibility of 720 different combinations. For each personality, the PPI

also identifies the "relative amount of energy available on each Personality Type floor" (Kahler, 2008, p. 37). According to Kahler (2008), energy scores of 40 or more indicate that the person is able to experience and demonstrate the positive characteristics associated with that personality. To better understand the meaning of personality, structure, and the resulting energy scores, we now move to take a deeper look at the model behind the PPI, the PCM.

The Process Communication Model

The PCM was developed by Taibi Kahler (1982a). Kahler, while interning at a mental health hospital, became interested in the transactional analysis concepts developed by Eric Berne (1964) because of the "systematized, logical, and observable" (Kahler, 2008, p. 3) characteristics of the model. As Kahler (1982a) observed transactional analysis therapy groups, he noticed a pattern that would begin the development of his own model. During these therapy groups, Kahler (2008) noticed that no matter the patient or the diagnosis, right before a distressed outburst came a defense-like behavior. Soon after, Kahler (2008) developed a matrix of defense-like behaviors he termed Drivers. Drivers became the breakthrough for Kahler (2008) that led to the discovery of mini-scripts, or the patterns of distress that followed Drivers, and eventually research that showed the concepts of scripts, Drivers, and distressed behaviors fell into "six, mutually exclusive clusters, at a high enough significance to not be random" (p. 13). These six clusters would later become the foundational six Personality Types in PCM (Kahler, 2008).

Kahler (2008) described PCM as "a model of personality structure and development that identifies how we view the world and why we do what we do" (p. vii). PCM "research has shown that there are six distinct Personality Types" (Kahler, 2008, p. 36). PCM is unique in that Kahler described personality not as static but rather as a dynamic concept that is influenced both

by nature and the environment (Collignon et al., 2012). The result is a model that described individuals as a unique combination of six Personality Types rather than one. The multidimensional approach to personality is unique to PCM, making it valuable in a variety of contexts (Gilbert, 2012).

The Six Personalities

According to Kahler (2008), individuals are comprised of six Personality Types. Each personality is coupled with a set of characteristics unique to that personality, which includes Perception, character strengths, facial features, and traits (Kahler, 2008). Kahler (2008) stated that no one personality is "better or worse, or more or less intelligent" (p. 38), rather the positive characteristics of any of the Personality Types can be portrayed as long as the individual is not in distress. All individuals, according to Kahler, have characteristics of all six Personality Types with a specific amount of energy to experience and demonstrate the characteristics of each. The following sections will outline the unique characteristics of each of the six Personality Types.

Thinker

Comprising 25% of the North American population, Base Thinkers are 75% male and 25% female (Kahler, 2008). With a primary Perception of thoughts, Base Thinkers look for facts, classify things, and are responsible, logical, and organized (Kahler, 2008; Lefeuvre, 2007). Base Thinkers are motivated by achieving goals (Collignon et al., 2012) and often have the distinct facial feature of horizontal lines across their foreheads (Kahler, 2008). Vignettes describing Base Thinkers present an individual who has a life structured into blocks of time that allow work to be done efficiently and a home and office organized in a logical way determined to be best based on

that person's workflow (Gilbert, 2012). The currency of the Base Thinker is logic (Kahler, 2015).

Harmonizer

Comprising 30% of the North American population, Base Harmonizers are 75% female and 25% male. With a primary Perception of emotions, Harmonizers use feelings to take in people and things (Kahler, 2008). The profile of a Base Harmonizer describes them as warm, sensitive, and good listeners who often work to satisfy other people (Collignon et al., 2012). Base Harmonizers often have facial characteristics that include a half moon line above their eyes. Vignettes of one in a pure Harmonizer personality describe an attentive person with a warm smile (Lefeuvre, 2007) and an office and home that appeals to the senses through scents and colors (Gilbert, 2012). The currency of the Base Harmonizer is compassion (Kahler, 2008)

Persister

Comprising 10% of the North American population, Base Persisters are 75% male and 25% female. With a primary Perception of opinions, Base Persisters judge people and things by evaluating them (Kahler, 2008). Base Persisters are described as conscientious with strong convictions, being motivated by providing opinions, and driven when they believe in the decision being made (Collignon et al., 2012). Vignettes highlighting one in a pure Persister personality describe a person with vertical lines between their eyes and who is always ready to stand behind their convictions even if it means engaging in an argument (Lefeuvre, 2007). The Base Persister's beliefs are front and center, and this can often be seen in the profession they choose and their interest in politics (Gilbert, 2012). The currency of the Base Persister is values (Kahler, 2008).

Promoter

Comprising 5% of the North American population, Base Promoters are 60% male and 40% female. With a primary Perception of action, Base Promoters take in the world through action (Kahler, 2008). Those in Promoter are adaptable, persuasive, and driven to accomplish challenges that have immediate results (Collignon et al., 2012). Vignettes describing one in a pure Promoter personality highlight a fashionable individual who is always sporting the newest technological devices with an energy that is unmatched. The Promoter is action oriented and prefers quick payoffs (Kahler, 2015). The Base Promoters home and office is filled with trophies and other tokens of an active lifestyle (Gilbert, 2012). The currency of the Base Promoter is charm (Kahler, 2008).

Rebel

Comprising 20% of the North American population, Base Rebels are 40% male and 60% female. With a primary Perception of reactions, Base Rebels take in the world by reacting with likes and dislikes (Kahler, 2015). Those in Rebel are spontaneous and creative, play while they work, and respond well to exchanges that include humor, joking, or play (Collignon et al., 2012; Kahler, 2015). Vignettes describing one in a pure Rebel personality highlight a high-energy person who excels in exciting environments, which can appear chaotic to others (Gilbert, 2012). The Base Rebel enjoys working with others and is creative, spontaneous, and lives in the moment (Lefeuvre, 2007). The currency of the Base Rebel is humor (Kahler, 2008)

Imaginer

Comprising 10% of the North American population, Base Imaginers are 40% male and 60% female. With a primary Perception of inaction, Base Imaginers experience the world by

reflecting in solitude (Kahler, 2008). Those in Imaginer are calm and display little or no reaction to situations. Keeping their distance from situations allows Imaginers to see the whole situation and contemplate what needs to be done using their well-developed imagination to take the situation in (Collignon et al., 2012). Vignettes describing one in Imaginer tell of a person with an inwardly-focused life who prefers to work alone (Gilbert, 2012). Solitude is the approach that recharges the Imaginer's batteries (Lefeuvre, 2007). The Imaginer, when directed into work, comes to life and prefers it when others propose activities (Lefeuvre, 2007). The currency of the Base Imaginer is imagination (Kahler, 2008).

Summary of Personalities

Six Personalities—Thinker, Harmonizer, Persister, Promoter, Imaginer, and Rebel— make up the basis of Kahler's (2008) model of personality, PCM. According to the model, an individual is made up of all six Personality Types. Each personality, according to Lefeuvre (2007), "is a body of information, coherent with itself, that connects a single existential question to a series of observable behaviors, probable skills, and a predictable distress pattern" (p. 45). No one personality is better or more intelligent than the other, and each person, according to Kahler (2008) is made up of all six Personality Types. Because individuals are a unique combination of Personality Types, not just one, each individual has a specific amount of energy to experience and demonstrate each personality and the characteristics associated with them. The amount of energy available, as well as a person's primary Perception, psychological needs, and probable distress pattern, can be determined based on their personality structure as measured by the PPI (Kahler, 2008).

Personality Structure

Personality structure is a key component of the PCM. Kahler (2008) represented personality structure within his model as a six-story condominium, and subsequently used structure and condominium interchangeably in discussing personality structure. Each floor of the condominium is organized by the amount of energy that person has to exhibit the characteristics of that specific personality and provides insight as to what personality resources are highly developed and which are not (Collignon et al., 2012). The bottom floor, or Base, represents the strongest personality. Subsequent floors are in a distinct order of 720 potential combinations. The floors are placed in order based on the amount of energy that individual has to experience and demonstrate the characteristics of that personality (Kahler, 2008). Kahler identified the Base floor of the condominium as being determined by nature and floors two through six as being determined by the environment interacting with an individual. A study of 20,000 children within a daycare setting showed that the order of the floors is determined by about age seven (Kahler, 2008).

To represent an individual's ability to access the resources on each floor of the condominium, Kahler (2008) used a depiction of an elevator. Kahler maintained that there is a single existential life position: "I'm OK—You're OK" (p. 6). According to Kahler, when a person is in an "I'm OK—You're OK" (p. 6) life position, they are able to ride the elevator up and down, accessing each successive floor and exhibiting the positive characteristics of that Personality Type. However, for each floor an individual has to go up within the condominium, the more energy that will be needed to access that floor (Kahler, 2008; Lefeuvre, 2007). Energy

scores of 40 or more indicate that the individual is open to communication through the primary

Perception of that floor.

Recalling the description of the model provided previously, all behavior within the

condominium is positive, healthy, okay, and no better or worse than another (Kahler, 2008).

Individuals' ability to ride their elevator allows them to better communicate with others who

exhibit a different personality, an ability that "enables us to manage our personal relationships so

that they run more smoothly" (Collignon et al., 2012, p. 22). Within the condominium, we are

simply being ourselves (Collignon et al., 2012).

Each floor of the condominium informs the listener of something specific about the

person speaking. From Perceptions and psychological needs to Drivers and distress patterns,

personality structure, and subsequently the condominium, all can inform an interaction

(Lefeuvre, 2007). In discussing the use of PCM, Lefeuvre (2007) stated, "When two people

interact and want to understand each other, they can choose a mode of communication that fits to

the other" (p. 15). The goal of PCM is to assist the user in matching the other person in the

interaction. By assessing personality structure through language and behavioral cues, the model

is designed to find the best possible Perceptual match in every conversation (Kahler, 2008). The

following sections will review the information that can be gleaned from the floors of an

individual's personality structure.

Base Personality

The first floor of an individual's personality structure, or condominium, represents their

Base Personality (Collignon et al., 2012; Kahler, 2008). According to Kahler (2008), our Base

Personality is either determined at birth or very early on in our lives. A person's Base Personality

is their strongest personality, determined by the relative amount of energy as indicated by the PPI. The Base floor, based on test-retest studies, show that Base Personality is almost certain to remain the same throughout a person's life (Stansbury, 1990).

Base Personality houses several key factors in connecting with an individual (Collignon et al., 2012; Kahler, 2008). Those factors are an individual's preferred strengths, key needs, Perception, Channel, preferred management style, and predictable miscommunication patterns (Kahler, 2008; Lefeuvre, 2007). Perception and Channel are paid particular importance within PCM. Kahler (2008) described Perception and Channel as the two key elements in connecting with others. Collignon et al. (2012) used Perception and Channel to describe different reactions to situations among friends, and Lefeuvre (2007) saw the source of most misunderstandings as developing from not being clearly perceived by the other person.

Base Personality plays a fundamental role in our lives, determining a large part of how we behave and view the world. In turn, Base Personality plays a large part in how we communicate (Collignon et al., 2012; Kahler, 2008). According to Kahler (2008), if you want to connect with someone and truly communicate with them, you must speak to their Base. This is done through using the Perceptual frame of the Base Personality. The following sections will discuss Perception and Channel in depth.

Perception

In his early research, Kahler (1982a) found significant correlations between each of the six Personality Types and what he called Perceptions. Perceptions, according to Kahler (2008), determine how an individual views and takes in the world. Each Personality has its own primary Perceptual frame, and an individual's preferred Perceptual frame is advertised through the words

they choose. According to Gilbert (2012), communication takes place when the listener understands the speaker as they would want to be understood. According to PCM, the primary Perceptual frame is how we are understood, as it is "the way we contact others and prefer they contact us" (Kahler, 2008, p. 46). An individual's primary Perception is housed in their Base Personality on the ground floor of their personality condominium. Each Base Personality has a preferred or primary Perception for a total of six different Perceptual frames.

Those in Thinker have a preferred Perceptual frame of thoughts. Those in Thinker value facts as it allows them to take in the world by first thinking and then organizing and classifying things (Kahler, 2015). The Perceptual frame of thoughts and logic can be heard in language through phrases like "I think," "Who," "What," "When," and "Where" (Kahler, 2008, p. 49). Those in Persister perceive through opinions and values and frame the world through fairness and right or wrong. "In my opinion," "I believe," and "We should" (Kahler, 2008, p. 49) are common language cues that point to a Base Personality of Persister and Perceptual frame of reference of values and opinions. Those in Harmonizer have a preferred Perception of emotions and compassion. "I feel," I care," and "I am comfortable with" (Kahler, 2008, p. 49) are all phrases often uttered by one in Harmonizer as they take the world in through emotions. Those in Imaginer are unique as they perceive through inaction and reflection. Often needing time to reflect, language cues like "Wait for more direction," "Own space," and "Hold back" (Kahler, 2008, p. 49) are all indicative of one in Imaginer perceiving the world through reflection and inaction. Those in Rebel, with common language cues such as "I like," "I hate," and "Wow," (Kahler, 2008, p. 49) perceive the world through reactions. Those in Rebel, in their reactions, are quick to like and dislike things. The last of the six Perceptual frames is actions and charm, the

preferred frame of preference of one in Promoter. Those in Promoter can often be heard saying "Bottom line," "Best shot," "Make it happen," or "Go for it" (Kahler, 2008, p. 50) as they experience the world through actions and charm.

Tuning in to an individual's primary Perception means listening to how someone says what they are saying (Kahler, 2008). Each personality is a little bit different in how they communicate and how they take in the world (Collignon et al., 2012; Kahler, 2008). Paying attention to language cues will provide insight into an individual's Base Personality and preferred Perception, or the way they take in the world. However, Perception is one of two key elements Kahler (2008) discussed. Once a preferred Perception is identified, communication occurs when an offer and acceptance occurs in Channel. Each preferred Perception, defined by an individual's Base Personality, is linked with a specific Channel (Kahler 2008). The following sections will discuss each Channel and its associated Perception and Base Personality.

Channel

An individual's preferred Channel, like their primary Perception, is determined by their Base Personality (Kahler, 2008). Five Channels, each associated with one or more Personality Types, are described by Kahler (2008): Interventive, Directive, Requestive, Nurturative, and Emotive. The PCM's rule for communication is "communication will take place if there is an offer and acceptance in the same Channel" (Kahler, 2008, p. 69). Kahler used the analogy of being on the same walkie talkie frequency, and Collignon et al. (2012) referred to being on the same wavelength when referring to being in the same Channel. Combining knowledge of an individual's primary Perception and using the appropriate Channel, according to Collignon et al.,

will lead to less miscommunication as it allows users of the PCM to not only communicate but to also determine interaction by interaction whether that communication is effective or not.

Used to interrupt one of the three degrees of miscommunication, the Interventive Channel is rarely used in the business context (Collignon et al., 2012; Kahler, 2008). The Interventive Channel, unlike the other four Channels, will work with any Personality and involves interrupting a miscommunication through cues such as "Calm down" and "Look at me" (Kahler, 2008, p. 70). The Interventive Channel is not aimed at a primary Perception but instead is aimed at an individual who is panicking, stressed, or overwhelmed (Collignon et al., 2012; Kahler, 2008)

The Directive Channel is aimed at the Base Promoter or Imaginer and gives a command or imperative. For the Base Promoter, the Directive Channel feeds the primary Perception of actions through cues that require performance of the directed action (Kahler, 2008). For the Base Imaginer, the Directive Channel feeds the preference that others make suggestions, driving one in Imaginer into action. Kahler (2008) is adamant that the Directive Channel does not indicate superiority, rather it directs action and requires thinking to do it. Kahler (2008) gave an example of the specific action "get the papers" (p. 72) as a command within the Directive Channel. According to Kahler (2008), acceptance within the Directive Channel would involve a crisp response "from the person taking in the command without feeling put upon or put down" (p. 72).

The exchange of thoughts or opinions occurs through the Requestive Channel. With a primary Perception of thoughts of opinions respectively, the Base Thinker and Persister Personality Types are best communicated within the Requestive Channel. Combining the primary Perception with the Requestive Channel, those in Thinker would be receptive to

questions, "What do you think?" or "Where did it happen?" The Base Persister's Perceptual frame of opinions would be seen in the Requestive Channel through cues such as, "What is your opinion?" Ultimately, according to Kahler (2008), the Requestive Channel is used to exchange information. The scope of that information, whether thoughts or opinions, depends on the Base Personality of the individuals being communicated with (Collignon et al., 2012; Kahler, 2008).

The Nurturative Channel is unique to the Base Harmonizer. Aimed at the primary Perception of emotions, the Nurturative Channel is like a sensitive parent that is warm, comforting, and caring. In opposition to the Requestive Channel, the Nurturative Channel is not about exchanging ideas. Instead, the Nurturative Channel is about making sure the other individual feels cared for. Collignon et al. (2012) noted that when communicating within the Nurturative Channel, one must take care to be sincere. Simply role-playing will be deemed unauthentic by those in Harmonizer, potentially resulting in miscommunication.

The final Channel is the Emotive Channel. Used with Base Rebels, the Emotive Channel creates a child-like atmosphere that is fun and non-threatening, appealing to those in Rebel and their primary Perception of reactions. From a language standpoint, the Emotive Channel cues would be reactionary and include phrases such as "Hey and I like" (Collignon et al., 2012, p. 116) aimed at making the other person react. The Emotive Channel is unique to those in Rebel and should be avoided with all other Personality Types as it could be viewed as less than serious in a business environment (Collignon et al., 2012).

The elevator used in the personality condominium is also used in selecting the appropriate Channel, what Collignon et al. (2012) termed Channel surfing. As the listener monitors the interaction second by second and determines what Perceptual frame their

counterpart is speaking from, they must ride their elevator to the floor of their condominium that houses the associated personality. Depending on how far up they must go and the associated energy on that floor, staying in Channel may be more or less difficult, as Kahler (2008) stated that an energy score of "less than 20 predicts the client will not be able to sustain a process" (p. 48) of exhibiting the characteristics associated with that personality and the associated Channel. Regardless, effective communication requires using Perceptual language to identify Base Personality and using that information to select the appropriate Channel aimed at the correct primary Perception.

Phase Personality

The dynamic concept of PCM can be found in what Kahler (2008) termed Phasing. The Phase Personality is the floor of an individual's personality condominium that houses the most current and important psychological needs (Collignon et al., 2012; Kahler, 2008). Originally, an individual's Base and Phase Personality are the same, located on the first floor of the condominium, which remains constant for 33% of the population. However, Kahler noticed early on in his research that subjects would often display the distress sequence of a personality other than their Base. Research conducted via the NASA astronaut program and completed in 1982 confirmed Phasing. Kahler saw that the same people would have different psychological needs throughout different Phases of their life. Subsequently, it was found that 67% of the population will experience one or more Phases (Kahler, 2008). When an individual Phases, the Base Personality still holds the primary Perception and Channel. That said, the primary source of motivation, and thus the most current psychological needs, shifts to the Phase Personality. In other words, if a person hears through their Base Personality, they decide through their Phase

Personality (Collignon et al., 2012). When Kahler inserted the newly found information into his 1972 research, the results were significant. With the new information included, Kahler's original data set was now significant at a .01 level. Kahler asserted that the reason PCM has been validated as a predictive model is because of the concept of Phasing.

Phasing does not indicate that a person is more or less developed than another and should also not be confused with riding the elevator to another floor within the personality condominium (Collignon et al., 2012; Kahler, 2008). As stated by Collignon et al. (2012), "Phasing is a long-lasting change in motivation" (p. 63). Phasing occurs due to an unresolved issue associated with each personality. When the associated issue is not dealt with in a healthy and authentic way, causing distress for an extended period of time, a Phase change will occur once the issue is dealt with (Kahler, 2008). Phasing explains why we may handle a situation differently if presented a second chance many years later (Collignon et al., 2012; Kahler, 2008).

As mentioned previously, if we hear through our Base Personality, we decide through our Phase (Collignon et al., 2012). If a Phase occurs, the Base Personality still houses the preferred Channel and Perception; however, the most current psychological needs and distress sequences are housed in the Phase Personality (Kahler, 2008). Although the Base Personality no longer indicates the primary source of motivation and potential distress sequence, Kahler (2008) argued that after satisfying the psychological need of the Phase Personality, the next important need is that of the Base Personality. Furthermore, Collignon et al. (2012) asserted that the Base Personality heavily influences all other floors of the Personality condominium. Therefore, an understanding of the psychological needs of both the Base and Phase Personalities is important

in ensuring communication is effective and needs are met in a healthy and productive way

(Collignon et al., 2012; Kahler, 2008).

Psychological Needs

Psychological needs, according to Lefeuvre (2007), are key in ensuring emotional well-being. When psychological needs are being met, individuals are more motivated, spend less time in distress, and most importantly are better equipped to adapt their communication to match others (Collignon et al., 2012; Kahler, 2008). In his 1972 research, Kahler researched and tested Dr. Eric Berne's six hungers, creating his own hypothesized hungers, which he referred to as psychological needs (Kahler, 2008). Further research conducted by Kahler in 1982 found eight "mutually exclusive and statistically significant psychological needs" (Kahler, 2008, p. 114) which were then correlated with Phase Personalities. Each need is associated with one or two Personality Types, and when not satisfied positively, results in an individual seeking to get that same need satisfied negatively (Collignon et al., 2012; Kahler, 2008). The seven psychological needs identified by Kahler were recognition of work, recognition of conviction, time structure, sensory, recognition of person, contact, and solitude. Although psychological needs can be associated with more than one personality, they may play out differently based on the primary Perception and characteristics of each personality (Kahler, 2008).

The psychological need of recognition of work is shared by both those in Thinker and Persister (Kahler, 2008). Recognizing accomplishments, quality of work, and professionalism all feed the psychological need of recognition of work for those in Thinker and Persister (Collignon et al., 2012; Kahler, 2008). However, the reason for this motivation differs slightly for each personality. Recognition of achievements through awards, bonuses, or pats on the back helps

those in Thinker recognize that the work they completed is well done (Kahler, 2008) and they

possess the ability to think clearly and logically. For those in Persister, recognition of work

satisfies motivational needs because it is the right thing to do (Collignon et al., 2012; Kahler,

2008). Recognition of work allows them to feel valued because of those in Persister's strong

commitment to the mission of the organization.

The psychological need of time structure is connected to those in Thinker. Those in

Thinker, with a primary Perception of thoughts and strong characteristics of organization, prefer

that things be logical and efficient (Kahler, 2008). Needing to know what is going to transpire

ahead of time, those in Thinker's need for time structure is directly tied to providing as much

information as possible so that preparation can occur (Collignon et al., 2012). Gilbert (2012), in

his narrative of one in pure Thinker Personality, described gravitation towards things that are

precise, a calendar that is set-up for efficiency, and conducting the day's work and activities in a

predictable fashion, all of which are characteristics that would have a strong need for time

structure.

The psychological need of recognition of conviction is a need exclusive to those in

Persister. With characteristics of being dedicated, conscientious, observant, and with a primary

Perception of opinions, those in Persister are motivated by the need to feel valued for having

strong opinions and beliefs (Kahler, 2008). Collignon et al. (2012) referred to this same need as

recognition of opinions. A description of one in pure Persister, written by Gilbert (2012),

affirmed how important recognition of conviction is to the Persister; one in pure Persister has a

life built around belief systems and values and often seeks out affirmation of the importance of

work within society. Whether described as opinions, values, or importance of work, the recognition of those in Persister's convictions fulfills one of two key psychological needs.

Kahler (2008) described the need for recognition of person as "the need for others to accept us just the way we are, without conditions or strings, or performance required" (p. 115). The need for recognition of person is one of two psychological needs exhibited by those in Harmonizer. A need that is not typically expressed in the business environment, recognition of person has nothing to do with work or performance and has everything to do with human warmth and being on first name terms (Collignon et al., 2012). The need for human warmth, as described by Collignon et al. (2012), is not a surprise, considering one in pure Harmonizer is characterized as warm, sensitive, and compassionate (Gilbert, 2012; Kahler, 2008). Those in Harmonizer want colleagues to say they appreciate them and that they are glad they are part of the team (Kahler, 2008). If this happens, those in Harmonizer, in return, will be very attentive to the feelings and needs of others (Collignon et al., 2012).

The second psychological need of those in Harmonizer is sensory (Kahler, 2008). Returning to Gilbert's (2012) description, one in pure Harmonizer is characterized not only as a warm and compassionate person but also an individual who fills their home with fragrant things, comfortable places to sit, and reminders of important people in their life; all items appeal to the senses. In environments that are characterized as cold, those in Harmonizer can be uncomfortable, preferring warm over functional. Whereas those in Thinker and Persister prefer their work to be recognized, those in Harmonizer need the environment they have created to be recognized (Collignon et al., 2012; Kahler, 2008).

Those in Imaginer have a primary Perception of inaction (Kahler, 2008). Those in Imaginer prefer others to suggest ideas and need clear direction to spring into action (Collignon et al., 2012). This preference of inaction and reflection over action leads to the lone psychological need of those in Imaginer, which is solitude (Kahler, 2008; Lefeuvre, 2007). Solitude, for those in Imaginer, provides space to think and see the whole situation. With an environmental preference of a functional uncluttered space, those in Imaginer prefer to be alone and work undisturbed (Gilbert, 2012). The psychological need of solitude is important, as those in Imaginer only represent 10% of the population (Kahler, 2008), requiring them to often be in faster paced, work-focused environments. Solitude provides time for those in Imaginer to recharge their batteries, allowing them to be better able to adapt and shift within their condominium.

The psychological need of contact is limited to those in Rebel who exhibit a need to be around exciting environments and fun people (Kahler, 2008). With characteristics of being creative and spontaneous and primary Perception of reactions, the environment needs to be stimulating to motivate those in Rebel. Likewise, relationships need to be fun and activities need to be spontaneous thus allowing those in Rebel to express their creativity (Collignon et al., 2012; Kahler, 2008). Visualizing one in Rebel through a description by Gilbert (2012), he or she is a person who is described as high energy and who may appear to others as having a chaotic home or office environment. Those in Rebel are creative and may be perceived to come up with bizarre solutions to routine problems (Gilbert, 2012). The need for contact is directly related to previously listed characteristics and descriptions. Those in Rebel are high energy, spontaneous,

and creative. For those in Rebel, any contact, whether environmental or person, needs to be the same.

The psychological needs of all Personality Types are important. Satisfying the needs of each personality, in the order of significance (Collignon et al., 2012; Kahler, 2008), is important to an individual's well-being (Kahler, 2008; Lefeuvre, 2007). Lefeuvre (2007) identified the Base personality as the most important psychological need to be met but indicated that Phase needs should be met first. Collignon et al. (2012) echoed this sentiment by referring to the Phase Personality's need as the first priority. Kahler (2008) described the Phase needs as "primary and crucial" (p. 234) but also referred to the importance of the foundational needs of the Base Personality being met regularly. Regardless of which need is described as most important, the literature on PCM indicated that the psychological needs provide individuals with motivation, both personally and professionally. When psychological needs are not being met, individuals go through a predictable distress sequence. The distress sequence appears through defense-like behaviors that can proceed into failure mechanisms and ultimately, if not addressed, can end in despair and depression (Kahler, 2008)

Distress Sequence

When communication or psychological needs are not met, an individual can enter distress. Returning to the previous discussion of the personality condominium, all behavior within the condominium is healthy, okay, and no one personality is better or worse, healthy or unhealthy. Distress occurs when behavior leaves the positive life position of the condominium where the positives begin to be replaced with negatives (Kahler, 2008). Each personality has a predictable sequence of distress that moves through a linear path, the order of which does not

change (Collignon et al., 2012; Kahler, 2008). Kahler (2008) described the three parts of the sequence as the doorway, the basement, and the cellar, also known as Drivers, Second-Degree Distress, and Third-Degree Distress.

The Doorway: Drivers. The doorway, also referred to as a Driver, is the start of distress and serves as a sort of a warning that the needs of the individual are not being met (Kahler, 2008). The Driver is the path out of the positive life position of the condominium and into the negative life positions outside, hence Kahler's (2008) use of the term doorway. Individuals are not outside of the condominium; instead, the doorway exhibits what Kahler (2008) referred to as "conditional OK'ness" (p. 6). Instead of a positive-positive position, the appearance of a Driver behavior reflects a behavioral life position of "OK if…" (Kahler, 2008, p. 83). This life position occurs when the pressure exerted by the environment leads individuals into stress, and Driver behaviors are used by individuals to avoid uncomfortable situations (Lefeuvre, 2007). Drivers only last a few seconds and are described as defense-like behaviors, a metaphorical yellow light that miscommunication is beginning (Kahler, 2008). Accordingly, each personality is associated with one of four distinct Drivers, identified in PCM as Be Perfect, Be Strong, Try Hard, and Please You (Kahler, 2015). Kahler stated that five behavioral cues of words, tones, gestures, postures, and facial expressions must be observed to confirm a Driver. In summation, each Driver is associated with a specific Personality Type as well as a unique set of behavioral cues.

The Be Perfect Driver exhibits a life position of "I must be perfect to be okay—you're okay" (Kahler, 2008, p. 84). Associated with the Base Thinker, the Be Perfect Driver is exhibited through measured tones and words that are used to make unnecessary qualifications and over explanations (Kahler, 2008; Lefeuvre, 2007). A simple sentence such as, "What do you mean"

becomes "I am not exactly sure what you mean" (Kahler, 2008, p. 87). From a posture, gesture, and facial expression standpoint, the Be Perfect Driver is characterized by a measured posture, punctuated movements with the fingers or hand, and a strained facial expression. Connecting with those in Thinker with thoughts and logic in the requestive Channel will invite those in Thinker out of miscommunication.

Sharing a preferred Channel and a similar Perception with those in Thinker, those in Persister also exhibit a Driver comparable, in key words, to that of those in Thinker. The Be Perfect Driver, in terms of one in Thinker, portrays a life position of "I must be perfect for you" (Kahler, 2008, p. 84). Those in Persister also exhibited a be perfect life position; however, in opposition to those in Thinker, those in Persister have a conditional life position of "I'm okay—You're OK as long as you're perfect" (Kahler, 2008, p. 86). The Be Perfect For Me Driver, is identified through over-qualifying questions, calculated gestures, and precise words. A rigid posture with piercing eyes also accompanies the Be Perfect For Me Driver as those in Persister focus on what is wrong and expect others to be perfect (Kahler, 2008; Lefeuvre, 2007). Using words and statements associated with a Perception of beliefs in the Asking Channel will invite those in Persister out of miscommunication (Kahler, 2008).

The Be Strong For You Driver, which is associated solely with those in Imaginer, exhibits a conditional life position of "I am okay as long as I be strong for you—you are okay" (Kahler, 2008, p. 95). Those in Imaginer, under stress, will make statements about feelings that are passive and lack liability for those same feelings (Collignon et al., 2012). The passive statements, such as "It came to me" (Kahler, 2008, p. 96), are accompanied by monotonic tones, no gestures, and both postures and facial expressions that are rigid and cold. The aforementioned

five behavior cues are all indicative of one in Imaginer experiencing miscommunication and thus displaying the Be Strong Driver. Using the Perception of inaction and the Directive Channel will invite those in Imaginer out of conditional okayness and back into the positive-positive life position of their personality condominium (Kahler, 2008).

Like those in Thinker and Persister, those in Promoter and Imaginer have Drivers that share similar words yet indicate completely different life positions. The Be Strong Driver, for those in Imaginer, indicates a position of "I am okay as long as I am strong for you—you're okay" (Kahler, 2008, p. 96). Those in Persister exhibit a Driver, counter to the Imaginer, which exhibits the Be Strong Driver as "I'm okay—you're okay as long as you are strong for me" (Kahler, 2008, p. 97). The Be Strong for Me Driver finds those in Promoter using words that expect others to fend for themselves (Collignon et al., 2012). "What makes you think that" and "How does that make you feel" (Kahler, 2008, p. 98) are phrases that may be uttered when the Be Strong for Me Driver is displayed. These phrases should not be confused with those in Thinker and the Perception of thoughts or those in Harmonizer with a Perception of feelings. Dissecting the statements further shows the Be Strong for Me Driver emphasizes the use of the word you (Kahler, 2008). Accompanied by tones meant to impress, exaggerated gestures, an imposing posture, and a confident facial expression, the Be Strong Driver behavior can be addressed through Perceptions of action in the Directive Channel (Kahler, 2008).

Those in Rebel are connected with the Try Hard Driver (Kahler, 2008). With a conditional life position of "I'm okay as long as I try hard for you" (Kahler, 2008, p. 92), the Try Hard Driver is used by those in Rebel to invite others to think for them and can also lead to an inappropriate delegation of tasks. Characterized by strained facial features, a forward-leaning

posture, and helpless gestures, the Try Hard Driver is accompanied with a pressured tone (Lefeuvre, 2007) and words that invite others to "do something for me" (Kahler, 2008, p. 92), words that can include "I don't understand," or "I'll try" (Kahler, 2008, p. 92). Focusing on a Perception of reactions in the Emotive Channel will invite those in Rebel out of miscommunication and allow them to, as described by Collignon et al. (2012), recharge their batteries, potentially providing the energy to shift within their condominium as needed.

The Please You Driver is associated with a lack of assertiveness and a flustered appearance (Collignon et al., 2012). A Driver exhibited solely by those in Harmonizer, the Please You Driver's lack of assertiveness can be seen in words characterized as whiny with a pitch that raises towards the end of the sentence, turning a statement into a question (Lefeuvre, 2007). With a conditional life position of "As long as I please you you're okay" (Kahler, 2008, p. 89), those in Harmonizer, when exhibiting the Please You Driver, will have a posture with shoulders rounded in and nod their head with their hands extended and palms up (Kahler, 2008). A timid smile and measured tones with words such as maybe, kind of, and you know affirm the lack of assertiveness associated with the Please You Driver (Kahler, 2008; Lefeuvre, 2007). Focusing on the Perception of emotion in the comforting Channel will invite those in Harmonizer to stop over adapting through the Please You Driver (Kahler, 2008).

An individual shows the Driver associated with his or her Base Personality the majority of the time (Kahler, 2008). In fact, Drivers of Base Personalities are shown thousands of times a day. Kahler (2008) attributed this to a breakdown in communication and further stated that it is a result of lacking energy to shift within the personality condominium. However, if an individual has experienced a Phase change, the Base Driver will not turn into a Base distress sequence.

Rather, the appearance of the Phase Driver, indicating unmet psychological needs (Kahler, 2008), is most likely to turn into second-degree distress.

Second-Degree Distress. Second-degree distress is a move from what Kahler (2008) referred to as the "doorway" (p. 82) of distress, into the basement, and out of the personality condominium. Here, the predictable sequence of distress continues. Reviewing the life positions discussed for each of the Driver behaviors, second-degree distress continues the replacement of positive life positions with negative ones (Kahler, 2008). Whereas Driver behavior exhibits an "OK if…" (Kahler, 2008, p. 83) life position, second-degree distress moves to what Kahler (2008) described as a teeter-totter, resulting in either "I'm OK—You're not OK or I'm not OK—You're OK life position" (p. 119). Using Kahler's teeter-totter analogy, one person in the interaction is up and one is down. Each negative life position is exhibited through three masks, with two Personality Types associated with each mask. The three masks are Attacker, Blamer, and Drooper. With the use of each mask, individuals are attempting to get the psychological needs of their Phase Personality met negatively (Kahler, 2008).

The Phase Thinker, when the psychological needs of recognition of work and time structure are not met, can devolve into second-degree distress where they put on the Attacker mask. Here, one in Thinker over controls and criticizes others for not thinking clearly, not being organized, or for mismanaging personal finances (Kahler, 2008). Expecting others to thank them for their hard work and dedication, emotions of frustration and anger will replace the positive behaviors found within one in Thinker's personality condominium (Collignon et al., 2012; Kahler, 2008). The pay-off for one in Thinker is negative recognition of work and time structure, with the invitation out of stress being positive recognition of the same needs (Kahler, 2008).

Much like Drivers and Channels, those in Persister's second-degree distress are similar to that of those in Thinker. Wearing the Attacker Mask, the Phase Persister will push their beliefs with righteous anger as they become suspicious of others and perceive them to be disloyal (Collignon et al., 2012; Kahler, 2008). Whereas those in Thinker find fault in the thoughts and organization of others when in distress, a nod to the primary Perceptual frame of one in Thinker, those in Persister find fault in the belief system and convictions of others. A lack of recognition of work, commitment, and convictions leads those in Persister to push beliefs with a pay-off of getting their needs met negatively by ensuring others are explicitly aware of their beliefs, drawing lines and pushing others away who are perceived to be against those in Persister (Kahler, 2008). Kahler (2008) outlined the importance of recognizing the opinions and conviction of the Phase Persister which prevents escalation into second-degree distress, as well as inviting those in Persister out of second-degree distress.

Second-degree distress for both those in Rebel and Promoter is displayed through the Blamer mask. According to Kahler (2008), the Blamer mask conveys the myth that things or situations can make you feel bad emotionally. For those in Rebel, the Blamer mask allows for a vengeful interaction that blames others for failures and mistakes. Without getting the psychological need of playful contact met, those in Rebel get the same need met negatively by frustrating others as they seek to be accepted just as they are. Psychological needs are eventually met negatively, as those in Rebel are sanctioned instead. During second-degree distress, those in Rebel appear to want to help but often attempt to avoid responsibility (Collignon et al., 2012; Kahler, 2008). For those in Rebel, the way out of distress is to have the need for playful contact met (Kahler, 2008).

For those in Promoter, the Blamer Mask allows for a vindictive interaction that allows one in Promoter to manipulate (Collignon et al., 2012; Kahler, 2008). Whereas those in Rebel with a Blamer mask overtly blame others, those in Promoter wear the Blamer mask in a way that covertly sets up drama between others and manipulates situations to watch the drama unfold (Collignon et al., 2012). The pay-off for those in Promoter is the action from the drama, a psychological need Kahler (2008) termed incidence. The action is a successful negative interaction and satisfaction of the psychological need of incidence, for those in Promoter. Meeting the psychological need of incidence positively will invite the distressed individual in Promoter to re-enter the condominium and the associated positive life positions (Kahler, 2008).

The Drooper mask is a signal of second-degree distress in both those in Imaginer and Harmonizer. The Drooper mask and the resulting life position of "I'm not OK—You're OK" (Kahler, 2008, p. 122), is like a victim. For those in Harmonizer, the Drooper mask appears as sadness and sometimes confusion, eventually making mistakes unconsciously. With a strong need for recognition of person, those in Harmonizer get these needs met negatively through mistakes, inviting criticism (Collignon et al., 2012; Kahler, 2008). Meeting both the sensory and recognition needs of those in Harmonizer will assist them in exiting second-degree distress.

For those in Imaginer, the Drooper mask means withdrawal. Feeling inadequate and unimportant, those in Imaginer in the Drooper mask internalize everything and await instructions (Kahler, 2008). For this reason, Collignon et al. (2012) called those in Imaginer displaying the Drooper mask the most subtle and hard to recognize of all of the masks. The Blamer mask may also lead those in Imaginer to take extra sick time away from work, thus getting the need for solitude met negatively by simply not showing up (Collignon et al., 2012). Given solitude

positively within the work environment provides the charge needed to move those in Imaginer out of distress.

The needs of both the Base and Phase Personalities are important (Collignon et al., 2012; Kahler, 2008; Lefeuvre, 2007). If the Driver of the Base Personality is shown, miscommunication is occurring and can be seen through Driver behaviors (Kahler, 2008). Matching the Perceptual and Channel needs of that personality will provide the charge to assist in improving communication. If the Base Driver is not addressed, it is not likely to devolve into second-degree distress. However, if the Driver of the Phase Personality is shown, Kahler (2008) indicated that it is likely that the Phase psychological needs are not being met, and when not addressed and thus psychological needs are still not met, an individual can leave the condominium and enter second-degree distress. Exhibiting one of three masks while in second-degree distress, individuals seek to get psychological needs met negatively. If psychological needs are still not positively met, despite distressed behaviors, the distress sequence continues to third-degree distress, also referred to by Kahler as the cellar.

Third-Degree Distress. The cellar, or third-degree distress, continues the move from a positive life position to a negative one (Kahler, 2008). In the cellar, all positive life positions are absent, with the individual experiencing a negative-negative life position, or "I'm not okay—You're not okay" (Kahler, 2008, p. 159). Whereas Kahler (2008) described the basement through three possible masks, the cellar has only one mask, the Despairer. The Despairer mask simply finds an individual giving up and confirming, unconsciously, all of the negative beliefs they have about themselves. While, according to Kahler, the mask is the same for each Personality Type, each Personality Type experiences the Despairer mask a little differently (Collignon et al., 2012).

In the Despairer mask, each of the Personality Types are in a depressive state. Those in Thinker are depressed because they feel worthless as their accomplishments and work have gone unrecognized. Those in Persister display depression from a position of hopelessness because their opinions, values, and convictions are ignored. Those in Rebel feel depression through a state of helplessness as their need for contact with others goes unmet. Those in Promoter, in lacking the key psychological need of incidence, feel abandoned. Those in Harmonizer feel rejected and unloved, falling into depression in the absence of recognition of person. Finally, those in Imaginer experience the Despairer mask as listlessness, failing to gain the solitude they need to fulfill their own psychological needs (Kahler, 2008).

The Despairer Mask finds each Personality Type depressed and in a negative life position. Like second-degree distress, distress in the third-degree allows individuals to get their psychological needs met negatively. Differently than second-degree distress, third-degree distress gains the individual confirmation of the negative life position connected to his or her primary Perceptual needs.

The previous sections have outlined the distress sequence defined within PCM and dictated by the set-up of every individual's personality condominium. Each Personality Type has a predictable sequence of distress that moves through a linear path, the order of which does not change (Collignon et al., 2012, Kahler, 2008). To address and avoid distress, an understanding of both Base Personality communication needs and Phase Personality psychological needs is necessary. Understanding the Base and Phase Personality allows users of PCM to understand how others contact us and how they prefer to be contacted, as well as their primary psychological

needs (Kahler, 2008). Understanding Base and Phase Personality, according to the model, allows for individuals to connect and communicate effectively.

Management Styles

Management style has been heavily researched in the world of education with the debate between management and leadership consuming much of the discussion (Kotterman, 2006). Thus far in this review, transformational leadership (Lucas & Valentine, 2002), transactional leadership (Turan & Bektas, 2013), and instructional leadership (Sahin, 2011; Short & Spencer, 1989) have been explored. While leadership and management have arguable differences, breaking each down into a collection of leadership behaviors shows similarities between management and leadership. Framed in this way, Kahler's (1988) model of management becomes a collection of preferred management behaviors connected to specific Personality Types, a concept relevant to the overarching discussion of school culture and leadership.

Originally published in 1988, *The Mastery of Management* is a guide in applying the PCM to the corporate world (Kahler, 1988). The application comes in the form of understanding the Perceptions and psychological needs of individuals. Kahler (1988), at the outset of his discussion in *The Mastery of Management*, stated that management "is a mystery only as long as people and behavior are a mystery" (p. 7). Refraining from making management a mystery, according to Kahler, involves assessing Personality Types to determine environmental preferences, primary Perceptual frames, and psychological needs and using each need to select the appropriate management style. Previous sections of this review have covered each of the three previously mentioned needs. The following sections will cover how Kahler's model of management addresses each respective need.

In terms of personality structure, an individual's preferred management style relates to the style preference of their Base Personality (Collignon et al., 2012; Kahler, 1988). This preference becomes both the management style people prefer to use as well as the management style they prefer to be managed through (Kahler, 1988; Lefeuvre, 2007). In recalling the previous discussion of the literature, Base Personality determines an individual's preferred Perceptual frame, or the way they see the world, as well as preferred communication Channel (Kahler, 2008). Each style of management is related to one or more Perceptual frames and a specific Channel, hence the importance of the Base Personality in determining management style. Although communication is the bulk of the management style preference, psychological needs cannot be ignored. Although Phase psychological needs are the most important needs to be met (Collignon et al., 2012; Kahler, 2008), Lefeuvre (2007) pointed out that whereas the Phase psychological needs motivate us, Base psychological needs become our demotivator. According to Lefeuvre, when using Kahler's (2008) model, both needs must be addressed. This is confirmed by Kahler (1988), who in no uncertain terms calls psychological needs the solution to mismanagement. Each of the management styles below utilizes PCM to address both communication and psychological needs.

An autocratic management style is heavily focused on goals and relies on lessening the focus on people and creativity (Kahler, 1988; Lefeuvre, 2007). Collignon et al. (2012) compared the autocratic style to Theory X of leadership, a model of leadership developed by Douglas McGregor (1960) that described people as working as little as possible, lacking ambition, resistant to change, and inherently self-centered. Preferred by both the Promoter and Imaginer Personality Types, the autocratic style involves describing in no uncertain terms what needs to be

done (Collignon et al., 2012; Kahler, 1988). However, with only 15% of the population being in Promoter or Imaginer, the autocratic style will not be most individuals preferred style (Collignon et al., 2012). According to Collignon et al., the autocratic style should be avoided with those in Thinker, Persister, Harmonizer, and Rebel Personalities.

A democratic management style sits in opposition to the autocratic style. Believing that people do better when they can contribute ideas, the democratic style looks to take advantage of the total amount of wisdom brought to the table by the group (Kahler, 1988). Taking advantage of the wisdom is done by being requestive and allowing others time to think (Collignon et al., 2012; Lefeuvre, 2007). Aimed at the Base Personalities of Thinker and Persister, the democratic style of leadership shares similarities with democratic leadership (Gastil, 1994), distributed leadership (Spillane et al., 2001), and participative leadership (Somech, 2005), all styles that would fit those in Thinker and Persister's Channel preference of requestive.

The benevolent style of management, like an autocratic style, shares similarities with a theory proposed by MacGregor (1960). However, rather than Theory X, similarities are shared with Theory Y, a theory MacGregor described as the human side of management. Fitting the description of the human side of management, the benevolent management style is oriented much more towards people than tasks (Kahler, 1988; Lefeuvre, 2007). Viewing the world through a Perceptual frame of emotions, those in Harmonizer prefer to manage and be managed through a benevolent style (Collignon et al., 2012; Kahler, 1988).

The laissez-faire management style was described by Lefeuvre (2007) as the leader holding authority while allowing others to take on as much authority as they want to. The laissez-faire leader simply sits back and enjoys the team, with Collignon et al. (2012) referring to

laissez-faire actions as non-directive. In educational research, laissez-faire leadership has often been referenced in studies of transformational and transactional leadership (Bass, 1990). However, laissez-faire leadership has often had a negative connotation within the research. Also referred to as zero leadership, laissez-faire leadership has been shown to increase role stress and interpersonal conflict (Skogstad et al., 2007). However, Collignon et al. pointed to the positives of the style as allowing for creativity and self-management, allowances that would benefit those in Rebel.

A review of the literature on each management style presented showed a connection between an individual's preferred Perception, psychological needs, and preferred management style. Kahler (1988), through the use of PCM, advocated for an individualized view of leadership and further stated that this could be achieved by understanding the dynamic nature of a person's Personality Type. Adding Kahler's ideas to that of the literature on leadership in schools may provide insight into not only the behaviors that make up particular styles of leadership, but also what styles of leadership may be more impactful based on the audience. Ultimately, analyzing leadership behaviors and selecting leadership styles based on the audience is a view of leadership in line with Kahler's views and a view that takes a more individualized look at leadership.

Process Communication Model and Leadership

Effective leadership requires good communication (Gilbert, 2012). The interconnection of leadership and communication is a concept that was mentioned several times throughout the literature specific to school leadership. Stronge et al. (2008) stated that effective school leaders need the "capacity for developing positive interpersonal relationships" (p. 111) so that they can recruit others to "focus on school goals, monitor instruction, and provide feedback and promote

communication within the school community" (p. 111). Leithwood and Riehl (2003) described

leadership as acting "through and with other people" (p. 2). In his research on school leadership,

Marzano et al. (2005) stated that good communication is a "critical feature of any endeavor in

which people work in close proximity" (p. 46). Furthermore, of Marzano et al.'s 21

responsibilities of the school leaders, 14 are beyond simple actions, requiring the leader to assess

situations, communicate effectively, and manage relationships. Scribner et al. (1999) referred to

communication as a kind of glue that holds together all the responsibilities of a leader.

Ultimately, regardless of what leadership style is explored, communication is a key component,

not only as in the general purveyance of information from the leader to constituents but the

communication of that information in a way that individually inspires others into action (Bass,

1990).

The PCM provides a framework that arguably matches all of the concepts of leadership

mentioned above. However, with the literature pointing to interpersonal relationships and

communication as key cogs in the leadership machine, for the purposes of this study it becomes

necessary to explore how PCM interplays with the specific leadership styles that have been

mentioned in correlation with the development and sustenance of a school's culture. A review of

the literature showed several studies that specifically outlined how a specific leadership style, or

a set of leadership behaviors, potentially impacted a school's culture (Barnett et al., 2001;

Leithwood & Jantzi, 2000; Sahin, 2011; Turan & Bektas, 2013). Those studies explored

transformational leadership, instructional leadership, as well as a general set of leadership

behaviors as potentially having a positive impact on school culture. The following sections will

explore the commonalities of each leadership style and the how the concepts presented in PCM

align with the implementation of the leadership behaviors mentioned in the literature.

Commonalities were determined by matching Marzano et al.'s (2005) meta-analysis on

leadership, specifically the 21 responsibilities correlated with student academic achievement,

with the general behaviors of both instructional and transformational leadership. Themes of

adaptability, relationships, rewards, and communication were all present within transformational,

instructional, and general leadership behaviors.

Adaptability

Leaders need to adapt to a variety of situations (Bossert et al., 1982). Marzano et al.

(2005) referred to this as situational awareness, or a leader's ability to know what is going on in

their building, and responding to each situation based on that knowledge. Marzano et al., in their

meta-analysis on leadership, found an average correlation of .33 between a leader's situational

awareness and student academic achievement. Turning to instructional leadership, Blase and

Blase (2000) found that effective instructional leadership included communicating with

individual teachers to promote reflection and growth. Bass (1990) included similar individual

actions with employees when he stated that transformational leadership involves meeting the

needs of individual employees. For Marzano et al., Bass, and Blase and Blase, a leader has to be

situationally aware to be successful. A leader needs to understand who they are communicating

with and what their needs are and use that information to shape their words and actions, thus

adapting to every situation based on an assessment of individual needs.

Within PCM, situational awareness means the leader has an understanding of the

preferred Perceptual frames and communication Channels of those they are interacting with and

uses that knowledge to shape their words and actions. Situational awareness is a process

summarized by Gilbert (2012) as diagnosing, adapting, and communicating. If a leader is going to be situationally aware (Marzano et al., 2005), have conversations with staff about instruction (Blase & Blase, 2000), and meet the individual needs of teachers (Bass, 1990), they must be able to diagnose the situation they are in, adapt their communication style to fit that of the person they are communicating with, and then communicate effectively with that person. According to Kahler (2008), doing so will avoid distressed behaviors and improve communication.

Another potential connection between PCM and adaptability is the ability of a leader to, as stated by Collignon et al. (2012), take their elevator to the floor housing the preferred Perception of the person they are communicating with. Returning to the basic premise of PCM, everyone has a specific amount of energy on each floor of their condominium to display the positive characteristics of that specific Personality Type (Kahler, 2008). According to Gilbert (2012), the leader needs to understand this and shift into the Perceptual frame of the individual they are speaking with to avoid miscommunication. Collignon et al. (2012) stated similar views, not in relation to leadership, but rather in relation to using PCM in coaching when they said that an "efficient coach is flexible in terms of communication" (p. 147). Adaptability, or flexibility, in communication requires both self-knowledge (Collignon et al., 2012) as well as the bandwidth to shift to another floor of the personality condominium (Kahler, 2008). Self-knowledge and adequate bandwidth are both tools that allow a leader to lead through a dynamic understanding of personality, which is a key to the view of individualized leadership advocated for by Kahler (1988) through the use of PCM.

Rewards

Each of the leadership styles and behaviors refers to rewards or praise as a key component of leadership. Bass (1990) spoke to treating teachers as individuals, having further stated that rewards work well as long as they are valued. Blase and Blase (2000) referred to praise as a part of the process of having reflective conversations about instruction, and Marzano et al. (2005), in speaking to general leadership behaviors, referred to both affirmation and contingent rewards. Providing affirmation and rewards seems simple enough. However, as stated by Wiley (1997), it can be much more difficult than it appears on the surface:

> Employees are motivated by feedback and recognition for the work they do. Herein lies
> the problem. Most employers think they know how to express appreciation for a job well
> done. Yet, research shows that employers seldom acknowledge appreciation for
> employees' work; and, when they do, it is done poorly. (p. 271)

Wiley referred to a clear disconnect between what leaders think they do with regards to praise and what those receiving the praise perceive to actually be happening. Affirmation and contingent rewards are designed to positively motivate employees into action. However, Wiley clearly outlined that affirmation and contingent rewards are not always positively received. Within PCM, the inconsistent impact of rewards can be explained through the psychological needs of each Personality Type.

According to PCM, motivation is in our Phase Personality (Kahler, 2008; Lefeuvre, 2007). An individual's Phase Personality houses their primary psychological need, which Kahler (1988) referred to as the solution to the problem of mismanagement. To Kahler (1988), the key to management was assessing personality, determining the psychological need of the individual,

and developing a personalized management plan to address the issue at hand. Returning to the

discussion of rewards, leadership styles, and the problem presented by Wiley (1997), it can be

argued that the personalized management plan mentioned by Kahler (1988) would be a potential

solution to the conundrum presented by Wiley. Managers stated that they celebrate their

employees, while employees perceived this to not be the case. Applying PCM to the situation,

the problem presented would be one of mismatched psychological needs. A leader may well be

praising the employee, but if it does not match the psychological need determined by the Phase

Personality of the individual, it will not motivate the employee into action. Restating the work of

Kahler (1988), to accomplish the goal of motivation, the leader must assess personality,

determine the psychological need, and develop a personalized management plan.

Relationships

The idea of relationships being a key component of effective management is not new. In

1960, MacGregor called for managers to appeal to the human side of enterprises. MacGregor

believed that management should be implemented under the premise that people, when

motivated properly, are capable of great things. Ouchi (1981) argued for a similar view when he

wrote that the problem of productivity was more social than structural. Weymes (2002) took a

similar stance stated differently when he argued that leadership is not about leaders and followers

but rather about influencing the emotions and feelings of those in the organization. Influencing

the feelings and emotions of those organizations requires leaders to be "consummate relationship

builders with diverse people and groups—especially with people different than themselves"

(Fullan, 2001, p. 19).

Related to the leadership styles discussed in conjunction with culture, the theme of relationships continues. One such example is the work done by Printy et al. (2010). Printy et al. brought the concepts of transformational and instructional leadership together in what they termed integrated leadership and argued that instructional leadership as a stand-alone tactic focused only on leadership functions. Adding transformational leadership to the equation results in integrated leadership, which according to Printy et al. builds organizational capacity while developing the instructional competency of teachers. The thoughts portrayed by Printy et al. are consistent with Bass's (1990) view of transformation leadership which is characterized by inspiring teachers into action, individually.

As stand-alone leadership styles, both transformational leadership and instructional leadership require relationship building to achieve success. Characteristics of instructional leadership garnered from the research of Cotton (2003) included facilitating discussions, providing feedback, and supporting teachers' risk-taking. For transformational leadership, those characteristics are individualizing support for staff, engaging others in decision making, and empowering others to enhance performance (Cotton, 2003), qualities that at the outset do not mention relationship building, but as Davis (1998) said, leading schools is a "people business" (para. 32). Relationships cannot be understated in terms of any leadership style. Davis (1998) tersely summed the idea of relationships in school leadership when he stated, "No other factor— including low student achievement, a disorderly campus, resistance to change, poor time management, poor administrative skills or poor decision-making—came close to the importance of interpersonal relationships in explaining why principals fail" (para. 32).

According to Collignon et al. (2012), PCM can assist in deepening our relationships with others through improved communication. If leaders are to improve relationships with individual staff members, as needed to be a transformational leader (Bass, 1990), or provide effective feedback and support teachers, to be an instructional leader, they must be able to communicate in a way that improves individual relationships with all involved staff members. Much like the discussion of adaptability and rewards, relationship building with PCM requires self-knowledge and knowledge of others (Kahler, 2008), a knowledge that includes our preferred Perceptual frame and communication Channel as well as the preferred Perceptual frame and communication Channel of the individual with whom we are attempting to build a relationship.

Communication

As stated by Gilbert (2012), effective leadership requires good communication. Communication was explicitly outlined in Marzano et al.'s (2005) meta-analysis of school leadership that resulted in an effect size of .24 garnered from 11 studies covering 299 schools. The connection to transformational and instructional leadership is evident in the literature. Bass (1990) described the behaviors of high expectations, coaching, and advising as evidence of a transformational leader who communicates on an individual basis in order to inspire others into action. Blase and Blase (2000) referred frequently to the reflective conversations that occur between instructional leaders and teachers, a process that explicitly requires an effective communicator. In all aspects of leadership, effective communication is key (Gilbert, 2012; Marzano et al., 2005). PCM is a tool for enhancing communication in general (Collignon et al., 2012; Kahler, 2008), making the connection to the transformational and instructional leadership behavior of communication an easy one.

In discussing PCM, Kahler (2008) stated frequently the importance of speaking someone's Perceptual language. Returning to the operational definitions of PCM, Perceptual language refers to the primary Perceptions, or the way a person views the world, of each of the Personality Types (Kahler, 2008). Much like relationships covered previously, communicating effectively within PCM requires the speaker to have knowledge of both their own preferred Perception and the preferred Perception of the person they are speaking with (Collignon et al., 2012; Kahler, 2008). Add in the idea of preferred Channel and PCM aligns with communication within transformational and instructional leadership by allowing leaders to communicate on an individual basis. The result is an individualized style of management advocated for by Kahler (1988).

Leaders, Personality, and School Culture: A Synthesis

Educational research has moved from a look at outputs (Fund, 1961; National Manpower Council, 1964) to a look at the schools themselves (Brookover & Lezotte, 1979; Edmonds & Frederiksen, 1978; New York Office of Education Performance, 1974; Purkey & Smith, 1982; Rosenholtz, 1985; Sammons et al., 1995; Weber, 1971). Although the current research has produced key characteristics of effective schools, authors have cautioned against taking the results of the effective school's movement as a formula for improvement (Hallinger & Murphy, 1986; Purkey & Smith, 1982). Rosenholtz (1985) pointed out the difficulty in generalizing the results to other school populations and grade levels as a reason to avoid a formulaic approach to school improvement, and Purkey and Smith (1982) added to that by calling blanket acceptance dangerous. The inability to generalize the results of the effective schools' research has led to a look for a concept that could potentially link the results with a variety of different situations.

School culture has been a concept that has been explored as a linking factor between effective schools (Cheong Cheng, 1993; Deal, 1985; Deal & Peterson, 1990; Dumay, 2009; Maslowski, 2006; Van Houtte & Stevens, 2010). Culture has been tied to student achievement (Gruenert, 2005), and the development of a collaborative culture has been outlined as one of the most important tasks of a school leader (Cotton, 2003; Marzano et al., 2005). As a concept, culture has been defined in many ways. One such definition was developed by Edgar Schein in 2004:

> The culture of a group can now be defined as a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. (p. 18)

Culture has also been defined as the "way we do things around here" (Deal, 1985) and as the personality of the school (Gruenert & Whitaker, 2015).

The personality of the individual has been a topic of research in psychology for over 50 years. The Myers-Briggs Type Indicator (Myers, 1962), Cattell's (1943) 16 Factor Theory, Eysenck's (1950) three factor model, and the five-factor model of personality (Costa & McCrae, 1992; Goldberg, 1992) have all been featured prominently in the research. One model provides a potential connection to the research on leadership and a principal's impact on culture. The PCM (Kahler, 2008) looks at personality from a dynamic standpoint, classifying each individual as a unique combination of six different Personality Types. The strongest of the six Personality Types, the Base Personality, identifies an individual's preferred Perception, or way of

experiencing the world. If culture teaches individuals the correct way to perceive within an

organization (Schein, 2004), then the personality of the leader, and thus the leader's preferred

Perception, may provide insight into why some cultures are collaborative and others are not.

Summary

The review of the literature was divided into six sections which provided context for the

study. The sections included the history of school research, the anthropological and sociological

origins of school culture, principal personality, the PCM Model, and how all of these factors

apply to school leadership. School principals face immense challenges as they respond to the

pressures of school performance and accountability requirements. The literature pointed to

school culture as a correlate of higher student achievement and the principal as a primary

purveyor of a school's unique culture. Although no previous research was found on how

principal personality may impact school culture, the literature review explored the PCM as a tool

for self-awareness for leaders and thus a potential link to the development of a positive school

culture.

CHAPTER 3

METHODOLOGY

The purpose of this study was to examine the potential relationship between strength of principal personality and the collaborative aspects of a school's culture. By assessing the personality of principals, this study hoped to create a better understanding of how perception, communication style, psychological needs, and distress sequences of the principal impact a school's culture. Findings from this study could help principals understand how to recognize their primary distress patterns and how those distress patterns impact their schools' cultures. In addition, the findings of this study could also allow principals to better understand their perceptions and preferred styles of communication and how those characteristics impact the culture of their schools. This chapter presents research methodology, including research design, hypotheses, sample recruitment, variables, instrumentation, data collection, and data analysis procedures.

Design

A quantitative approach was utilized in this study to examine the potential relationship between the personality style of building principals and the collaborative nature of their schools' culture. Data on the independent variable, personality style, and the dependent variable, school culture, was collected via online surveys. Data on personality was gathered via the PPI (Kahler,

1982a), which assesses an individual's strength of personality across six Personality Types. School culture data was gathered similarly using the Gruenert/Valentine School Culture survey (Gruenert, 1998). Participants of the study were not limited based on years of experience, grade level configuration of the school, or enrollment, although data on these factors will be collected and analyzed.

The statistical methods of correlation and ANOVA were used to examine the data. The correlations that were performed during the data analysis portion of this study examined the potential relationship between strength of principal personality in all six of the Personality Types and the collaborative nature of a school's culture, as well as strength in Phase Personality. In addition, ANOVAs were performed to examine the potential relationship between the nominal variable of Base Personality, Phase Personality, and the collaborative nature of a school's culture. The statistical method of regression was planned to examine whether any combination of personality strengths or demographic factors predict the collaborative nature of a school's culture. However, the low numbers in the sample made this particular statistical process incapable of analysis.

Research Questions

The primary question addressed in this study was, "Does a relationship exist between a principal's strength of personality and the aspects of a school's collaborative culture?" Investigating this relationship required looking at all six Personality Types as well as both the Base and Phase Personalities of principals to uncover their preferred mode of communication, perceptions, psychological needs, and distress patterns. The study also addressed the following descriptive and inferential research questions:

Descriptive Subquestions

1. What percentage of principals represent each of the six Base Personalities?

2. What percentage of principals represent each of the six Phase Personalities?

3. How many principals have been in their current school for more than five years?

4. How many principals represent schools with a grade configuration of sixth grade or above?

5. How many principals represent schools with a grade configuration of fifth grade or lower?

Inferential Subquestions

1. What relationship, if any, exists between a principal's strength in all six personalities and the aspects of a school's collaborative culture?

2. What relationship, if any, exists between a principal's Base Personality and the aspects of a school's collaborative culture?

3. What relationship, if any, exists between a principal's Phase and/or strength of Phase Personality and the aspects of a school's collaborative culture?

4. Does any combination of personality strengths predict a significant proportion of variance among the aspects of a school's collaborative culture?

5. Do years of principal experience in their current school, grade configuration, and strengths of personality predict a significant proportion of variance among the aspects of a school's collaborative culture?

Null Hypotheses

H_01: Inferential Subquestion 1. There is no relationship between the strength in any of the six personalities and the aspects of a school's collaborative culture.

H_02: Inferential Subquestion 2. There is no relationship between the strength of a principal Base Personality and the aspects of a school's collaborative culture.

H_03: Inferential Subquestion 3. There is no relationship between the strength of a principal's Phase Personality and the aspects of a school's collaborative culture.

H_04: Inferential Subquestion 4. Combination of personality strengths do not predict a significant proportion of variance among the aspects of a school's collaborative culture.

H_05: Inferential Subquestion 5. Principal experience in their current school, grade configuration, and strengths of personality does not predict a significant proportion of variance among the aspects of a school's collaborative culture.

Population

The population of this study was comprised of 1,795 non-charter, public school principals in Indiana. All principals in the population were recruited, and the sample was derived from those in the population who wished to participate. Email addresses for principals in the study's population were requested from the Public Records Department of the Indiana Department of Education.

Recruitment

The recruitment process was conducted in two phases. Each phase was similar in scope but designed to collect data from two separate groups. The first phase involved public school principals, and the second phase subsequently included all teachers in the buildings of principals

who chose to participate. All 1,795 public school principals in the population were invited to

participate. Email addresses accessed through the Public Records Department of the Indiana

Department of Education were utilized to email all potential participants. The email contained

the following information:

1. A letter of introduction which included overall information on the scope and purpose of

   the study, data collection procedures, the primary researcher's name and contact

   information, the faculty sponsor's name and contact information, a statement regarding

   potential risk or non-risk, and a secure link to Qualtrics (see Appendix A).

2. An informed consent document was included in Qualtrics outlining the purpose of the

   study, the researcher's contact information, and information on the anonymity of the

   survey with a disclaimer noting absolute anonymity cannot be guaranteed with online

   surveys, per the Indiana State University Institutional Review Board. After reviewing the

   consent document, subjects were presented with an agreement button that, when clicked,

   indicated consent. After consent had been indicated, a link to a survey was presented to

   subjects within Qualtrics (see Appendix B).

Follow-up emails were sent following a bi-weekly review of the data over a four-week period.

The email included a friendly reminder as well as gratitude for those who already participated

(see Appendix C).

All teachers who work in the buildings in which the principal completed the initial survey

were also invited to participate. Email addresses were accessed through the Public Records

Department of the Indiana Department of Education. The email to teachers contained the exact

same information as the email to principals, with the exception of the survey. For clarity, the information included in the teacher email is provided below:

1. A letter of introduction which included overall information on the scope and purpose of the study, data collection procedures, the primary researcher's name and contact information, the faculty sponsor's name and contact information, a statement regarding potential risk or non-risk, and a secure link to Qualtrics (see Appendix D).

2. Within Qualtrics an informed consent document was included outlining the purpose of the study, the researcher's contact information, and information on the anonymity of the survey with a disclaimer that absolute anonymity cannot be guaranteed with online surveys, per the Indiana State University Institutional Review Board. After reviewing the consent document, subjects were be presented with an agreement button, that when clicked indicated consent. After consent had been indicated, subjects were presented with a survey (see Appendix E).

Follow-up emails were sent following a bi-weekly review of the data over a four-week period. The email included a friendly reminder as well as gratitude for those that already participated (see Appendix F).

<div align="center">**Data Collection Process**</div>

The data collection process was conducted in the two phases described above and began with an email to all non-charter, public school principals (see Appendix A). The email contained a letter of introduction which included overall information on the scope and purpose of the study, data collection procedures, the primary researcher's name and contact information, the faculty

sponsor's name and contact information, a statement regarding potential risk or non-risk, and a secure link to Qualtrics. Informed consent was presented in Qualtrics.

If consent was given, and after reviewing the information in Qualtrics, the subject completed information on tenure and the grade level configuration of the school they work in. Upon completion of the demographic information, a link to an online survey (see Appendix B) was presented. The online survey linked within Qualtrics was used to collect data from all public school principals who decided to participate. The survey, the PPI (Kahler, 1982a), contained 45 questions and was completed only by the principal. This survey was completed externally via a website set up by Kahler Communications and was used to identify the principal's personality structure and report on the strength of each of the six Personality Types in that structure.

Subjects who wished to not be included were given the option to exit the survey at any time. Incomplete surveys were not used for analysis purposes. Once a survey was submitted, participants could no longer opt out of participating. Data from the PPI was collected by Kahler Associates in Little Rock, Arkansas and shared only with the primary investigator.

The data collection process for teachers began similarly with an email (see Appendix D). However, in contrast to the principals who all received the survey, only teachers who work in the buildings of principals who chose to participate in the study by completing the initial survey received this email. For purposes of recruitment, all teachers employed within the buildings of principals who choose to participate were invited to take part in the study. The email contained a letter of introduction which included overall information on the scope and purpose of the study, data collection procedures, the primary researcher's name and contact information, the faculty sponsor's name and contact information, a statement regarding potential risk or non-risk, and a

secure link to Qualtrics. The body of the email contained text to serve as the letter of recruitment. The informed consent was included within Qualtrics and again contained information regarding the process of online research, information regarding informed consent, and email addresses of the researcher and the Institutional Review Board. Participants were advised to read the document. After reviewing all of the information within Qualtrics, the participant was presented with a button to click should they wish to continue. Clicking the button indicated consent.

When consent was indicated, subjects were taken to an online survey contained within Qualtrics, which was used to collect data from all teachers who decided to participate (see Appendix E). The survey included was The School Culture Survey developed by Gruenert (1998). The Gruenert and Valentine School Culture Survey contains 35 items and is designed to measure six unique aspects of a school's culture. For this study, all 35 items were included in the survey, however only the 17 items designed to measure Collaborative Leadership and Teacher Collaboration were used during analysis. Subjects who wished to not be included were given the option to exit the survey at any time. Incomplete surveys were not used for analysis purposes. Once a survey was submitted, participants could no longer opt out of participating.

The School Culture Survey (Gruenert 1998) data was collected using Qualtrics and shared with only the primary investigator through an online log in. All data was used to examine the descriptive and inferential statistics in regard to the potential relationship between principal strength in all six Personalities, Base Personality, Phase Personality, and the collaborative nature of a school's culture.

Instrumentation

Two data collecting instruments were utilized in this study. The first instrument, the PPI, was used to assess the independent variable, strength of the principal personality. The second instrument, the School Culture Survey (Gruenert, 1998), addressed the dependent variable, the collaborative nature of a school's culture. Both surveys were distributed and completed online.

The PPI was developed by Taibi Kahler (1982a). The inventory identifies an individual's personality structure. The structure is based on Kahler's model of personality and identifies the ordering of six different Personality Types. Each personality is reported in order of strength and identifies how much energy an individual has to experience and demonstrate each of the Personality Types and the characteristics associated with them. The survey is 45 questions with up to six answers. Participants can rank their order of preference on up to five of the six answers.

The School Culture Survey was developed by Gruenert (1998). The survey includes 35 Likert-scale items based on a five-point from "strongly agree" to "strongly disagree" (Gruenert, 1998). The 35 items are organized into six dimensions of school culture: collaborative leadership, which measures the degree to which school leaders establish and maintain a collaborative relationship with school staff; teacher collaboration, which measures the degree to which teachers engage in constructive dialogue that furthers the educational vision of the school; professional development, which measures the degree to which teachers value continuous personal development and school-wide improvement; collegial support, which measures the degree to which teachers work together effectively; unity of purpose, which measures the degree to which teachers work toward a common mission for the school; and learning partnership, which measures the degree to which teachers, parents, and the students work together for the

common good of the student (Gruenert, 1998). Each factor is designed to measure a unique aspect of a school's collaborative culture (Gruenert, 2005).

The primary research question for this study was to determine whether a relationship exists between the strength of principal personality and the aspects of a school's collaborative culture. To maintain a focus on the primary goal of the research, only the factors of Collaborative Leadership and Teacher Collaboration were used in analysis.

Survey Validity

Researchers use validity to describe whether an instrument actually measures what it is intended to measure (Cloninger, 1996). Ampaw et al. (2013) reported on the validity of the PPI. Although Kahler (1982b) had done validation studies on the original 22 item inventory, the more robust 45 item inventory had not undergone analysis for validity. Ampaw et al. (2013), using a sample of 54,233 subjects, used factor analysis to look at both the validity of Base and Phase Personalities. Using a threshold of .300, Ampaw et al. (2013) found five base components and five patterns for Phase Personality. The researchers determined the survey to be valid.

The reliability of a survey is used to determine whether the instrument produces consistent scores from one time to another (Cloninger, 1996). Ampaw et al. (2013) also reported on the reliability of the PPI. Using Cronbach's Alpha, the researchers measured the extent to which all of the items test the same concept. Ampaw et al. found that only two items fell below the .70 confidence level typically used. All other factors fell above the .70 confidence level. Ampaw et al. found the PPI to be reliable.

The School Culture Survey (Gruenert, 1998) was developed from an initial instrument of 79 questions developed from an extensive review of the literature on school culture. The initial

79 questions were administered to 632 teachers in Missouri. A factor analysis was completed on the responses, resulting in 44 items being extracted and six factors being established. Alpha reliability coefficients were calculated for each of the factors in the new survey, with none being shown to be lower than .64. The validity of The School Culture Survey was established through a correlational analysis of the six factors with selected factors from the National Association of Secondary School Principals School Climate Survey (Gruenert, 1998).

Study Variables

This study looked to explore if a relationship exists between principal personality style and the collaborative nature of a school's culture. The independent variable of personality took a look at both the strength of personality, or the energy a person has to experience and demonstrate each of the six Personality Types, as well as Base and Phase Personality, and strength of Phase Personality. The personality data was analyzed with the dependent variable of the collaborative aspects of a school's culture.

Data Analysis

Both descriptive and inferential statistics were utilized in this study. The descriptive statistics collected identified the percentage of principals that represented each of the six possible Base and Phase Personalities, the total number of years for each principal in their respective building, and the grade configuration of the school they currently lead. The descriptive statistics were used in conjunction with the inferential data to help explain potential relationships between strength in personality and the dependent variable of a collaborative school culture.

Inferential statistics were also used to examine principal strength of personality and collaborative nature of a school's culture. Specifically, correlation allowed the researcher to

examine the potential relationships that may exist between strength of each principal in six different Personality Types with Collaborative Leadership and Teacher Collaboration, two of the six dimensions identified in the School Culture Survey, developed by Gruenert (1998). A one-way ANOVA was utilized to identify whether a relationship exists between the nominal variables of Base Personality, Phase Personality, and the collaborative dimensions identified in The School Culture Survey (Gruenert 1998). A correlation was also used to identify whether a relationship exists between strength of Phase Personality and the collaborative nature of a school's culture. The statistical method of regression was planned to examine whether any combination of personality strengths or demographic factors predict the collaborative nature of a school's culture. However, the small sample gathered in this study made this particular statistical procedure incapable of analysis.

The process, method, and steps of data analysis used involved gathering descriptive statistics for the sample population for all research questions included in the study. Analyses of the descriptive data was conducted for all independent and dependent variables. The descriptive analyses included means and standard deviations. Correlation analyses were then conducted and used to evaluate the independent variables (strength of all six Personality Types as well as strength of Phase Personality) in relation to each dependent variable (Collaborative Leadership and Teacher Collaboration). Regressions were planned to be used to examine whether any combination of personality strengths or demographic factors predict the collaborative nature of a school's culture; however, low numbers in the study's sample made a regression impossible.

Summary

Chapter 3 offered the design of the study which included research questions, null hypotheses, population, recruitment, and information on the surveys and data analyses processes to be used. A quantitative study was conducted to determine if a relationship exists between the strength of a principal's Base Personality, Phase Personality, a combination of Base and Phase Personality, and the collaborative nature of a school's culture. K–12 public school principals and teachers were surveyed in order to offer insight into the research questions identified in this study, with correlation, and ANOVA analyses conducted on the resulting data. The goal of the study was to determine what potential relationships exist between principal strength of personality and the collaborative nature of a school's culture.

Chapter 4 will present the results of both the correlation and ANOVA analyses utilized in this study. A discussion will follow in Chapter 5 to outline the conclusions and possibilities for expanded future research.

CHAPTER 4

DATA ANALYSIS

The purpose of this quantitative study was to investigate whether a relationship exists between the strength of personality in K–12 public school principals and the collaborative nature of their school's culture. Using the quantitative variables of strength in all six Personality Types, as defined by the Process Communication Model (Kahler, 2008), and mean scores on The School Culture Survey (Gruenert, 1998), statistical analyses were prepared to determine whether a relationship exists between principal personality and school culture.

Statistical analyses of the data included descriptive statistics, Pearson correlation, and two separate ANOVAs. In addition to analyzing six descriptive subquestions, the analyses also addressed the following inferential subquestions:

1. What relationship, if any, exists between a principal's strength in all six personalities and the aspects of a school's collaborative culture?

2. What relationship, if any, exists between a principal's Base Personality and the aspects of a school's collaborative culture?

3. What relationship, if any, exists between a principal's Phase and/or strength of Phase Personality and the aspects of a school's collaborative culture?

4. Does any combination of personality strengths predict a significant proportion of variance among the aspects of a school's collaborative culture?

5. Do years of principal experience in their current school, grade configuration, and strengths of personality predict a significant proportion of variance among the aspects of a school's collaborative culture?

A correlational analysis was conducted to determine whether a relationship exists between principal strength in all six Personality Types and the collaborative nature of a school's culture. Additionally, the statistical analysis of correlation was used to determine whether a relationship exists between the strength of a principal's Phase Personality and the collaborative nature of a school's culture. Finally, two ANOVAs were conducted to reveal if the nominal variable of Base or Phase Personality of the principal significantly differs from other Base or Phase Personalities across mean scores related to the collaborative nature of a school's culture.

To address the issues related to a low response rate, correlational analyses and ANOVAs were used. Research Questions 4 and 5 would require analysis using the techniques of multiple regression and a two-way ANOVA. The study did not meet the sample size sufficient enough to perform multiple regression or a two-way ANOVA. As a result, Research Questions 4 and 5 were determined to be incapable of statistical analysis.

This chapter provides a description of the data as well as results of the study. It is organized into the following sections: descriptive data, inferential data, inferential findings and analyses, and summary of findings. The descriptive data section reveals the configuration of the schools in the sample and the characteristics of the principals. The inferential data section

presents the data related to the inferential subquestions, and the summary of findings section addresses the results for the inferential research questions.

Descriptive Data

The data collection process began with an email to all 1,795 public, K–12 school principals in the state of Indiana. Of the 1,795 principals who were offered the opportunity to participate, 50 fully completed the survey. Of the 50 that fully completed the survey, 37 had teachers who responded to the school culture survey that followed. The descriptive statistics represented below outline the characteristics of the 37 principals who both fully responded to the survey and had teachers who responded to The School Culture Survey (Gruenert, 1998).

Principal Respondent Characteristics

The population of school principals who responded to the survey represented 37 of the 1,795 public, K–12 school principals in the state of Indiana. Demographics related to years of experience, school configuration, Base Personality, and Phase Personality were collected via an electronic survey. The following sections outline the descriptive data collected.

Respondents by Years of Experience

The first section of the survey asked respondents to report the number of years completed as principal of their current school. The results addressed Descriptive Subquestion 3, which asked, "How many principals have been in their current school for more than five years?" Descriptive Subquestion 4 is also addressed in the results, which asked "How many principals have been in their current school for less than five years?" Respondents were able to choose from 0–4 years, 5–9 years, or 10 or more years. Principals with 0–4 years of experience in their current school made up the largest portion of the sample, with 54.05% of the respondents having

less than five years of experience in their current school. Principals with 5–9 years represented 24.32% of the sample, and principals with 10 or more years of experience in their current school encompassed 21.62% of the sample. The survey did not require respondents to report their exact years of experience. Aggregating the results to answer Descriptive Subquestion 3, 45.94% of the principals surveyed have been in their current school for more than five years.

Respondents by School Configuration

In addition to asking for years of experience, the first part of the survey also asked respondents to choose the grade configuration that best described their school. The results addressed Descriptive Subquestion 5, which asked, "How many principals represent schools with a grade configuration that includes grades six and above?" In addition, the results also addressed Descriptive Subquestion 6, which asked, "How many principals represent schools with a grade configuration that includes grades five and below?" Respondents were able to choose from K–5, K–6, K–12, 6–8, 7–8, 9–12, and Other as options for grade configurations that best described their school. The configurations of K-5 (27.03%), 9–12 (21.62%) and 6–8 (18.92%) made up the largest portion of the sample. Other grade configurations reported were 7–8 (10.81%), 6–12 (2.7%), K–12 (2.7%), and K–6 (2.7%). In addition, 10.81% responded by selecting the option "Other," indicating that their school configuration did not fit any of the options presented. Combining the results to answer Descriptive Subquestions 5 and 6, 56.75% of the respondents reported a grade configuration that included grades 6 and above. Alternatively, 32.43% of respondents reported grade configurations that included grades 5 and below.

Descriptive Summary of Personality Strength of Principals

Personality strength data of the 37 principals who both completed the survey and had teachers complete The School Culture Survey (Gruenert, 1998) is presented here. Personality strength is measured on a scale from 0–100 representing the individual's ability to portray the positive characteristics of that particular Personality Type, the lowest score being 0 and the highest score being 100.

Principal Base Personality

An individual's Base Personality represents their predominant Personality Type, in terms of strength, and determines their primary way of perceiving the world (Kahler, 2008). Base Personality was determined through each principal's completion of the Personality Pattern Inventory (Kahler, 1982a). The results from the inventory respond to Descriptive Subquestion 1, which asked, "What percentage of principals represent each of the six Base Personalities?" Of the 37 principals in the sample, 35.14% were Base Harmonizers, 32.43% were Base Thinkers, 29.73% were Base Persisters, and 2.7% were Base Rebels. No principals were determined to have the Base Personality of Promoter or Imaginer.

Principal Phase Personality

An individual's Phase Personality represents the Personality Type that determines an individual's primary psychological needs and motivation (Kahler, 2008). Differing from Base Personality, which always has a strength of 100, Phase Personality has a strength represented numerically from 0–100. In this study, Phase Personality was determined through each principal's completion of the Personality Pattern Inventory (Kahler, 1982a). Of the 37 principals in the sample, 40.54% were Phase Thinkers ($M = 82.53$, $SD = 9.19$), 29.73% were Phase

Harmonizers (*M* = 80.82, *SD* = 9.79), 27.03% were Phase Persisters (*M* = 80.3, *SD* = 11.63), and

2.7% were Phase Imaginers (*M* = 45). No principals were determined to have the Phase

Personality of Promoter or Rebel.

Descriptive Summary of School Characteristics

Certified teachers in each of the respondent's buildings were administered The School

Culture Survey (Gruenert, 1998). The survey included 35 items, scored on a Likert scale from

one to five, relating to six factors of school culture. Each of the six factors were reported out as

means. It should be noted that although the study did not ask descriptive or inferential questions

with regard to the school culture factors of Professional Development, Unity of Purpose,

Collegial Support, and Learning Partnership, that data is still included in the descriptive data

below. While the research questions of the study do not address these factors, reporting out on all

six factors provides a complete picture of the schools included in this study.

A total of 247 certified staff members from each of the principal's schools accessed the

survey via Qualtrics. Of the 247 who initially accessed the survey, 232 gave consent to begin the

study, with 193 of those teachers ultimately completing the survey in its entirety. Incomplete

surveys were not included in the results.

Collaborative Leadership

The factor score for Collaborative Leadership was determined by individual responses to

11 of the 35 questions on The School Culture Survey (Gruenert, 1998). The overall average of

Collaborative Leadership factor was 3 (*M* = 3.35, *SD* = .53). When disaggregated by school

configuration, means ranged from a high of 4.24, reported by certified staff members in 6–12

schools, to a low of 3.36, reported by certified staff members in K–6 schools. Table 1 shows the

means and standard deviations for Collaborative Leadership scores across all grade

configurations.

Table 1

Collaborative Leadership Means by School Configuration.

School Configuration		
	M	*SD*
K–5	3.99	.43
K–6	3.36	-
K–12	3.42	-
6–8	3.82	.68
6–12	4.24	-
7–8	3.84	.31
9–12	3.52	.44
Other	3.64	.33

Note. Standard deviations could not be calculated for several variables due to sample size.

Teacher Collaboration

Teacher Collaboration scores were determined through individual responses to six of the

35 questions on The School Culture Survey (Gruenert, 1998). The results from those six

questions produced an overall mean score of 3.53 ($M = 3.53$, $SD = .53$). Table 2 provides

Teacher Collaboration means across school configurations.

Table 2

Teacher Collaboration Means by School Configuration.

School Configuration		
	M	*SD*
K–5	3.74	.50
K–6	3.00	-
K–12	2.33	-
6–8	3.39	.55
6–12	3.28	-
7–8	3.17	.12
9–12	3.16	.28
Other	3.15	.76

Note. Standard deviations could not be calculated for several variables due to sample size.

Professional Development

Five of the 35 questions on The School Culture Survey (Gruenert, 1998) related to the factor of Professional Development. Means were gathered by combining all of the responses on the five related questions, with a resulting overall mean of 3.92 ($M = 3.92$, $SD = .37$). Means by school configuration ranged from a high of 3.74, reported by certified staff members in K–5 schools, to a low of 2.33, reported by certified staff members in K–12 schools. All means across all school configurations are reported out in Table 3.

Table 3

Professional Development Means by School Configuration.

School Configuration		
	M	*SD*
K–5	4.23	.34
K–6	3.20	-
K–12	3.83	-
6–8	3.90	.28
6–12	4.20	-
7–8	3.75	.30
9–12	3.69	.25
Other	3.88	.39

Note. Standard deviations could not be calculated for several variables due to sample size.

Unity of Purpose

Five questions on The School Culture Survey (Gruenert, 1998) related to the factor Unity of Purpose. Mean scores were calculated by aggregating all responses on the five related questions. The overall mean for Unity of Purpose was 4.05 ($M = 4.05$, $SD = .46$). When disaggregated by school configuration, means ranged from a high of 4.33, in schools configured 6–12, to a low of 3.66, in schools serving grades 9–12. Means across all school configurations can be found in Table 4.

Table 4

Unity of Purpose Means by School Configuration.

School Configuration		
	M	*SD*
K–5	4.30	.38
K–6	3.8	-
K–12	3.71	-
6–8	4.09	.56
6–12	4.33	-
7–8	4.11	.15
9–12	3.66	.50
Other	4.09	.29

Note. Standard deviations could not be calculated for several variables due to sample size.

Collegial Support

Four of the 35 questions on The School Culture Survey (Gruenert, 1998) related to the factor of Collegial Support. Means were gathered by aggregating all survey answers on the four related questions. The overall mean for the factor of Collegial Support was 4.07 (*M* = 4.07, *SD* = .34), highest of any of the six school culture factors included in the survey instrument. When disaggregated by school configuration, means ranged from a high of 4.26, reported by certified staff in K–5 schools, to a low of 3.64, reported by those in schools serving K–12 students. A complete report of means across school configurations can be found in Table 5.

Table 5

Collegial Support Means by School Configuration.

School Configuration		
	M	*SD*
K–5	4.26	.34
K–6	3.75	-
K–12	3.64	-
6–8	4.19	.45
6–12	4.17	-
7–8	3.99	.17
9–12	3.91	.22
Other	3.90	.17

Note. Standard deviations could not be calculated for several variables due to sample size.

Learning Partnership

Of the 35 questions included in The School Culture Survey (Gruenert, 1998), four related to the factor of Learning Partnership. Overall mean scores for the factor were calculated by aggregating all responses collected on the four related questions. The overall mean for Learning Partnership was 3.57 ($M = 3.57$, $SD = .50$). When disaggregated by school configuration, mean scores ranged from a high of 3.92 in K–5 schools, to a low of 3.33 in schools serving grades 9–12. Means for Learning Partnership across all school configurations are represented in Table 6.

Table 6

Learning Partnership Means by School Configuration.

School Configuration	M	SD
K–5	3.92	.36
K–6	3.75	-
K–12	2.89	-
6–8	3.55	.72
6–12	3.50	-
7–8	3.41	.37
9–12	3.33	.29
Other	3.39	.54

Note. Standard deviations could not be calculated for several variables due to sample size.

Inferential Data

In seeking to determine whether a relationship exists between strength in principal personality and the collaborative nature of a school's culture, several analyses were completed. For Inferential Subquestions 1 and 3, Pearson correlations were used, and Inferential Subquestion 2 was tested using an ANOVA. With regard to Inferential Subquestions 4 and 5, analysis of each would require using the techniques of multiple regression and a two-way ANOVA. The study did not meet the sample size sufficient enough to perform multiple regression or a two-way ANOVA. Accordingly, Research Questions 4 and 5 were determined to be incapable of statistical analysis.

Inferential Statistics for Strength in Personality and Collaborative Leadership

Pearson correlations were used to analyze the potential relationship between principal strength in all six Personality Types and the collaborative nature of a school's culture. The analysis required running six correlations, one for each personality. The first Pearson correlation performed was for strength in Thinker Personality ($M = 72.35$, $SD = 22.86$) and the school culture factor of Collaborative Leadership ($M = 3.77$, $SD = .48$), $r(35) = -.24$, $p = .15$, two-tailed. The second Pearson correlation performed was for strength in Harmonizer Personality ($M = 70.95$, $SD = 26.38$) and the school culture factor of Collaborative Leadership ($M = 3.77$, $SD = .48$), $r(35) = .04$, $p = .80$, two-tailed. The third Pearson correlation performed was for strength in Persister Personality ($M = 69.84$, $SD = 25.40$) and the school culture factor of Collaborative Leadership ($M = 3.77$, $SD = .48$), $r(35) = -.04$, $p = .81$, two-tailed. The fourth Pearson correlation performed was for strength in Imaginer Personality ($M = 33.35$, $SD = 16.25$) and the school culture factor of Collaborative Leadership ($M = 3.77$, $SD = .48$), $r(35) = .14$, $p = .39$, two-tailed. The fifth Pearson correlation performed was for strength in Promoter Personality ($M = 43.76$, $SD = 24.64$) and the school culture factor of Collaborative Leadership ($M = 3.77$, $SD = .48$), $r(35) = -.09$, $p = .59$, two-tailed. The sixth Pearson correlation performed was for strength in Rebel Personality ($M = 32.46$, $SD = 22.63$) and the school culture factor of Collaborative Leadership ($M = 3.77$, $SD = .48$), $r(35) = .14$, $p = .40$, two-tailed.

Six Pearson correlations were utilized to determine whether a relationship exists between principal strength in any of the six Personality Types and the scores on the factor of Collaborative Leadership. No significant correlations were discovered between the factor of Collaborative Leadership and the strength of personality in Thinker, Pearson's $r(35) = -.24$, $p =$

.15, Persister, Pearson's $r(35) = -.04$, $p = .81$, Promoter, Pearson's $r(35) = -.09$, p = .59,

Harmonizer, Pearson's $r(35) = .04$, $p = .80$, Rebel, Pearson's $r(35) = .14$, $p = .40$, or Imaginer,

Pearson's $r(35) = .14$, $p = .39$.

Inferential Statistics for Strength in Personality and Teacher Collaboration

For the factor of Teacher Collaboration, six correlations were also utilized to determine whether a relationship exists between that particular factor and the strength of principal personality in all six Personality Types. This analysis required six correlations to be completed. The first Pearson correlation performed was for strength in Thinker Personality ($M = 72.35$, $SD = 22.86$) and the school culture factor of Teacher Collaboration ($M = 3.35$, $SD = .53$), $r(35) = -.10$, $p = .57$, two-tailed. The second Pearson correlation performed was for strength in Harmonizer Personality ($M = 70.95$, $SD = 26.38$) and the school culture factor of Teacher Collaboration ($M = 3.35$, $SD = .53$), $r(35) = .08$, $p = .60$, two-tailed. The third Pearson correlation performed was for strength in Persister Personality ($M = 69.84$, $SD = 25.40$) and the school culture factor of Teacher Collaboration ($M = 3.35$, $SD = .53$), $r(35) = -.08$, $p = .65$, two-tailed. The fourth Pearson correlation performed was for strength in Imaginer Personality ($M = 33.35$, $SD = 16.25$) and the school culture factor of Teacher Collaboration ($M = 3.35$, $SD = .53$), $r(35) = -.44$, $p = .01$, two-tailed. The fifth Pearson correlation performed was for strength in Promoter Personality ($M = 43.76$, $SD = 24.64$) and the school culture factor of Teacher Collaboration ($M = 3.35$, $SD = .53$), $r(35) = .12$, $p = .49$, two-tailed. The sixth Pearson correlation performed was for strength in Rebel Personality ($M = 32.46$, $SD = 22.63$) and the school culture factor of Teacher Collaboration ($M = 3.35$, $SD = .53$), $r(35) = .11$, $p = .50$, two-tailed.

Six Pearson correlations were utilized to determine whether a relationship exists between principal strength in any of the six Personality Types and the scores on the factor of Teacher Collaboration. No significant correlations were discovered between Teacher Collaboration and the strength of personality in Thinker, Pearson's $r(35) = -.10$, $p = .57$, two tailed; Persister, Pearson's $r(35) = -.08$, $p = .65$, two-tailed; Promoter, Pearson's $r(35) = .12$, $p = .49$, two-tailed; Harmonizer, Pearson's $r(35) = .08$, $p = .60$, two-tailed; and Rebel, Pearson's $r(35) = .11$, $p = .50$, two-tailed. A significant relationship was discovered at the .01 level between strength in Imaginer Personality, Pearson's $r(35) = .44$, $p = .007$, two tailed, and Teacher Collaboration.

Inferential Statistics for Principal Base Personality and a Collaborative School Culture

This section reviews the analysis related to the second inferential research question: "What relationship, if any, exists between a principal's Base Personality and the aspects of a school's collaborative culture?" In order to examine this relationship, a one-way between-subjects ANOVA was conducted to compare the effect of principal Base Personality on the school culture factors of Collaborative Leadership and Teacher Collaboration. The assumption of homogeneity of variance was met with a Levene's Test that showed no significance. The scores were also determined to be normally distributed with Kurtosis values between 1 and -1. It should be noted that of the six Personality Types in the survey, only the Base Personalities of Thinker, Persister, and Harmonizer existed in the data set. The Base Personality of Imaginer did appear once, however that sample size was not sufficient enough to complete post-hoc tests. The Base Personalities of Promoter and Rebel did not exist in the sample.

Base Personality and Collaborative Leadership

Three Base Personality Types were reported in the data set. For the factor of Collaborative Leadership, the Base Personality of Persister ($M = 3.92$, $SD = .34$) had a slightly higher mean than the Base Personalities of Thinker ($M = 3.57$, $SD = .41$) and Harmonizer ($M = 3.79$, $SD = .60$). Table 7 presents the descriptive statistics for the school culture factor of Collaborative Leadership.

Table 7

Descriptive Statistics for Base Personality and Collaborative Leadership.

Base Personality			
	M	*SD*	*N*
Harmonizer	3.79	.60	12
Persister	3.92	.34	12
Thinker	3.57	.41	12

No significant differences were found in Collaborative Leadership scores across Base Personalities $F(2, 33) = 1.72$, $p = .175$. It should be noted the response rate was low. Any findings, whether significant or not, should be interpreted with caution, as any result would be prone to error. Table 8 shows the effects between variables.

Table 8

One-Way Analysis of Variance of Collaborative Leadership in Base Personalities.

Source	*df*	*SS*	*MS*	*F*	*p*
Between groups	2	.74	.37	1.72	.175*
Within groups	33	7.13	.22		
Total	35	7.88			

*p < .05

Base Personality and Teacher Collaboration

For the factor of Teacher Collaboration, the Base Personality of Persister ($M = 3.47$, $SD = .60$) had a slightly higher mean than the Base Personalities of Thinker ($M = 3.24$, $SD = .54$) and Harmonizer ($M = 3.32$, $SD = .48$). Table 9 presents the descriptive statistics for the school culture factor of Teacher Collaboration.

Table 9

Descriptive Statistics for Base Personality and Teacher Collaboration.

Base Personality	*M*	*SD*	*N*
Harmonizer	3.32	.48	12
Persister	3.48	.60	12
Thinker	3.24	.54	12

No significant differences were found in Teacher Collaboration scores across Base Personalities $F(2, 33) = .60$, $p = .54$. It should be noted that the response rate was low. Any findings, whether significant or not, should be interpreted with caution, as any result would be prone to error. Table 10 shows the effects between variables.

Table 10

One-Way Analysis of Variance of Teacher Collaboration in Base Personalities.

Source				F	P
	df	SS	MS		
Between groups	2	.352	.18	.60	.54*
Within groups	33	9.68	.29		
Total	35	10.03			

*p < .05

Inferential Statistics for Principal Base Personality and a Collaborative School Culture

This section reviews the analysis related to the third inferential research question: "What relationship, if any, exists between a principal's Phase and/or strength of Phase Personality and the aspects of a school's collaborative culture?" To address whether a relationship exists between a principal's Phase Personality and the aspects of a school's Collaborative Culture, a one-way ANOVA was used. The relationship of strength in Phase Personality and the aspects of a school's collaborative culture was investigated using Pearson correlation.

Strength of Phase Personality and Collaborative Leadership

A single Pearson correlation was performed to determine whether a relationship exists between principal strength in Phase Personality and mean scores on the school culture factor of Collaborative Leadership. The Pearson correlation that was completed was not designed to differentiate between the different Phase Personalities, rather its purpose was to analyze only strength in any of the six Phase Personalities and the mean score on the school culture factor of Collaborative Leadership. A significant relationship was not discovered between Collaborative Leadership and the strength of Phase Personality, Pearson's $r(37) = .02$, $p = .90$, two tailed.

Strength of Phase Personality and Teacher Collaboration

A single Pearson correlation was utilized to determine whether a relationship exists between principal strength in Phase Personality and mean scores on the school culture factor of Teacher Collaboration. The Pearson correlation that was performed was not designed to differentiate between the different Phase Personalities, rather its purpose was to analyze only strength in any of the six Phase Personalities and the mean score on the school culture factor of Teacher Collaboration. A significant relationship was not discovered between Teacher Collaboration and the strength of Phase Personality, Pearson's $r(37) = .08$, $p = .66$, two tailed.

Phase Personality and Collaborative Leadership

An ANOVA was utilized to determine whether significant differences existed across Phase Personalities for the factor of Collaborative Leadership. Out of 37 subjects, only three of the six Personality Types were represented as Phase Personalities. The Phase Personalities of Rebel, Promoter, and Imaginer did not appear in the data set. The assumption of homogeneity of

variance was met with a Levene's Test that showed no significance. The scores were also

determined to be normally distributed with Kurtosis values between 1 and -1.

While it appeared through descriptive analysis that the Phase Personality of Persister (M = 3.78, SD = .37) had a slightly higher mean than the Phase Personalities of Thinker (M = 3.77, SD = .53) and Harmonizer (M = 3.72, SD = .52), it was found not to be statistically significant through inferential analysis $F(2, 33)$ = .06, p = .55. Table 11 presents the descriptive statistics for the school culture factor of collaborative leadership and Table 12 shows the effects between variables.

Table 11

Descriptive Statistics for Phase Personality and Collaborative Leadership.

Phase Personality			
	M	*SD*	*N*
Harmonizer	3.72	.52	11
Persister	3.78	.37	10
Thinker	3.77	.53	15

Table 12

One-Way Analysis of Variance of Collaborative Leadership in Phase Personalities.

Source				*F*	*p*
	df	*SS*	*MS*		
Between groups	2	.03	.02	.06	.55*
Within groups	33	7.88	.24		
Total	35	7.91			

*p < .05

Phase Personality and Teacher Collaboration

A one-way ANOVA was utilized to determine whether significant differences existed across Phase Personalities for the factor of Teacher Collaboration. Out of 37 subjects, only three of the six Personality Types were represented as Phase Personalities. The Phase Personalities of Rebel, Promoter, and Imaginer did not appear in the data set. The assumption of homogeneity of variance was met with a Levene's Test that showed no significance. The scores were also determined to be normally distributed with Kurtosis values between 1 and -1.

While it appeared through descriptive analysis that the Phase Personality of Harmonizer ($M = 3.41$, $SD = .43$) had a slightly higher mean than the Phase Personalities of Thinker ($M = 3.38$, $SD = .57$) and Persister ($M = 3.22$, $SD = .62$), it was found not to be statistically significant through inferential analysis $F(2, 33) = .60$, $p = .94$. Table 13 presents the descriptive statistics for the school culture factor of Teacher Collaboration and Table 14 shows the effects between variables.

Table 13

Descriptive Statistics for Phase Personality and Teacher Collaboration.

Phase Personality			
	M	*SD*	*N*
Harmonizer	3.41	.43	11
Persister	3.22	.62	10
Thinker	3.38	.57	15

Table 14

One-Way Analysis of Variance of Teacher Collaboration in Phase Personalities.

Source	df	SS	MS	F	p
Between groups	2	.23	.11	.60	.94*
Within groups	33	9.79	.30		
Total	35	10.01			

*p < .05

Inferential Findings and Analyses Summary

In order to determine whether a relationship exists between principal strength of personality and the collaborative nature of a school's culture, correlations and regressions were intended to be applied to the data. Due to a low response rate, the planned regressions could not be completed, as any statistically significant results would have come into question and any inferences drawn from the data could have come into question. Based on the response rate, Pearson correlations and one-way ANOVAs were utilized.

To address the first inferential research question: "What relationship, if any, exists between strength in all six Personality Types and the aspects of a school's collaborative culture," correlations were performed between each of the six Personality Types and the mean factor scores on The School Culture Survey (Gruenert, 1998) for both Collaborative Leadership and Teacher Collaboration. The correlational analysis for Collaborative Leadership revealed no significant relationship between any of the six Personality Types and the mean factor scores. For the factor of Teacher Collaboration, the Pearson correlation indicated no significant relationships between the strength of personality in Thinker, Harmonizer, Rebel, Promoter, and Persister and

mean scores for the factor of Teacher Collaboration. However, the results of the Pearson correlation indicated that there was a significant positive association between strength of Imaginer Personality and mean scores on the factor of Teacher Collaboration, $r(35) = .44$, $p = .007$, two tailed.

An ANOVA was utilized to test the second inferential subquestion: "What relationship, if any, exists between a principal's Base Personality and the aspects of a school's collaborative culture?" Using the nominal value of principal Base Personality and mean scores on the school culture factors of Collaborative Leadership and Teacher Collaboration, an ANOVA was utilized to detect significant differences in mean scores across Base Personalities. For Collaborative Leadership, no significant differences were found in scores across Base Personalities $F(3, 33) = 1.74$, $p = .18$. In addition, no significant differences were found in Teacher Collaboration scores across Base Personalities $F(3, 33) = .48$, $p = .70$. It should be noted the response rate was low. Any findings, whether significant or not, should be interpreted with caution, as any result would be prone to error.

The third inferential question: "What relationship, if any, exists between a principal's Phase and/or strength of Phase Personality and the aspects of a school's collaborative culture," was split into two parts and tested using both Pearson correlations and ANOVAs. Pearson correlations matched principal strength in any of the six possible Phase Personalities against the mean scores for Collaborative Leadership and Teacher Collaboration, while the ANOVA matched the nominal value of Phase Personality against the same factors. The Pearson correlations revealed no significant relationships between strength of principal Phase Personality

and either Collaborative Leadership, Pearson's $r(37) = .02$, $p = .90$, two tailed, or Teacher

Collaboration, Pearson's $r(37) = .08$, $p = .66$, two tailed.

An ANOVA was utilized to test the second portion of the inferential question, which

refers to the nominal value of principal Phase Personality without reference to strength in

personality. Three of the six possible Phase Personalities appeared in the data set. The ANOVA

revealed no significant differences in Collaborative Leadership scores across Phase Personalities

$F(2, 33) = .06$, $p = .94$. In addition, no significant differences were found in Teacher

Collaboration scores across Phase Personalities $F(2, 33) = .38$, $p = .69$. It should again be noted,

like the other ANOVAs performed, the response rate was low. Any findings, whether significant

or not, should be interpreted with caution, as any result would be prone to error.

Despite emails to all public, non-charter school principals, only 50 principals responded

to the survey, even after several reminders. Of the 50 principal respondents, only 37 had staff

members respond to the School Culture Survey. Regressions were planned for both Inferential

Subquestion 4 and Inferential Subquestion 5. However, due to the low response rate, those tests

were not utilized. Any data gleaned from the limited sample would have come into question,

regardless of whether a statistically significant result was found or not.

Summary

This chapter was organized into sections addressing descriptive data, inferential data, and

an inferential findings and summary analyses. The descriptive data revealed the years of

experience, school configuration, and primary Base and Phase Personality Types of the

principals in the survey sample. The inferential data section focused on answering the five

inferential subquestions posed in the study. The inferential findings and analyses section addressed the statistical results of the inferential subquestions.

With regard to the descriptive subquestions posed in the study, respondents were split evenly between three Base Personalities, with 35.14% in Harmonizer, 32.43% in Thinker, and 29.73% in Persister. The most common Phase Personality was Thinker, encumbering 40.54% of the respondents, with the Phase Personalities of Harmonizer (29.73%) and Persister (27.03%) also represented in the sample. The descriptive statistics also revealed that most respondents were in their first four years in their current building, with 54.05% of respondents reporting 0–4 years of experience, 24.32% reporting 5–9 years, and 21.62% reporting 10+ years of experience in their current building. The most commonly reported grade configurations in the sample were the traditional configurations of K–5 (27%), 6–8 (18.92%), and 9–12 (21.62%).

This chapter also contained findings for three inferential questions. The study intended to look at two additional inferential subquestions, using multiple regression. However, due to the low response rate, and the resulting inability to complete the regressions appropriately, both questions were not included in the analysis of the data. Correlations performed between each personality and the school culture factors of Collaborative Leadership and Teacher Collaboration revealed one significant relationship, as energy in Imaginer had a significant positive correlation with the factor of Teacher Collaboration Pearson's $r(35) = .44$, $p = .007$, two tailed. All other correlations examining the relationship between strength in all six Personality Types and the collaborative nature of a school's culture were not significant. The one positive correlation does lead to rejecting the null hypothesis for Inferential Subquestion 1.

An ANOVA was used to investigate Inferential Subquestion 2, which looked at mean differences in Collaborative Leadership and Teacher Collaboration scores across Base Personalities. Similarly, an ANOVA was utilized to look at mean differences in the same two factors across Phase Personalities, addressing Inferential Subquestion 3. In addition to the ANOVA, Inferential Subquestion 3 was also analyzed using correlation between strength in Phase Personality and mean scores for Collaborative Leadership and Teacher Collaboration. Neither ANOVA revealed significant differences across means, and the correlations did not reveal any significant relationships. The null hypothesis for both Inferential Subquestion 2 and Inferential Subquestion 3 fail to be rejected.

CHAPTER 5

DISCUSSIONS, IMPLICATIONS, AND FUTURE RESEARCH

This chapter is organized into three sections. The first section reviews both the descriptive and inferential findings and any conclusions that can be drawn from those results. The second section provides the implications of the findings. Finally, the third section provides recommendations for future research with regard to principal leadership and its impact on the collaborative nature of a school's culture.

The purpose of this quantitative study was to examine the potential relationship between strength in principal personality and the collaborative aspects of a school's culture. Data on principal personality and matching scores on two of the six aspects of The School Culture Survey (Gruenert, 1998) were reviewed to determine if a particular personality, and/or strength in a particular personality, had a relationship with a school's collaborative culture. In addition, the nominal value of Base and Phase Personality were analyzed to determine whether mean values significantly differed across Base and Phase Personality Types.

Principals of all K–12 public schools in Indiana were recruited as the study's population. A list of principals with email addresses and correlating school codes were requested, and ultimately provided, by the Indiana Department of Education. A request to complete the survey was sent out to all Indiana K–12 public school principals, and the initial sample of this study was

comprised of principals who both completed the personality survey and had teachers who completed The School Culture Survey (Gruenert, 1998). In seeking out information to reveal a relationship between principal personality and school culture, the study addressed the following question: Does a relationship exist between a principal's strength of personality and the aspects of a school's collaborative culture? The following inferential subquestions were also addressed in the study:

1. What relationship, if any, exists between a principal's strength in all six personalities and the aspects of a school's collaborative culture?

2. What relationship, if any, exists between a principal's Base Personality and the aspects of a school's collaborative culture?

3. What relationship, if any, exists between a principal's Phase and/or strength of Phase Personality and the aspects of a school's collaborative culture?

4. Does any combination of personality strengths predict a significant proportion of variance among the aspects of a school's collaborative culture?

5. Do years of principal experience in their current school, grade configuration, and strengths of personality predict a significant proportion of variance among the aspects of a school's collaborative culture?

A total of 1,795 principals received an email inviting them to participate, with 50 eventually completing the personality inventory. After removing principals who had no staff members respond to the school culture survey, 37 principals remained in the data set. The survey instrument provided the respondents the opportunity to provide descriptive data about their experience, the configuration of their school, and respond to the personality inventory. The

information provided by the principal was ultimately connected with teacher responses on The School Culture Survey (Gruenert, 1998).

Discussion of Findings

School culture has been proposed by researchers as a key piece of the school improvement process, and the principal as one of the key people in a school that impacts that culture (Marzano et al., 2005; Leithwood, 2005). This study looked at the potential relationship between the school principal and the culture of the school they lead. Despite the fact that researchers describe the relationship between the principal and a school's culture as mediated (Hallinger & Heck, 1998), but positive (Gruenert, 2005), no definitive inferential conclusions could be drawn from the data. Although no definitive inferential conclusions could be drawn, the inferential and descriptive data do provide some conclusions about the relationship between schools, the principals that lead those schools, and the prevailing culture contained within each building.

The Indiana Department of Education provided email addresses for 1,795 public K–12 principals in the state of Indiana. After an initial email and a follow-up reminder a week later, over 100 email addresses bounced back as not valid, and only 50 principals ultimately consented and participated by responding to the personality inventory and the descriptive data questions that preceded the inventory. After conducting a second round of survey requests, involving the responding principal's staff, the data set shrunk to 37 principals who fully completed the descriptive questions, the personality inventory, and had teachers respond to the school culture survey. The low response rate calls into question the reliability of any conclusions drawn from the data. Although the 37 principals who responded did so completely, the rate of staff responses

varied greatly from school to school. With staff responses varying from a high of 32 respondents to a low of 1 respondent, conclusions about the culture of individual schools were difficult to make.

In addition to the low response rate, 54.5% of principals reported less than five years of experience in their current building. While this may seem insignificant, researchers have reported that a building's culture takes 3–5 years to impact (Fiore, 2014). This assertion could lead to the conclusion that those principals with less than five years of experience may not have been in place long enough to impact their school's culture. In turn, the school culture data collected from their teachers may be more representative of the previous leader, or a combination of the previous leader and the current principal, more than it can be attributed solely to the current principal. The majority of the respondents having less than five years of experience also brings up the question of continuity in the leadership within K–12 public schools in Indiana. If a positive culture is associated with an increase in student achievement (Gruenert, 2005), and culture takes 3–5 years to impact (Fiore, 2014), continuity in leadership may be a factor that schools and school districts should pay attention to in lower performing schools.

When analyzing the data on school culture scores, differences among school configurations were evident. Conway (1994) concluded that different schools and school configurations had cultures very different from each other. Specifically, Conway found that elementary schools had cultures different than that of high schools, and public schools had cultures different than their private counterparts. Of the respondents who completed the survey, the majority were from schools configured as K–5 (27.03%) and 9–12 (21.62%). The K–5 configuration is most commonly identified as an elementary school and 9–12 as a high school.

The data set revealed these two cultures to be different, in line with Conway's (1994) work. On all factors analyzed, K–5 schools consistently had a higher mean score than that of their 9–12 counterpart. While definitive, inferential conclusions are difficult to make based on these mean scores. It does, however, beg the question why this occurs? If a more positive culture is associated with higher student achievement, it would behoove those in our educational system to take a look at the set-up of elementary schools in an effort to determine what variables lead to a more positive culture.

The more positive culture seen in elementary schools via the data set may be related to the homogeneity in principal personality among K–5 principals. Of the 10 principals who reported a K–5 configuration, only two Base Personalities were represented: Harmonizer and Persister. With the addition of the configurations of PK–5 and K–6—also common elementary configurations—the number of Base Personalities only increases to three, with the addition of the Thinker, which appeared only once. In principals working in a 9–12 configuration, the same homogenous trend can be seen, with only three Base Personalities appearing. Of the eight principals who responded, and reported a 9–12 configuration for their school, Harmonizer and Thinker appeared three and four times, respectively, while Persister appeared once. Although the response rate was too low to make inferential conclusions about the data, it is interesting how homogenous the data are. Human resources officials, and others responsible for the hiring of leaders in schools, may want to analyze why the same personality types are being hired for similar positions in similar schools. If the hiring practices are set-up to favor particular personality types, the right leaders may be screened out before being able to provide evidence as

to why they are the best leader for that particular school. This could result in a failure to positively impact struggling schools, by way of choosing the wrong leader.

With that said, analysis of the data only revealed one significant relationship between strength of principal personality and the collaborative nature of a school's culture. Of the 37 principals who responded, the personality of Imaginer only appeared once as a Base or Phase Personality of a principal. However, after analysis, the personality of Imaginer was found to be significantly and positively correlated with the school culture factor of Teacher Collaboration. This finding is interesting, as the overall mean strength of Imaginer is the second lowest in the data set, meaning that Imaginer is one of the least developed Personality Types of the respondents. Only the personality of Rebel had a lower overall mean strength. Regardless, some conclusions can be carefully drawn from this finding. The personality of Imaginer has a primary Perception of inaction and experiences the world by reflecting in solitude (Kahler, 2008). Principals with higher Imaginer energy may in fact prefer, at times, to work alone. In turn their staff members may be left to figure out and implement school-introduced innovations on their own, increasing the need for teacher collaboration. This conclusion would appear to be more of a survival tactic for teachers then a positive collegial trait, however it could also mean that teachers who are provided structure for collaboration, and are given a clear idea of what their work should entail, will collaborate effectively if given the opportunity without administrative interference and oversight.

Outside of the one significant relationship detailed above, no Base, Phase, strength in Phase, or strength in a particular Personality Type showed a significant relationship with the collaborative characteristics of a school's culture. While the quantitative nature of this study was

limited by a low response rate, the research question addressed in this study asked: What relationship, if any, exists between a principal's strength in personality and the collaborative nature of a school's culture? The only inferential conclusion that can be drawn is that a principal that is strong in Imaginer may positively impact the collaborative nature of a school's culture.

Although no definitive, inferential conclusions could be drawn from the data, some implications do exist. Where it lacks in breadth, the inferential data does give us some insight into the school principal personality and the how it may interplay with the most common school configurations seen in Indiana. The following section discusses some potential conclusions that can be drawn from the study.

Conclusions

The goal of this research study was to investigate whether a relationship exists between the strength of personality in K-12 public school principals and the collaborative nature of the culture in the schools they lead. A survey was distributed electronically to 1,795 K-12 public school principals in the state of Indiana. The final data set included 37 principals who completed the personality inventory and also had at least one teacher respond to the school culture survey.

After examining both the results of the personality inventories and the school culture surveys, statistical analysis revealed that strength in Imaginer had a positive correlational relationship with the school culture factor of Teacher Collaboration. No relationships were discovered between any other Personality Type with either of the factors associated with the collaborative nature of a school's culture. Previous research has examined the relationship between leadership behaviors and school culture (Lucas & Valentine, 2002; Sahin, 2011; Turan

& Bektas, 2013), but no research was uncovered that examined the innate quality of principal personality and its potential impact on the culture of a school.

The results of this study were subject to limitations. The sample size of this study represented only 2% of the school principals identified by the Indiana Department of Education as leading public schools in the state. The results of the study may have been impacted by the small percentage of principals represented. This same limitation in turn impacted the statistical analyses that were utilized. The statistical analysis of multiple regression was not completed because of the small data set, and both the correlational and analysis of variance results could be called into question because of the small sample size.

Although the sample size impacted the results, this research provides insight into both the make-up of school principals from an experience, school configuration, and personality standpoint. In addition, the statistical analysis indicating that strength in Imaginer and the school culture factor of Teacher Collaboration are positively correlated, provides a piece of evidence that the investigation into leader personality and its impact on school culture is worthy of further investigating. Further discussion of the results of this study continue in the following sections, through an examination of both the implications brought about by the analysis of the data, as well as suggestions for future research

Implications

The search for the panacea of school improvement has led researchers to investigating a variety of variables. A look at the inputs of schools (Coleman et al., 1966), the outputs of schools (Fund, 1961; National Manpower Council, 1964), and the schools themselves, has led to a lot of research, but not to a formula proven to drive school improvement. While the formulaic

approach to school improvement has been cautioned against (Hallinger & Murphy, 1986), the lack of continuity in the process has led to schools essentially performing in line with socioeconomic status (Clark, 2013).

One factor that is referenced in a majority of the school improvement research is the building principal (Lucas & Valentine, 2002; Marzano et al., 2005; United States Congress, 1974). This constant reference makes sense, as the building principal is responsible for almost everything that goes on, day to day, in a school. Researchers have looked at principals from a leadership standpoint (Lucas & Valentine, 2002). Those observable leadership behaviors that a principal can choose to employ as they work with their staffs to move the needle on student achievement. While this research is valuable in determining what actions may or may not motivate staff, it fails to look at the person who is employing these strategies. This study was designed to look at just that. Who is the person leading these buildings, and do strengths in a particular personality lead to a more or less collaborative culture?

The one significant finding of this research was the positive relationship between strength in Imaginer and the school culture factor of Teacher Collaboration. Strength in Imaginer is associated with a Perception of inaction, which seems counterintuitive to the characteristics of collaboration; however, strength in Imaginer may lead to less administrative oversight of the collaborative process. While structures are needed to afford teachers the time to collaborate, too much administrative oversight may lead to a contrived version of collaboration that is less effective. In this way, a principal strong in Imaginer may back out of the process enough to leave the teachers the professional room to collaborate over the topics most important to them.

Kahler's (2008) Assessing Matrix provides more insight into why strength in Imaginer may lead to higher means on the factor of Teacher Collaboration.

As a tool for assessing personality dynamics related to each of the six Personality Types, The Assessing Matrix is represented by a vertical and horizontal line of axis. The vertical axis represents goal involvement, with internal and external appearing at opposite ends of the matrix. Internal involvement refers to the self-motivation to complete a task. External involvement represents the exact opposite, with the individual needing to brought into action by others. The horizontal axis of the matrix represents the desire to be in a group or with group effort, with involving and withdrawing appearing at opposite ends. Those on the involving side prefer to be in groups, while those on the opposite end prefer to work alone.

The significant and positive relationship between strength in Imaginer and the school culture factor of Teacher Collaboration may fall in line with where that particular Personality Type falls on The Assessing Matrix (Kahler, 2008). Figure 1 illustrates each of the Personality Types and Kahler's placement of those Personality Types on The Assessing Matrix. It should be noted that Imaginer falls in the lower right quadrant, which is referred to as external-withdrawing.

Figure 1

The Assessing Matrix

The Assessing Matrix

Internal

Harmonizer   Thinker

Persister

Involving ← → Withdrawing

Promoter

Rebel   Imaginer
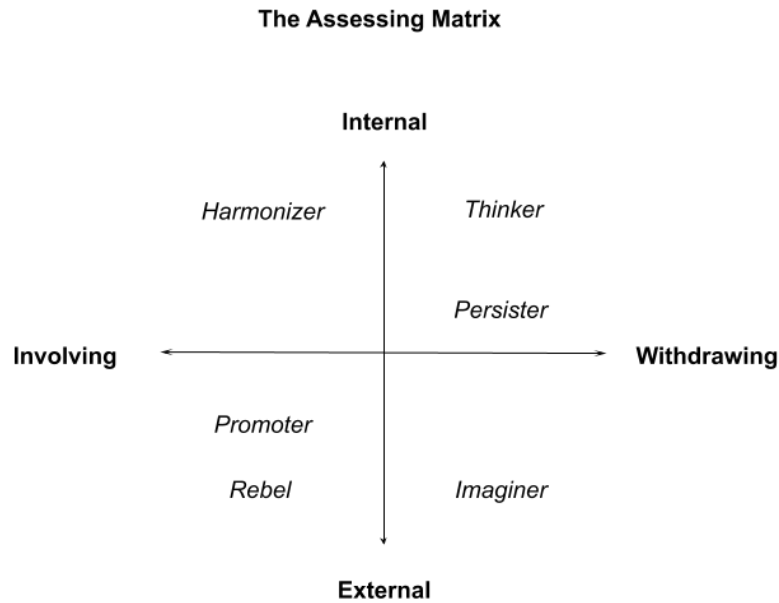
External

With a bottom, right quadrant placement on The Assessing Matrix (Kahler, 2008) as external-withdrawing, it still appears counterintuitive that strength in Imaginer would lead to an increase in teacher collaboration. However, a leader who is drawn into action by others may be willing to listen to their teacher leaders, and ultimately allow them to lead. Gruenert and Valentine (2006), in referring to evaluating scores on The School Culture Survey (Gruenert, 1998), mention that large standard deviations in the factor scores mean that there is an expert on that topic in the building who has yet to be heard. In that scenario, an external-withdrawing leader may be driven to create collaborative opportunities by this expert teacher leader, with the leader ultimately allowing them to collaborate and lead without interference in the process. In

this way, the Imaginer may be the Personality Type most likely to improve authentic, grassroots teacher collaboration.

Human resource officials in districts across Indiana are charged with hiring the best possible leadership for their schools. This is arguably the most important hire human resource officials make, as researchers have often pointed to the building principal as a key component of an effective school (Leithwood & Wahlstrom, 2008; Short & Spencer, 1989). The descriptive data in this research showed that based on school configuration, most principals are homogenous in their personality structure. Principals in schools typically defined as elementary schools were predominantly Base Harmonizers or Persisters, while secondary principals tended to be Base Thinkers or Harmonizers. The Base Personalities of Imaginer, Promoter, and Rebel appeared one, zero, and one time respectively. The selection of like personalities could be hindering school improvement. If the personality structures are homogenous, chances are the incoming principal has a similar personality structure to that of the outgoing principal. Furthermore, if the new leader has ascended to the top of the organization by working within the system, and thus following the written and unwritten rules, they will have very little interest in challenging the current culture of the school. That culture, and their ability to work within that culture, is what got them to the top.

While only one personality strength had a significant positive relationship with a collaborative school culture, the lack of other significant relationships may mean that human resources officials should look at hiring practices to determine whether they are setup in a way that protects the status quo, leading to the hiring and promotion of the same personality types, resulting in little to no impact on the culture of the school, and little change in the overall

achievement of the school. The leader is the catalyst of change in schools (Peckron, 2001) and culture is a tool through which leaders can elicit change. This information would suggest hiring similar personalities would protect the status quo rather than elicit potentially needed change.

School configuration also appears to be a factor in the overall school culture scores. This finding is in line with the work of Conway (1994) who concluded that different schools and school configurations had cultures very different from each other. Specifically, Conway found that elementary schools had cultures different than that of high schools, and public schools had cultures different than their private counterparts. Although this study was not set-up to determine what variables, outside of personality, may be impacting the scores, schools with a K–5 configuration had higher mean scores on both the factors of Teacher Collaboration and Collaborative Leadership. If a collaborative school culture is associated with an increase in student achievement (Gruenert, 2005), higher mean scores in the elementary schools would make sense, as proficiency on both the English/Language Arts and Math portion of the Indiana Learning and Evaluation Readiness Network (ILEARN) assessment drops almost 8% from 3rd to 8th grade (Indiana Department of Education, 2019). From this standpoint, secondary administrators and officials should examine what differences exist between the structure and leadership of secondary and elementary schools in an effort to positively impact the collaborative culture of their schools.

Based on the discussion above, a look at leader personality within school configurations may be warranted. The descriptive data collected during this study, within school configurations, reveals that K–5 principals are predominantly Base Harmonizer or Persister. While Harmonizer does appear as a Base Personality for 9–12 principals three times, Persister only appears once.

The Base Personality of Thinker appears most often in principals of 9–12 schools, a Base Type that does not appear in K–5 principals at all. Elementary, or K–5 principals, while homogenous in their own personality styles, differ greatly from 9–12 principals. Although analysis of the data did not reveal a significant relationship between a particular Base Personality and a collaborative school culture, as discussed above, the data does show that K–5 schools have a more collaborative culture than 9–12 schools, and, as mentioned previously, outperform their secondary counterparts on the state assessment. Future research will be discussed in the next section, however this phenomenon may need to be looked into further, as the personality structures of K–5 principals may benefit the cultures of 9–12 schools.

Outside of school configuration and homogenous personality types, this study brings to light the potential of quantitatively defining the impact of principals in a way that does not include state assessment scores, failure rates, or subjective reviews by district administrators. Gruenert and Whitaker (2015) stated, "culture is a school's personality" (p. 11). If that is the case, then the leader's personality may have an impact on the personality of the building. While choosing the right leader is important, developing the leaders in the buildings is a way to maintain consistency in leadership, while potentially improving outcomes. If a leader understands how they impact others, in both a positive and negative manner, they may be able to better reflect on decisions being made to elicit the best possible outcome. Various definitions of culture lean heavily on the human process of relationships and how things are learned, shared, and passed on (Gruenert, 1998), and Deal and Kennedy (1982) described understanding organizational culture as all coming down to "understanding the importance of working with people" (p. 18). Professional development activities typically pertain to classroom strategies or

data collection and review. To better understand the importance of working with people, a system of professional development that allows each leader to reflect on who they are and how they respond both positively and negatively to others could lead to a stronger school culture. As Gruenert, Deal, and Kennedy astutely point out, leadership occurs through interpersonal relationships, communication is a key part of interpersonal relationships, and the collection of interpersonal relationships determines the culture of the building. How the principal operates within that system of relationships is vitally important to the process of change, and operating within that system requires increased self-awareness that may be brought about by the intrinsic study of personality.

Future Research

The quantitative nature of this study was limited by a low response rate. The study was also limited to only two variables, a very linear look at the concept of school culture that is not singularly impacted by any one thing. Witziers et al. (2003) have also noted that the principal's impact on a school is mediated by several other factors. That said, based on the outcome of this study, multiple proposals for future research can be made. These proposals are my views on how to further explore the complicated relationship between leadership, school culture, and student achievement.

The first recommendation is for a repeat of this study with involvement from a governing agency, such as the Indiana Department of Education. New federal requirements stipulate a metric related to "school quality or student success" (U.S. Department of Education, 2017, p. 11) that is not academic achievement, growth, graduation rate, or academic progress for English language learners. Indiana has chosen chronic absenteeism as that metric, however stakeholder

feedback in the development of the state's Every Student Succeeds Act State Plan found support for culture and climate survey or assessment (Indiana Department of Education, 2018). School culture could be a metric that would hold much more weight in informing school officials on school improvement strategies. If a governing agency, such as the Indiana Department of Education, got involved with a study such as this, the data set would undoubtedly be larger and allow for further analysis and resulting inferential conclusions.

The descriptive statistics in this study also provide an opportunity for future research. In terms of experience, exploring the overall lack of experience seen in this study and its impact on school culture would answer the question with regard to the impact stability of leadership has on a school. Gathering longitudinal data on school culture would allow researchers to determine how new leadership may impact school culture over time. Whether scores dip when an initial change is made, and whether scores increase, decrease, or level out over the tenure of the principal could inform district officials as to whether leadership changes are beneficial in struggling schools. If scores dip, supporting and developing the current leader may be more effective.

Grade configuration statistics may also be worth exploring further. While only one statistically significant difference was found between strength in personality and the collaborative nature of a school's culture, it was noted that K–5 schools consistently had higher mean scores on the school culture factors of Collaborative Leadership and Teacher Collaboration. Contrastingly, schools configured 9–12 had consistently lower averages in the same factors across all school configurations. Exploring these two configurations qualitatively could assist in flushing out some of the variables that may be at play in these differences.

Determining whether the reason for the higher and lower means is leadership, teachers, or some other variable would be beneficial.

Finally, it is suggested that the homogeneity of personality profiles be explored. Simply collecting information on the personality types of principals across all school configurations could assist in driving school improvement. Although the sample size in this study did not lend itself to making definitive conclusions about schools, the principals, and their school's cultures, it did reveal that the same personality types tend to appear often within particular school configurations. Specifically, the Base Personalities within school configurations were often limited to two primary types, with one additional type appearing two or fewer times. The Base Types that did appear often differed between school configurations. Collecting descriptive statistics on the personality of principals within each school configuration would lead to a development of a profile of the school principal in each setting.

Future research is needed to address the lack of a large sample size, as well as some of the variables that were not covered within the parameters of this research study. Strong, positive leadership within schools is necessary to drive school improvement (Marzano et al., 2005). Collecting and using data with regard to school culture and the leaders within them is critical in ensuring that every student is walking into an effective school, every day.

Summary

The purpose of this quantitative study was to examine the potential relationship between strength in principal personality and the collaborative aspects of a school's culture. Descriptive statistics were also collected on the years of experience of the building principal, as well as grade

configurations. Pearson correlations and ANOVAs were performed to analyze the collected data to determine whether the previously mentioned relationships existed.

The study revealed one significant and positive relationship between strength in Imaginer Personality and the school culture factor of Teacher Collaboration. However, the study was plagued by low response rates, making any definitive inferential conclusions difficult to make. In spite of the low response rates, the study revealed some areas that should be addressed in future studies. The scope of school improvement often is focused on strategies to be utilized in the classroom. For those schools classified as "targeted" (Indiana Department of Education, 2018), the improvement process is filled with deep dives into the data and transactional plans to improve that data. This research shines a light on the leaders in Indiana's K–12 public schools. The path to improvement may lie within those individuals, and quantitatively looking at how the principal impacts their school may be a path worth going down.

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APPENDIX A: EMAIL TO PRINCIPALS

This survey will take approximately 45 minutes to complete

LINK WILL BE INSERTED HERE

Date: mm/dd/yyyy

Subject: K-12 Principals' Personality and The Collaborative Nature of a School's Culture

You are invited to participate in a research study about the relationship between a K-12 principal's personality and the collaborative nature of a school's culture. This study is being conducted by Chase Huotari as a part of his doctoral dissertation at Indiana State University. Dr. Ryan Donlan is serving as the faculty sponsor from the department of Educational Leadership.

All Indiana K-12 public school principals and their associated teachers are invited to participate. Names, school codes, and school names will be utilized on the survey. As a result, the researcher will be able to identify you by name. However, names will be changed to school codes and redacted immediately upon receipt of the data by the researcher, as there is no methodological reason for the researcher to need principals' names. Results will be reported in groups without identification of individual participants. Names of principals and identifiable

school code numbers will not be made available to anyone but the researcher and the faculty

sponsor.

Your responses will be kept in a secure, password protected file that is only accessible to the

researcher and his faculty sponsor. Complete anonymity cannot be guaranteed, as this is an

Internet survey. Participation is voluntary and the risk of harm is minimal.

The informed consent document is available at the very start of the survey. Should you wish to

participate and complete the survey, you may withdraw from the study at any time within seven

days of submission by emailing Chase Huotari, the principal researcher.

Subsequent to your completion of the survey, certificated teachers in your associated school will

receive an invitation that will include the following language:

If you are receiving this invitation, your building principal has already elected to participate and

is aware that as a result, certificated teachers in their building will be receiving this invitation.

Teachers will be invited to complete The School Culture Survey. Teachers in the buildings of

principals who elect to participate will be ensured that their participation will be confidential

(and thus the importance of the inclusion of your schools' Indiana Department of Education code

number.).

If you have any questions about this study, please contact Mr. Huotari at (317) 490-8887 or at chuotari@sycamores.indstate.edu or Dissertation Chairperson, Dr. Ryan Donlan, by e-mail at ryan.donlan@indstate.edu or by phone at (812) 237-2918. If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at 114 Erickson Hall, Terre Haute, IN 47809, by phone at (812) 237-3088, or by e-mail at irb@indstate.edu.

Thank you for your efforts and assistance.

Respectfully,

Chase Huotari

APPENDIX B: PERSONALITY PATTERN INVENTORY

The most valuable parts of my personality are those that

- give and take information and organize it.
- have flexibility, creativity, and a joy for life.
- allow me to be calm and introspective.
- show sensitivity and respond to the feelings of others.
- have high ideals, morals and expectations.
- I can use to survive and adapt.

I prefer to be with friends who

- respect my beliefs and principles.
- like excitement and taking chances.
- provide a lively exchange of interesting ideas.
- are creative, fun and do their own things.
- are warm and accepting.
- respect my privacy.

I am often

- nurturing.
- responsible.
- dedicated.
- playful.
- adaptable.
- reflective.

When upset, I am likely to experience

- the other person still not accepting my opinions.
- "I'll show you."
- feeling hurt or rejected.
- frustrated at someone else's stupidity.
- "who needs you."
- myself withdrawing and being alone.

An ideal relationship for me would be to have a friend who

- likes to do fun, spontaneous, playful things with me.
- recognizes the hard work I do, how responsible I am, and how I plan my time.
- respects my opinions and believes in me and my values.
- allows me my own space, pace and privacy.
- is warm, nurturing, and caring - someone who cares about me and how I feel.
- can handle being on the "fast track," and who likes excitement; who'll follow my lead.

When things go badly, I

- feel hurt, and then vengeful.
- go off by myself and seem not to feel much.
- feel unloved or rejected.
- dig in and hold firm with my beliefs.
- think that others "can't be that stupid."
- look out for number one.

I prefer

- excitement.
- people.
- ideas.
- values.
- privacy.
- fun things.

As a child, I

- liked learning facts and information.
- was withdrawn and shy. I discovered I could use my imagination and daydreams.
- wanted to belong . . . Friendships and caring people were important to me.
- had a parent who instilled in me strong beliefs and convictions. I learned how to value integrity and honor.
- liked animals, loved to play and have fun, and got bored easily.
- took risks and liked lots of action.

The part of my personality that I seem to use a lot is

- a concerned, nurturing, taking-care-of-others part.
- a clear thinking, logical one.
- one with emphasis on values, opinions, and beliefs.
- an imaginative one. I tend to let my mind drift in time and space.
- a fun, playful, sometimes very active one.
- a direct, bottom-line, cut to the chase approach.

When in distress, with which of the following do you most closely identify?

- "I feel awful when I let others down."
- "I try to be responsible. I even take on more than my share."
- "Without morals and ethics, people are dangerous."
- "I seem to be the one always left out."
- "I'll show you; it's not always my fault."
- P.T. Barnum was right, there are "fools, and people who make fools of fools."

Often I

- try but it's really hard sometimes.
- am convinced a person is either a leader or a follower.
- try to please almost everyone.
- have high expectations for other people.
- experience myself in a shell-like world.
- am driven to excel and achieve.

People know that I like them by my

- respecting their privacy and alone time.
- playing and having fun with them.
- trusting them to do something "big" and exciting with me.
- being warm, close and caring.
- planning, thinking and working hard.
- having values, and being loyal and devoted.

In general, I have preferred

- being alone with my fantasies, daydreams or using my imagination. Sometimes, I prefer doing things that do not require lots of energy thinking all the time.
- being with my friends and doing our thing, even though others may not approve or understand.
- to take the initiative and capitalize on opportunities when they present themselves.
- being with people and especially feeling wanted, accepted, and important when I am in a group.
- either being alone and thinking or planning, or being with one other person in a stimulating, intellectual, or thought-provoking discussion.
- either being alone and thinking, organizing, or philosophizing, or being with one other person, sharing beliefs, opinions, or views on politics, religion, or current events.

My strengths are my abilities to

- receive and process information to solve problems.
- play, have fun and be creative.
- nurture and care about others.
- do tasks others might find boring.
- adapt, survive, and make things happen.
- stick with my beliefs, even under pressure.

Some of my friends might say I am too

- sentimental.
- much of a free spirit.

- work oriented.
- manipulative.
- set in my beliefs.
- shy.

At work (or when involved in a project or task) I would rather be

- involved in the creative, less structured part of a project.
- involved in an exciting, short-term project.
- surrounded by friends.
- requested to structure and organize projects.
- given a project that requires stick-to-it-iveness and that will be important.
- given a task to do alone, but with lots of directions.

Often I

- find my private place to be alone.
- get bored with routines, and have to get some stimulation.
- take on more responsibility and want to achieve.
- have a desire to give to others love and affection and to be given to.
- crave excitement and quick rewards.
- am driven by a mission and a desire to convince others of what they should believe in.

I sometimes experience

- myself withdrawing into a shy, shell-like appearance. It is as if I am in a world all by myself.
- myself wanting to please others in hopes of being accepted. Sometimes I have a hard time saying "no" or putting myself first.
- others being upset with me. It is difficult for me to accept that things "be done so perfectly" or that there have to be so many "rules".
- putting lots of pressure on myself to be perfect in order not to make mistakes, or in order that others will understand me just right, I often over qualify or need to explain myself.
- myself taking care of "me" and expecting others either to get behind me or get out of the way.
- myself finding imperfections in others or noticing what they have done wrong.

A saying for me could be

- "Stick to it and trust in your beliefs."
- "Do your own thing."
- "Look out for number one."
- "It's better to give than to receive."
- "Work now, play later."
- "Don't make waves."

Of the following animals, friends would see me as a(n)

- turtle.
- "mother hen".
- cat.
- beaver.
- owl.
- fox.

I would give up last my

- beliefs.
- warmth.
- clear thinking.
- charm and ability to influence others.
- alone time.
- knack for fun.

A great fantasy for me would be to

- win at high stakes gambling.
- have all people believe the right way.
- have all the alone time I want.
- have everyone love one another.
- have all the fun I want.
- know every word in the dictionary.

In important friendships in the past when there was an unpleasant ending, I

- just wanted to please my friend, but it seemed the more I gave, the less I got. I ended up feeling rejected and unloved.
- tried to make things fun. The more I tried, the more I got criticized. I felt hurt and angry at being rejected and ignored.
- got tired of the demands on me and my time after I had worked hard all day and been responsible enough to meet my obligations. I would get frustrated and even lose my temper occasionally.
- couldn't seem to convince my friend how important some things in life are…having goals, commitments, or strong beliefs by which to live. I'd even find myself "preaching" sometimes.
- couldn't seem to express what was going on inside of me. I have had difficulty even with closest friends making lively conversation. The more my friends expected me to be involved and outgoing, the more I seemed to withdraw.
- knew when to cut my losses and move on.

I see myself sometimes

- having people criticize or reject me.
- giving people advice, or even preaching at them.
- frustrated that people won't look at the facts.
- egging people on just to see them boil at me.
- shutting down and pulling away.
- pitting people against each other to see them argue or fight.

Most all of my life I have been interested in

- solitude and/or seclusion.
- religion and/or politics.
- deals and/or risks.
- video games and/or art.
- fashion and/or decorating.
- trivia and/or puzzles.

In high school, I was probably seen as

- Mr./Miss Beliefs.
- Mr./Miss Information.
- Mr./Miss Nice.
- Mr./Miss Clown.
- Mr./Miss Quiet.
- Mr./Miss Make It Happen.

I would agree that the secret to life is

- to chill out. Have fun, be yourself, and let the creative juices flow.
- to have strong values and beliefs and be committed to your mission in life.
- keeping calm and having an active imagination.
- "I did it my way."
- to be logical, think clearly and work hard.
- to be compassionate, caring and loving to everyone.

When I have physical pain, I most likely feel it in my

- chest.
- back.
- neck and shoulders.
- all over.
- bottom.
- stomach.

I am more likely to listen to a salesperson who

- knows his/her product and can answer my questions accurately.
- is a bottom liner like me who cuts through the red tape and cuts me a deal.
- is trustworthy and appreciates the value of things.
- has a lighter approach and makes purchasing more fun and less work.
- takes initiative, tells me what I need to do and leads me through the sale.
- is genuinely friendly and concerned about my needs.

I am more likely to buy a product that

- is first offered to me that meets my needs.
- has eye appeal and looks pricier than it really is.
- is unique, fun or has a whimsical quality that I think is peculiar or fun.
- I feel comfortable with and fits me best.
- dependably serves the purpose for which it was made.
- has good workmanship and quality.

People I like the least are

- unprincipled.
- clingy.
- insensitive.
- unreasonable.
- intrusive.
- boring.

If I were in charge of an office, I would make work a place to

- build relationships and encourage and support others.
- create few waves while seeing or conceptualizing things in unusual ways.
- gather information, analyze data and plan a consistent approach.
- observe closely, compare to an internal standard or ideal and then identify problems.
- impact our bottom line - profit.
- stay loose, generate energy and use my creativity to overcome obstacles.

When disagreements arise I am most likely to

- be confounded that others won't listen to my opinions.
- feel myself withdrawing and needing to be alone.
- get the one who tried to get me.
- feel hurt, rejected or personally unappreciated.
- frustrated that others are too emotional and not trying to solve a problem like I am.
- feel misunderstood, judged and get vengefully angry.

Which of the following statements ring "true" for you?

- "Everyone should have a mission in life."
- "Still waters run deep."
- "There is no friend like an old friend."
- "Just the facts, please."
- "Strike while the iron is hot."
- "Either I like it, or I don't."

A prominent part of my personality is that which

- invites others to have fun, be spontaneous and express their individuality.
- makes things happen.
- likes to give to others, encouraging and building them up.
- identifies a goal, gathers information and then proceeds in a logical way.
- knows what is right and sticks to it.
- tends to hold back unless asked to join in and share.

Most recently in my life I seem to be more concerned with

- how I structure my time.
- politics and/or religion.
- my privacy.
- whether or not people like me.
- doing things that give me a rush.
- if I am really being myself and having fun.

The way others know I love them is by my

- open physical affection and verbal expressions of love and caring.
- providing for them in reliable and responsible ways.
- being dependable, trustworthy and someone in whom they can place their trust.
- making few demands and giving them their space.
- buying them nice things, going on exciting vacations and providing other experiences.
- spending time with them doing activities, sports, arts and crafts or just hanging out.

I come to know others by

- what they imagine.
- how they react.
- what they do.
- what they feel.
- how they think.
- what they believe in.

I seek

- respect.
- privacy.
- excitement.
- acceptance.
- accomplishment.
- fun.

An effective leader knows that people need

- more responsibility, education and fair treatment.
- quick rewards.
- to be spontaneous, express themselves in an atmosphere of acceptance and appreciation for their creative gifts.
- a moral and ethical structure in which they can trust.
- some alone time.
- to be loved and cared for.

I have appreciated my

- imagination.
- compassion.
- charm.
- logic.
- values.
- humor.

If I were to be praised, I'd prefer to hear someone say

- that I'd done a good job.
- that they admired my commitment.
- that I deserve some time to myself.
- that I really made things happen.
- that they like me as a person.
- that I was creative and fun to be with.

I would vote for a president or political leader who was able to

- recognize people for who they are inside, not for what they do. Such a leader unconditionally cares about people and lets them know that they are appreciated and accepted.
- schedule time efficiently and recognize hard work, performance and task completion abilities in people.
- make it happen, call the shots, and when the going is the roughest show who is the toughest!
- recognize dedication, loyalty, perseverance and commitment in people, as well as rewarding them for believing in and accomplishing their duties and tasks.
- be spontaneous, playful, joking, fun and humorous with people.
- respect that some people need their own space and privacy - a time to be alone and reflective.

An effective leader is

- calm.
- charming.
- playful.
- compassionate.
- logical.
- dedicated.

Money means (to me)

- privacy.
- a way to chill out (more "toys" or fun things).

- the means to care for others.
- excitement.
- reward for hard work.
- security.

APPENDIX C: FOLLOW-UP EMAIL TO PRINCIPALS

Second Request: For those that have completed the survey, thank you! If you have not had a chance to start the survey, the link is below.

Thanks in advance for your help in completing my study.

———

This survey will take approximately 45 minutes to complete

LINK WILL BE INSERTED HERE

Date: mm/dd/yyyy

Subject: K-12 Principals' Personality and The Collaborative Nature of a School's Culture

You are invited to participate in a research study about the relationship between a K-12 principal's personality and the collaborative nature of a school's culture. This study is being conducted by Chase Huotari as a part of his doctoral dissertation at Indiana State University. Dr. Ryan Donlan is serving as the faculty sponsor from the department of Educational Leadership.

All Indiana K-12 public school principals and their associated teachers are invited to participate. Names, school codes, and school names will be utilized on the survey. As a result, the researcher will be able to identify you by name. However, names will be changed to school codes and redacted immediately upon receipt of the data by the researcher, as there is no methodological reason for the researcher to need principals' names. Results will be reported in groups without identification of individual participants. Names of principals and identifiable school code numbers will not be made available to anyone but the researcher and the faculty sponsor.

Your responses will be kept in a secure, password protected file that is only accessible to the researcher and his faculty sponsor. Complete anonymity cannot be guaranteed, as this is an Internet survey. Participation is voluntary and the risk of harm is minimal.

The informed consent document is available at the very start of the survey. Should you wish to participate and complete the survey, you may withdraw from the study at any time within seven days of submission by emailing Chase Huotari, the principal researcher.

Subsequent to your completion of the survey, certificated teachers in your associated school will receive an invitation that will include the following language:

If you are receiving this invitation, your building principal has already elected to participate and is aware that as a result, certificated teachers in their building will be receiving this invitation.

Teachers will be invited to complete The School Culture Survey. Teachers in the buildings of principals who elect to participate will be ensured that their participation will be confidential (and thus the importance of the inclusion of your schools' Indiana Department of Education code number.).

If you have any questions about this study, please contact Mr. Huotari at (317) 490-8887 or at chuotari@sycamores.indstate.edu or Dissertation Chairperson, Dr. Ryan Donlan, by e-mail at ryan.donlan@indstate.edu or by phone at (812) 237-2918. If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at 114 Erickson Hall, Terre Haute, IN 47809, by phone at (812) 237-3088, or by e-mail at irb@indstate.edu.

Thank you for your efforts and assistance.

Respectfully,

Chase Huotari

APPENDIX D: INITIAL EMAIL TO TEACHERS

If you are receiving this invitation, your building principal has already elected to participate and is aware that as a result, certificated teachers in their building will be receiving this invitation.

This survey will take approximately 15 minutes to complete

SURVEY LINK

Date: 07/25/2019

Subject: K-12 Principals' Personality and The Collaborative Nature of a School's Culture

You are invited to participate in a research study about the relationship between a K-12 principal's personality and the collaborative nature of a school's culture. This study is being conducted by Chase Huotari as a part of his doctoral dissertation at Indiana State University. Dr. Ryan Donlan is serving as the faculty sponsor from the department of Educational Leadership.

All Indiana K-12 public school principals and their associated teachers are invited to participate. No names will be utilized on the survey, only school code and school name. There is no methodological reason for the researcher to need teacher and/or principal names. Results will be reported in groups without identification of individual participants. Identifiable school code

numbers and names will not be made available to anyone but the researcher and the faculty sponsor.

Your responses will be kept in a secure, password protected file that is only accessible to the researcher and his faculty sponsor. Complete anonymity cannot be guaranteed, as this is an Internet survey. Participation is voluntary and the risk of harm is minimal.

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If you have any questions about this study, please contact Mr. Huotari at (317) 490-8887 or at chuotari@sycamores.indstate.edu or Dissertation Chairperson, Dr. Ryan Donlan, by e-mail at ryan.donlan@indstate.edu or by phone at (812) 237-2918. If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at 114 Erickson Hall, Terre Haute, IN 47809, by phone at (812) 237-3088, or by e-mail at irb@indstate.edu.

Thank you for your efforts and assistance.

Respectfully,

Chase Huotari

APPENDIX E: SCHOOL CULTURE SURVEY

School Culture Survey

Indicate the degree to which each statement describes conditions in your school.

Please use the following scale:

1=Strongly Disagree   2=Disagree   3=Undecided   4=Agree   5=Strongly Agree

		Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1.	Teachers utilize professional networks to obtain information and resources for classroom instruction.	①	②	③	④	⑤
2.	Leaders value teachers' ideas.	①	②	③	④	⑤
3.	Teachers have opportunities for dialogue and planning across grades and subjects.	①	②	③	④	⑤
4.	Teachers trust each other.	①	②	③	④	⑤
5.	Teachers support the mission of the school.	①	②	③	④	⑤
6.	Teachers and parents have common expectations for student performance.	①	②	③	④	⑤
7.	Leaders in this school trust the professional judgments of teachers.	①	②	③	④	⑤
8.	Teachers spend considerable time planning together.	①	②	③	④	⑤
9.	Teachers regularly seek ideas from seminars, colleagues, and conferences.	①	②	③	④	⑤
10.	Teachers are willing to help out whenever there is a problem.	①	②	③	④	⑤
11.	Leaders take time to praise teachers that perform well.	①	②	③	④	⑤
12.	The school mission provides a clear sense of direction for teachers.	①	②	③	④	⑤
13.	Parents trust teachers' professional judgments.	①	②	③	④	⑤
14.	Teachers are involved in the decision-making process.	①	②	③	④	⑤
15.	Teachers take time to observe each other teaching.	①	②	③	④	⑤
16.	Professional development is valued by the faculty.	①	②	③	④	⑤

17.	Teachers' ideas are valued by other teachers.	①	②	③	④	⑤
18.	Leaders in our school facilitate teachers working together.	①	②	③	④	⑤
19.	Teachers understand the mission of the school.	①	②	③	④	⑤
20.	Teachers are kept informed on current issues in the school.	①	②	③	④	⑤

Please continue on the back of this survey.

1=Strongly Disagree   2=Disagree   3=Undecided   4=Agree   5=Strongly Agree

		Strongly Disagree	*Disagree*	*Undecided*	*Agree*	*Strongly Agree*
21.	Teachers and parents communicate frequently about student performance.	①	②	③	④	⑤
22.	My involvement in policy or decision making is taken seriously.	①	②	③	④	⑤
23.	Teachers are generally aware of what other teachers are teaching.	①	②	③	④	⑤
24.	Teachers maintain a current knowledge base about the learning process.	①	②	③	④	⑤
25.	Teachers work cooperatively in groups.	①	②	③	④	⑤
26.	Teachers are rewarded for experimenting with new ideas and techniques.	①	②	③	④	⑤
27.	The school mission statement reflects the values of the community.	①	②	③	④	⑤
28.	Leaders support risk-taking and innovation in teaching.	①	②	③	④	⑤
29.	Teachers work together to develop and evaluate programs and projects.	①	②	③	④	⑤
30.	The faculty values school improvement.	①	②	③	④	⑤
31.	Teaching performance reflects the mission of the school.	①	②	③	④	⑤
32.	Administrators protect instruction and planning time.	①	②	③	④	⑤
33.	Teaching practice disagreements are voiced openly and discussed.	①	②	③	④	⑤
34.	Teachers are encouraged to share ideas.	①	②	③	④	⑤
35.	Students generally accept responsibility for their schooling, for example they engage mentally in class and complete homework assignments.	①	②	③	④	⑤

APPENDIX F: FOLLOW-UP EMAIL TO TEACHERS

Thanks to those who have already participated. If you have not had a chance to complete the linked survey, thanks for taking the time to consider assisting me in completing my research.

‾‾‾‾‾

If you are receiving this invitation, your building principal has already elected to participate and is aware that as a result, certificated teachers in their building will be receiving this invitation.

This survey will take approximately 15 minutes to complete

SURVEY LINK

Date: 07/25/2019

Subject: K-12 Principals' Personality and The Collaborative Nature of a School's Culture

You are invited to participate in a research study about the relationship between a K-12 principal's personality and the collaborative nature of a school's culture. This study is being conducted by Chase Huotari as a part of his doctoral dissertation at Indiana State University. Dr. Ryan Donlan is serving as the faculty sponsor from the department of Educational Leadership.

All Indiana K-12 public school principals and their associated teachers are invited to participate. No names will be utilized on the survey, only school code and school name. There is no methodological reason for the researcher to need teacher and/or principal names. Results will be reported in groups without identification of individual participants. Identifiable school code numbers and names will not be made available to anyone but the researcher and the faculty sponsor.

Your responses will be kept in a secure, password protected file that is only accessible to the researcher and his faculty sponsor. Complete anonymity cannot be guaranteed, as this is an Internet survey. Participation is voluntary and the risk of harm is minimal.

The informed consent document is available at the very start of the survey. Should you wish to participate and complete the survey, you may withdraw from the study at any time within seven days of submission by emailing Chase Huotari, the principal researcher.

If you have any questions about this study, please contact Mr. Huotari at (317) 490-8887 or at chuotari@sycamores.indstate.edu or Dissertation Chairperson, Dr. Ryan Donlan, by e-mail at ryan.donlan@indstate.edu or by phone at (812) 237-2918. If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at 114 Erickson Hall, Terre Haute, IN 47809, by phone at (812) 237-3088, or by e-mail at irb@indstate.edu.