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Principal Trust: Factors that Influence  
Faculty Trust in the Principal

A. Tyler Howe

A dissertation to be submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Doctor of Education

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## ABSTRACT

### Principal Trust: Factors that Influence Faculty Trust in the Principal

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Doctor of Education

Principals are held accountable for student achievement even though they only have an indirect influence on that achievement. Accountability raises the question about what should be the priority for the principal's attention. The literature supports the existence of a positive correlation between faculty trust in the principal and increased student achievement. Our study considered the appropriateness of representing trust as a two-factor model broken down into components related to how teachers view the *skill* and the *will* of the principal. Additionally, our study examined which demographic factors of the school and of the principal affect faculty trust in the principal.

This study examined historical data acquired from a large suburban school district in the western United States between 2013 and 2014. The archival data included over 1,700 completed surveys from elementary, junior-high, and high-school teachers of the Omnibus T-Scale survey created by Wayne K. Hoy and Megan Tschannen-Moran (2003).

Almost all principals in the study were evaluated higher in terms of skill (competence, reliability, honesty) than in terms of will (benevolence, openness, empathy or vulnerability), and the data set fits a two-factor model of trust. Our findings show no significant association between the principal or school demographics and overall faculty trust in the principal, with the exception of a negative correlation between the principal's level of education and faculty trust in the principal. These findings suggest principals are not at a disadvantage to achieve faculty trust based on principal and school demographic factors.

Keywords: trust (psychology), academic achievement, principals, leadership

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I am also tremendously grateful to the students, teachers, and principals I work with as a school principal in Granite School District. I am in awe of how challenging and rewarding education is. In many ways, the profession seems too overwhelming to bear. However, because children are at stake, we'll always find a way.

Above all, I am grateful to my wonderful family. My four kids suffered through an absentee dad on too many occasions as I pursued this work. My parents and siblings each had a hand in this dissertation as they supported me with time, finances, and babysitting in making this a reality. And no one worked harder to make this happen than my beautiful wife, Laura, who encouraged me to pursue a doctoral degree without so much as batting an eye. She functioned as a single mom for the better part of four years, and she never once complained. I love her, and hope I can repay the favor.

Finally, I express my gratitude to a loving Heavenly Father whose guiding hand I've seen too many times in my life to not recognize.

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## INTRODUCTION OF STRUCTURE AND CONTENT

This document is presented in the format of the hybrid dissertation as approved by Brigham University's McKay School of Education. The hybrid dissertation is one of several formats supported in Brigham Young University's David O. McKay School of Education. Unlike a traditional five-chapter format, the hybrid dissertation focuses on producing a journal-ready manuscript. Consequently, the final dissertation product has fewer pages than the traditional format and focuses on the presentation of the scholarly manuscript as the centerpiece. Following the journal manuscript are appendices, which include an extended review of literature and a methodological section sufficient for the requirements of an institutional review board.

The targeted journal for this dissertation is the *NASSP Bulletin*, the official journal of the National Association of Secondary School Principals. As clarified in their publishing guidelines online, *NASSP Bulletin* is a peer-refereed journal that publishes scholarly and research-based knowledge that informs practice, supports data-driven decisions, and advances the performance of middle and high school principals. It features a wide range of articles of enduring interest to educators that help promote student learning and achievement, provide insight for strategic planning and decision making in schools, and provide contemporary perspectives on educational reform and policies.

Manuscripts submitted for publication in the *NASSP Bulletin* should not exceed 30 double-spaced pages (excluding references, illustrations, tables, and figures). This manuscript is approximately 25 pages.



## Abstract

Principals are held accountable for student achievement even though they only have an indirect influence on that achievement. Accountability raises the question about what should be the priority for the principal's attention. The literature supports the existence of a positive correlation between faculty trust in the principal and increased student achievement. Our study considered the appropriateness of representing trust as a two-factor model broken down into components related to how teachers view the *skill* and the *will* of the principal. Additionally, our study examined which demographic factors of the school and of the principal affect faculty trust in the principal.

This study examined historical data acquired from a large suburban school district in the western United States between 2013 and 2014. The archival data included over 1,700 completed surveys from elementary, junior-high, and high-school teachers of the Omnibus T-Scale survey created by Wayne K. Hoy and Megan Tschannen-Moran (2003).

Almost all principals in the study were evaluated higher in terms of skill (competence, reliability, honesty) than in terms of will (benevolence, openness, empathy of vulnerability), and the data set fit a two-factor model of trust. Our findings showed no significant association between the principal or school demographics and overall faculty trust in the principal, with the exception of a negative correlation between the principal's level of education and faculty trust in the principal. These findings suggest principals are not at a disadvantage to achieve faculty trust based on principal and school demographic factors.

## Principal Trust: Factors that Influence

### Faculty Trust in the Principal

#### **Background**

Although school principals are primarily held accountable for student achievement, they have only an indirect impact on that achievement (Darling-Hammond & Bransford, 2007; Hallinger & Heck, 1996; Supovitz, Sirinides, & May, 2010). Teachers affect student achievement directly, and principals affect teachers. Because faculty trust in the principal is one variable principals affect in teachers that could have a positive impact on student achievement (Bryk & Schneider, 2002; Sweetland & Hoy, 2000; Tschannen-Moran, 2001), the challenge for principals is knowing what will impact their teachers' trust in them (Blake & MacNeil, 1998).

The literature supports outcomes as being positively influenced by trust (Dirks, 2000; Dirks & Ferrin, 2001; Forsyth, Barnes & Adams, 2006). Dirks and Skarlicki (2009) assert, "perceiving other organizational members to be trustworthy increases the likelihood that the trustor will take a risk (e.g., initiate an exchange relationship), which in turn can result in performance-related outcomes for the trustor" (p. 137). In the context of schools, this means teachers who trust their principal are more likely to take risks that may result in increased student achievement. Student achievement is directly influenced by the teachers, and the teachers are directly influenced by the principal (illustrating a principal's indirect influence on student achievement). Principals might negatively influence student achievement through this indirect relationship if they do not know which factors influence their teachers' trust in them and which factors do not. This study will help principals understand factors that impact faculty trust in the principal, so teacher influence may more likely increase student achievement.

The relationship between trust and results is demonstrated with the following example. A young boy goes rappelling for his first time and is rather apprehensive watching the older kids take their turns. Watching the first boy climb down the cliff, the boy whispers to the nearby adult, “If he dies, I’m not doing it!” Those words may seem comical given the circumstances, but they illustrate an important relationship. Results drive trust, and trust drives results (Hallam & Hausman, 2009). The school principal who encourages, invites, and supports his or her teachers on a given initiative gains additional trust from those teachers when that initiative produces the desired results. What may be less intuitive, however, is that the initiative is more likely to produce the desired results when the teachers trust and follow the principal. Trust and results are interdependent. Our young rappeller gained more and more trust as he watched each of the older kids make a safe descent. And, when it was his turn, he was more likely to have a successful descent of his own because he then trusted in the equipment and in the instructions of those around him. Results produced trust, and trust produced results.

The relationship between results and trust can be both positive and negative. Whereas increased results can breed increased trust and vice versa, decreased results breed decreased trust and vice versa. Goddard, Tschannen-Moran, and Hoy (2001) state, “[H]igher student achievement is likely to produce even greater trust, whereas low student achievement could be expected to lead to a self-reinforcing spiral of blame and suspicion on the part of teachers, parents, and students that would further impair student achievement” (p. 15). Faculty trust in the principal will diminish with diminished student-achievement results just as the young rappeller’s trust would have diminished had things not gone well for the older kids. Further, a decrease in trust will engender a decreased capacity to produce the desired results. Even if the principal

leads in the best direction to maximize student achievement, those results will be mitigated if teachers do not trust and follow that principal.

Because principals can choose from so many things on which to spend their time (Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004), and because faculty trust in the principal has such a bearing on student achievement (Bryk & Schneider, 2002; Sweetland & Hoy, 2000; Tschannen-Moran, 2001; Vescio, Ross, & Adams, 2008), principals should learn which factors affect faculty trust in the principal. We recognize that not all things that may affect faculty trust in the principal are within the principal's control. For example, principals cannot change their age, sex, or the poverty percentage at their schools. However, if these factors affect faculty trust in the principal, principals would do well to be cognizant of their effects. A basketball team would have a different outlook on the second half of the game if it is coming out of the locker room after halftime down by ten points than if it is up by ten. The team may not be able to alter its circumstances at the start of the second half, but the score will probably affect the decisions the team makes in the second half. Likewise, a principal who is aware that certain factors affect faculty trust in the principal, even if those factors are outside the principal's control, can compensate appropriately using factors the principal does control. Further, a principal who is aware that certain factors do not affect faculty trust in the principal could not then use those factors as an excuse for low trust. Leithwood et al. (2004) articulate this well when they say:

Leaders need to know which features of their organizations should be a priority for their attention. They also need to know what the ideal condition of each of these features is, in order to positively influence the learning of students. (p. 14)

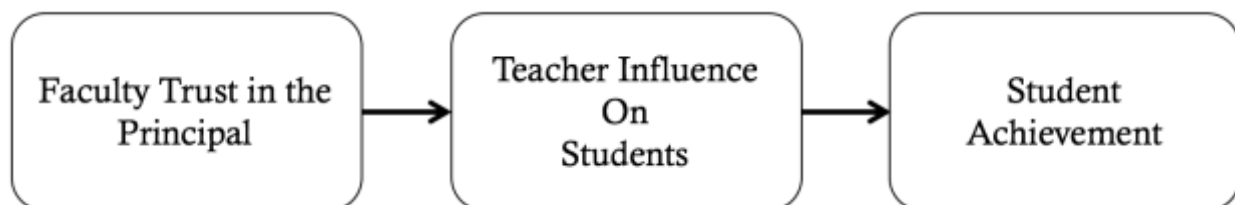
Principals who know the score can better prioritize their attention.

## Research Context

In an education context, trust matters inasmuch as it enables principals to enhance teachers' abilities to increase student achievement (see Figure 1). Schools exist to effect change in students. Principals, as the leaders of those schools, work to increase the efficiency and direction of that change. Teachers, as the educators with a direct influence over student learning, become more effective as their trust in the principal increases (Bryk & Schneider, 2002; Sweetland & Hoy, 2000; Tschannen-Moran, 2004a). Teachers are not more effective simply because they trust their principal, but, rather, teachers are more effective because of the conditions created by a trusting environment. Bryk and Schneider (2002) explain:

Relational trust does not directly affect student learning. Rather, trust fosters a set of organizational conditions, some structural and others social-psychological, that make it more conducive for individuals to initiate and sustain the type of activities necessary to affect productivity improvements. (p. 116)

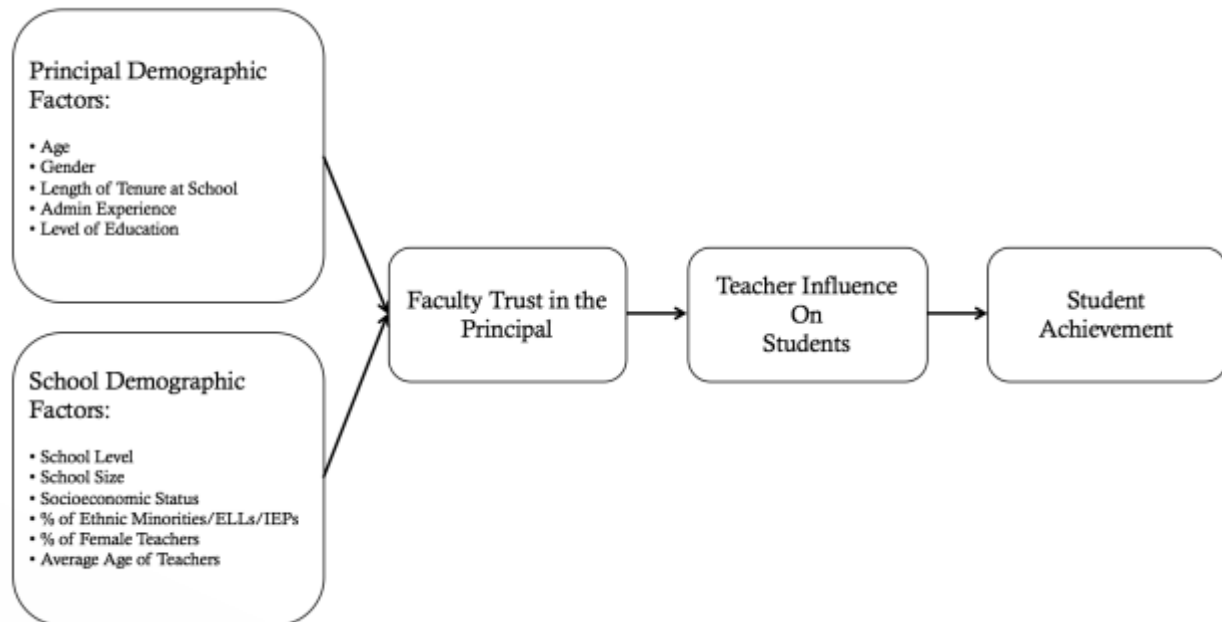
Consequently, faculty trust in the principal should be a priority for schools desiring to effect change and enhance student achievement.



*Figure 1.* Faculty trust in the principal's indirect influence on student achievement.

Given the implications that faculty trust in the principal can have on student achievement, principals would do well to consider what affects their faculty's trust in them. As stated previously, this research attempts to address just that. Specifically, with this research, we consider how demographic factors of the principal, including principal age, sex, length of tenure at the school, administrative experience, and level of education, are associated with the faculty

trust in the principal. Also, with this research, we consider how demographic factors of the school, including school level, school size, socioeconomic status of the students, percentage of ethnic minorities, percentage of English Language Learners (ELLs), percentage of students with disabilities (IEPs), percentage of female teachers, and the average age of the teachers affect the faculty trust in the principal. These factors are displayed in Figure 2.



*Figure 2.* Demographic factors & faculty trust in the principal.

Whereas the trust literature supports the assertion that faculty trust in the principal will ultimately result in improved student achievement (Bryk & Schneider, 2002; Sweetland & Hoy, 2000; Tschannen-Moran, 2001; Vescio et al., 2008), the examination of archival data in this study retrieved from approximately 1,700 teacher surveys on trust informs the understanding of which demographic factors are likely to influence faculty trust in the principal. Additionally, the survey data can help us better understand the facets that comprise faculty trust in the principal. The Omnibus T-scale developed by Hoy and Tschannen-Moran (2003) used in the archival data describes trust as the composite of five facets of the trustee: competence, benevolence, honesty,

openness, and reliability (see Appendix A). The archival survey also measured a sixth facet described as vulnerability. Because vulnerability actually describes a characteristic of the trustor rather than the trustee, to equate it to the other five facets in terms of its relationship with the trustee, we describe it as *awareness of vulnerability*. This study will examine these six facets as a measure of faculty trust in the principal (see Figure 3).

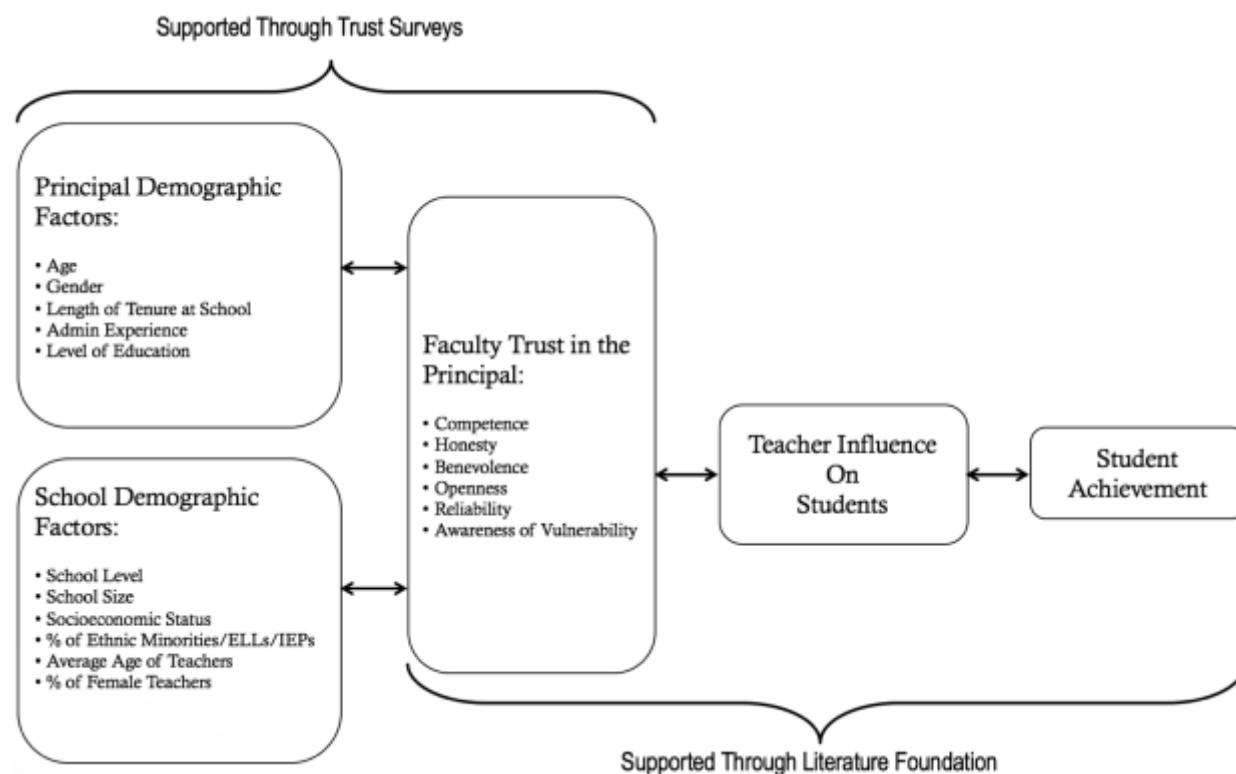


Figure 3. Demographic factors, facets associated with faculty trust in the principal and student achievement.

### Defining Trust

Although trust has been acknowledged as an influential construct in schools and other organizations (Dirks, 2000; Dirks & Ferrin, 2001; Forsyth et al., 2006), the literature varies regarding the definition of trust and its impact on relationships. Several authors have put forth useful definitions (with Hoy and Tschannen-Moran's [2003] facets being widely accepted), but when analyzing which demographics affect trust in the principal, finding a concise

terminology—from the many different terms—to categorize the two factors of trust is imperative.

Although earlier trust definitions made many worthwhile contributions to the trust literature (Deutsch, 1958; Edwards, 1990; Lewis & Weigert, 1985; Rotter, 1967), Mayer, Davis, and Schoorman (1995) provide an important focus to the discussion when they emphasized the construct of *vulnerability* as a component of trust. This focus delineates facets of trust administrators could look to when analyzing their faculty's trust in them. They describe trust as, “[T]he willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (p. 712). Their use of *vulnerability* in the trust definition has been widely influential on later authors. Additionally, Mayer et al. go on to spell out three facets of trust that become foundational for later authors. These facets are *ability* (skills in a specific domain), *benevolence* (a desire to do good to the other party), and *integrity* (adherence to a set of acceptable principles).

Mishra (1996) altered the definition of Mayer et al. (1995) by describing trust as “one party's willingness to be vulnerable to another party based on the belief that the latter party is 1) competent, 2) open, 3) concerned, and 4) reliable” (p. 5). Although Mishra did not recognize integrity in his definition, the rest of his definition seems to align perfectly with Mayer et al. However, Mishra used the word *competent* instead of *able* and the word *concerned* instead of *benevolent*. Additionally, he added two new constructs—*openness* (a willingness to share relevant information) and *reliability* (consistency between word and action). Mishra (2013) further emphasized the importance of vulnerability when he said, “Simply put, trust means you are willing to be vulnerable to others in the face of uncertainty” (p. 18).



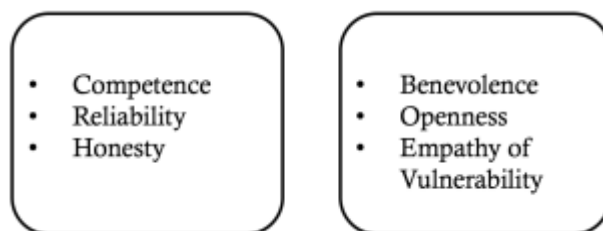
Hoy and Tschannen-Moran (1999) consolidated the definitions put forth by Mayer et al. (1995) and Mishra (1996). They describe, “Trust is an individual’s or group’s willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest, and open” (p. 189). Hoy and Tschannen-Moran’s use of the term competence seems synonymous with ability, just as their term honesty seems synonymous with integrity. Much like Mayer et al. and Mishra, Hoy and Tschannen-Moran describe trust as a willingness to be vulnerable even before any vulnerable action is taken. Without grouping their facets into a two-factor model, the Hoy and Tschannen-Moran definition of trust encompasses the other trust definitions. In other words, most trust definitions seem to be reasonably comprised within the five facets that Hoy and Tschannen-Moran articulate.

Like Hoy and Tschannen-Moran (1999), Rousseau, Sitkin, Burt, and Camerer (1998) also recognize different facets of trust, but they begin to define a two-factor construct by condensing the aforementioned facets into two groups. Rousseau et al. define trust as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intention or behavior of another” (p. 612). Rousseau et al. condenses what Tschannen-Moran and Hoy represent with five facets into two broader groups: intentions and behaviors.

Like Rousseau et al. (1998), other researchers discuss the characteristics of the trustee as a two-factor construct, each definition varying from the other. Edwards (1990), McAllister (1995), and Dirks and Ferrin (2002) describe the two factors as cognition-based trust and affect-based trust. Similarly, Lewis and Weigert (1985) describe them as cognitive and emotional trust. Cook, Hardin, and Levi (2005) call the two factors confidence and motivation and describe them as the two main aspects of trustworthiness. Kramer (1999) talks of rational choice and relational choice. Lewicki, Tomlinson, and Gillespie (2006) describe a behavioral tradition and a

psychological tradition of trust research. Hallam, Boren, Hite, Hite, and Mugimu (2013) identify the two factors as competence trustworthiness and relational trustworthiness. Although the literature supports two factors of trust, research varies in how the two types are labeled and what is included within each type.

A concise terminology and organization to describe the two factors of trust is needed to identify which demographics affect faculty trust in the principal. Using Hoy and Tschannen-Moran's (1999) five facets of trust, this research will explore the appropriateness of dividing the facets into two groups similar to what the other researchers have done. This study groups the facets competence, reliability, and honesty into the arena other researchers have called cognition-based trust, cognitive trust, confidence, rational choice, behavior tradition, and competence trustworthiness. Additionally, this study groups the facets benevolence and openness into the arena other researchers have called affect-based trust, emotional trust, motivation, relational choice, psychological tradition, and relational trustworthiness. On their trust survey, Hoy and Tschannen-Moran (2003) connect certain indicators to a sixth facet they label as vulnerability. Although the trustor is vulnerable, the trustee's perceived understanding of that vulnerability influences trust. Therefore, this study also adds awareness of vulnerability (the trustee's appreciation of the trustor's risk) to the latter group (see Figure 4).



*Figure 4.* Trust facets organized into two groups.

For this study, we have adopted Hoy and Tschannen-Moran's (1999) definition of trust (including awareness of vulnerability) with the additional organization of the trust facets into the

two groups. Thus, our working definition is: Trust is an individual's or group's willingness to be vulnerable to another party based on the latter party's competence, reliability, and honesty and the latter party's benevolence, openness, and awareness of vulnerability.

### **Research Questions**

This study addresses the following two research questions based on a secondary analysis of archival data gathered from a large western suburban school district from 2013 to 2014:

1. To what extent is there support for a two-factor model of trust in which the trust facets of competence, reliability, and honesty are divided from the trust facets of benevolence, openness, and awareness of vulnerability?
2. Which principal and school demographics are related to the faculty's perception of the principal's competence, reliability, and honesty? Which are related to the faculty's perception of the principal's benevolence, openness, and awareness of vulnerability?

The first research question addresses the appropriateness of representing trust as a two-factor model broken down by facets researchers have associated with cognitive trust, cognition-based trust, competency trust, etc. on one side and facets researchers have associated with emotional trust, affect-based trust, relational trust, etc. on the other. Specifically, this question considers how the perceived competence, reliability, and honesty of the principal and how the perceived benevolence, openness, and awareness of vulnerability of the principal stand as separate constructs. If representing trust as a two-factor model is appropriate, principals might increase overall faculty trust (and, therefore, the level of student achievement at the school) by being cognizant of and nurturing both factors.

The second research question examines demographic factors associated with the principals themselves and how those factors correlate with the level of faculty trust in the principal. This question considers whether or not the principal's age, sex, length of tenure at the school, administrative experience, or level of education has an influence on faculty trust in the principal. Of particular interest to school leaders is the correlation between the length of tenure at the school and faculty trust in the principal. Because principals can be turned over frequently, they might assume the faculty will not trust them initially. Does principal turnover have an association with faculty trust in the principal and, therefore, the level of student achievement of the school?

The second research question also examines demographic factors associated with the school and how those factors correlate with the level of faculty trust in the principal. This question considers whether or not school level (elementary, junior high, or high school), school size, socioeconomic status of the students, percentage of ethnic minorities, percentage of English language learners (ELL), percentage of students with disabilities (IEPs), gender makeup of the staff (as measured by the percentage of female teachers), or average age of the teachers has an influence on faculty trust in the principal. Of particular interest to school leaders is the correlation between school level (elementary, junior high, or high school) and faculty trust in the principal. Faculties, principals, students and parents deal with vastly different things at different levels of schooling. Does the school level have an association with faculty trust in the principal and, therefore, the level of student achievement at the school?

## Methods

Archival data was quantitatively analyzed to address the two research questions. A description of the sampling, data collection, and data analysis are included in this methods section.

### Sampling

The archival data for this study came from teacher surveys from a large suburban school district in the western United States. The archival data included over 1,700 completed surveys using the Omnibus T-Scale survey developed by Hoy and Tschannen-Moran (2003) from elementary, junior-high, and high-school teachers (see Appendix A). Participation at each of the 64 schools ranged from 60% of the faculty to over 90%. At each site, teachers considered their own principal when responding to each item on the survey. The mean age of the principals was 47 years (SD 9.00), the principals averaged 4.5 years (SD 3.30) at their school, and 73% of the principals were male. All principals had at least a master's degree, and 9% of the principals had a doctoral degree.

The archival data consisted of teacher responses from 45 elementary schools, 11 junior high schools, and 8 high schools. The number of students at each school ranged from 409 to 2,331, and faculty sizes ranged from 6 to 50 teachers. The percentage of students on free or reduced-price lunch at each school ranged from 8.9% to 83.1% with an average of 32.3%. ELLs at each school ranged from 0% to 40.2% with an average of 7.1%. Ethnic minority students at each school ranged from 5% to 59.8% with an average of 18.1% (see Table 1).

The Omnibus T-Scale survey developed by Hoy and Tschannen-Moran (2003) was distributed to a census sample of a district population of 3,314 teachers which had the following demographics: 74.4% were female, 25.6% were male; 23.8% were between the ages of 20 and

Table 1

*Data Points from Sample*

Data Points	Elementary	Junior High	High School	Totals
<b>School</b>				
Number of Schools	45	11	8	64
Mean School Size— Students	780	1314	1792	998
% of Poverty Students	30%	29%	24%	28%
% of Minority Students	16%	17%	16%	16%
% of ELLs	7%	3%	2%	5%
% of IEPs	12%	11%	8%	11%
Average Age of Teachers	41	41	42	41
% of Faculty Female	90%	60%	52%	76%
<b>Principal</b>				
Mean Age	48	44	45	47
Sex – # Male	29	11	7	47
Sex – # Female	16	0	1	17
Mean Tenure at School	5.00	3.64	2.88	4.50
Mean Years in Admin	7.71	10.18	11.75	8.64
# of Masters Degrees	41	10	6	57
# of Doctorate Degrees	4	1	2	7

29, 25.9% were between the ages of 30 and 39, 21.1% were between the ages of 40 and 49, 20.2% were between the ages of 50 and 59, 9.0% were 60 or older; and less than 1% identified themselves as either Asian, Black, Hispanic, Indian, or other whereas 99% identified themselves as White. These demographics describe the census sample of teachers who were sent the survey, rather than the set of respondents, and present possible confounding variables given that the demographic data of respondents is not available at the individual participant level.

**Data Collection**

For our study, we used archival data acquired using quantitative survey methods. Because the data set was archival and the data had certain pre-existing limitations, our analyses were

tailored to these limitations. This correlational study sought to discover what demographic variables of the principal and schools were associated with faculty trust in the principal. A score for faculty trust in the principal; a score for the competence, reliability, and honesty of the principal; and a score for the benevolence, openness, and awareness of vulnerability of the principal served as the dependent or outcome variables. Principal and school demographic variables were independent or control variables. These demographics were acquired from the district's Human Resources department for the timeframe the survey was administered. These included principal age, principal sex, principal length of tenure at the school, principal length of administrative experience, principal level of education, school level, school size, socioeconomic status of the students, percentage of ethnic minorities, percentage of English language learners, percentage of students with disabilities, the percentage of female teachers, and the average age of the teachers.

Faculty trust in the principal was measured using the Omnibus T-Scale developed by Hoy and Tschannen-Moran (2003). While the original instrument consists of 26 Likert items that measure faculty trust in the principal, faculty trust in colleagues, and faculty trust in clients (students and parents), the archival data used in this study used only the eight items associated with the subscale of faculty trust in the principal. Teachers scored their level of agreement on a 6-point Likert scale from *Strongly Disagree* to *Strongly Agree* for each of the eight items associated with overall faculty trust in the principal. We used the average of these eight items as a score for faculty trust in the principal. Because Hoy and Tschannen-Moran (2003) have correlated each of the eight items to one of their five facets of trust as well as to vulnerability, we were also able to determine a score for competence, reliability, and honesty and a score for

benevolence, openness, and awareness of vulnerability by using the mean of the items related to those facets.

### Data Analysis

Data analyses consisted of determining a score for the overall faculty trust in the principal; a score for the competence, reliability, and honesty of the principal; and a score for the benevolence, openness, and awareness of vulnerability of the principal. Means of the principal and school demographics were also determined. Descriptive analyses included univariate analyses (including the central tendency and dispersion) of each of the variables.

Because the literature (Cook et al., 2005; Dirks & Ferrin, 2002; McAllister, 1995) supports a two-factor model of trust, the next analyses consisted of a confirmatory factor analysis (CFA) of the survey data. Using items 1, 2, 5, and 8 from the Omnibus T-scale survey as indicators of the latent variable related to the principal's benevolence, openness, and awareness of vulnerability; using items 3, 4, 6, and 7 as indicators of the latent variable related to the principal's competence, reliability, and honesty; and acknowledging a correlation between both latent variables, we conducted a confirmatory factor analysis according to the model in Figure 5.

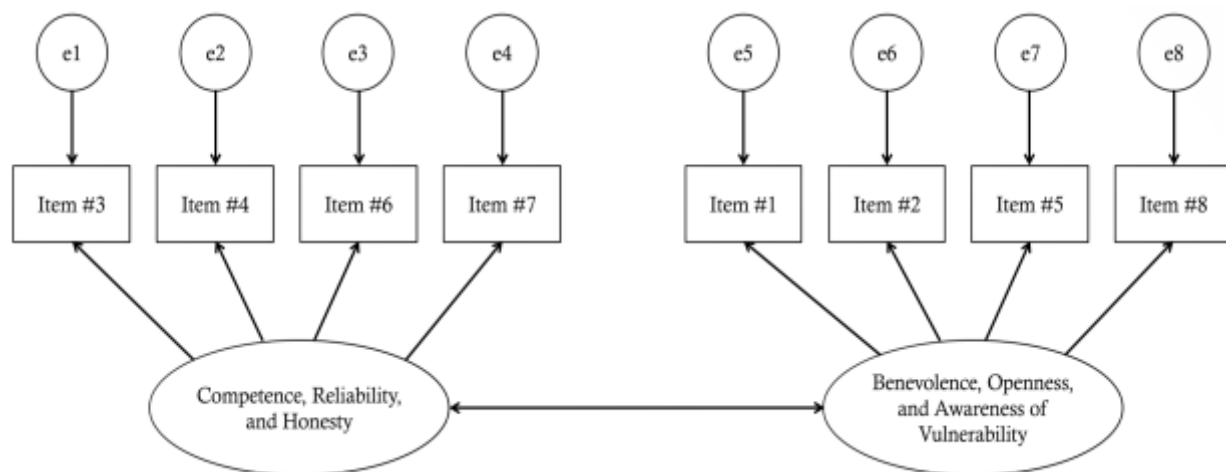


Figure 5. Confirmatory factor analysis of two groupings of the trust facets.



The final analyses considered possible relationships between faculty trust in the principal and the principal/school demographics. Correlation analyses between the explanatory variables (principal and school demographics) and the dependent variables (faculty trust in the principal; competence, reliability, and honesty of the principal; and benevolence, openness, and awareness of vulnerability of the principal) were completed using bivariate correlations, analyses of variance (ANOVA), independent-sample T-tests, simple linear regressions, and multilinear regressions.

### **Findings**

The findings addressed the two research questions. The findings addressing the first research question supported the appropriateness of using a two-factor model of trust in which trust facets are grouped by the competence, reliability, and honesty of the trustee and by the benevolence, openness, and awareness of vulnerability of the trustee. By conducting a confirmatory factor analysis (CFA), the goodness-of-fit measures indicated our survey data did fit a two-factor model. The Comparative Fit Index (CFI) returned a value of .978, and the Root Mean Square Error of Approximation (RMSEA) returned a value of .079. With only three exceptions, all principals scored higher on the indicators related to competence, reliability, and honesty (mean of 5.20) than they did on indicators related to benevolence, openness, and awareness of vulnerability (mean of 4.98). The average difference between the two types of trust at each school is -0.22 with a 95% confidence interval of -0.25 to -0.19 favoring the facets competence, reliability, and honesty. With a p-value of essentially 0, the difference between these means is statistically significant (see Table 2). The confirmatory factor analysis supported the goodness-of-fit of our data as a two-factor model of trust.

Table 2

*Omnibus Trust Scores*

Mean Trust Scores	Elementary	Junior High	High School	Totals
Competence/Reliability/Honesty	5.20	5.35	5.00	5.20
Benevolence/Openness/Vulnerability	5.00	5.13	4.66	4.98
Overall Faculty Trust in the Principal	5.10	5.24	4.83	5.09
Overall Faculty Trust in the Principal (Scaled)	624	644	587	623

Having established that a two-factor model is appropriate, a concise terminology to describe the two factors of trust is needed. We propose labeling the factor related to the competence, reliability, and honesty of the principal as *skill* and labeling the factor related to the benevolence, openness, and awareness of vulnerability of the principal as *will* (see Figure 6).

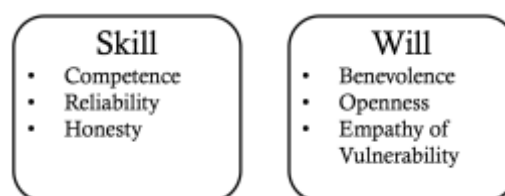


Figure 6. The trust facets grouped as perceived skill and perceived will.

The findings addressing the second research question on the association of principal and school demographics with overall faculty trust in the principal are provided in Tables 2, 3, and 4. Based upon bivariate correlations, analyses of variance (ANOVA), independent-sample T-tests, and multi-linear regressions, no relationship was found between most principal demographics (including age, sex, length of tenure at the school, and length of admin experience) and faculty trust in the principal (including faculty trust in the principal when broken down into the two separate factors). The only principal demographic data point that was associated with each of our outcome variables was the principal's level of education (see Table 3). Analyses also

Table 3

*Principal Demographics Associated with Faculty Trust in the Principal*

Principal Demographics	Perceived Skill			Perceived Will			Overall Trust		
	$\beta$	SE	Sig.	$\beta$	SE	Sig.	$\beta$	SE	Sig.
Principal Age	-.004	.006	.500	.000	.007	.975	-.002	.006	.770
Principal Tenure at School	.004	.015	.777	.011	.018	.542	.008	.016	.641
Principal Admin. Experience	.011	.008	.155	.014	.019	.147	.012	.008	.146
Principal Gender (Male Compared to Female)	.097	.110	.379	.045	.132	.733	.071	.120	.554
Principal Education (Doctoral Compared to Masters)	-.447	.146	.003*	-.478	.177	.009*	-.463	.159	.005*

\*p&lt;.05

demonstrated that, in this data set, principals with a master's degree had higher overall faculty trust, higher perceived skill, and higher perceived will than did principals with a doctoral degree. When considering school demographics, none of the explanatory variables (including school level, school size, school socioeconomic status, school percentage of ethnic minorities, school ELL population, school percentage of students with disabilities, school proportion of female teachers, and the school's average age of teachers) had a significant relationship with the outcome variables of perceived skill, perceived will, and overall faculty trust (see Table 4) with the exception of school level (elementary, junior high, and high school). Based on the analyses, principal and school demographic variables were not significantly associated with faculty trust in the principal, perceived skill of the principal, nor perceived will of the principal (with the notable exceptions of the principal's level of education and the school level).

### Discussion

Perhaps the most statistically significant finding of this research is that related to the two-factor model of trust. Our analysis showed that when faculty trust in the principal is broken down into two factors, one related to the perceived skill of the principal and the other related to the perceived will of the principal, the perceived skill is almost always scored higher by teachers.

Table 4

*School Demographics Associated with Faculty Trust in the Principal*

School Demographics	Perceived Skill			Perceived Will			Overall Trust		
	$\beta$	SE	Sig.	$\beta$	SE	Sig.	$\beta$	SE	Sig.
School Size	-.001	.003	.864	-.003	.004	.445	-.002	.003	.618
School Socioeconomic Status	.258	.266	.335	.203	.320	.529	.230	.289	.429
School % of Minorities	.151	.397	.705	-.083	.475	.862	.034	.432	.937
School % of ELL	.389	.534	.469	.192	.641	.766	.290	.581	.619
School % of IEPs	1.551	1.303	.239	1.539	1.565	.329	1.545	.1418	.280
School % of Female Teachers	.075	.286	.793	.242	.341	.480	.159	.310	.610
Average Age of Teachers	-.004	.015	.769	-.003	.018	.870	-.004	.016	.822
School Level (Elementary Compared to Junior High)	-.156	.128	.228	-.131	.152	.393	-.143	.138	.305
School Level (High School Compared to Junior High)	-.359	.177	.047*	-.468	.210	.030*	-.413	.191	.035*

\*p&lt;.05

Our findings are consistent with that of McAllister (1995) who said, “[F]ollowers’ perceptions of leader competency trustworthiness is higher than perceptions of relational trustworthiness” (p. 9). Contrastingly, other research by Tschannen-Moran and Hoy (1998) asserts subordinates, “[look] to superiors for openness and benevolence when extending trust” (p. 341). Subordinates recognize a capable leader even though they prefer an open and benevolent leader who sympathizes with the subordinate’s vulnerability. Knowing this, principals can attend to the needs of the faculty with care (benevolence), can be transparent with information and decision-making (openness), and can show that they are human, with human needs and emotions (vulnerability).

Although principals should be cognizant of the shortcomings of the perceived will factor of trust demonstrated by this data, principals should also feel a certain level of success that the data showed the perceived skill factor of trust was scored so highly by the teachers. Tschannen-Moran and Hoy (2000) articulate this well when they emphasize the importance of a trustee being viewed as capable by the trustors. They cite Baier (1986), Butler and Cantrell (1984) and

Mishra (1996) in their claim that “There are times when good intentions are not enough. When a person is dependent on another but some level of skill is involved in fulfilling an expectation, an individual who means well may nonetheless not be trusted.” (p. 557-558). Tschannen-Moran and Hoy then give the following example:

[T]he student of a new teacher may feel that the teacher wishes very much to help her learn, but if the teacher is not skillful the student may not feel a great deal of trust. Many of the situations in which we speak about trust in an organizational context have to do with competence. In schools, if a person’s or team’s project depends on others, principals and teachers may or may not feel an ‘assured confidence’ that deadlines will be met or that the work will be of adequate quality to enhance the teaching and learning goals of the school. (p. 557-58)

In this regard, the principals in this research have taken the first step by achieving high scores on the indicators related to competence, reliability, and honesty. Overall, teachers perceive their principals are capable, and McAllister (1995) suggests that some level of perceived competence trustworthiness must exist for perceptions of relational trustworthiness to develop.

Although competence, reliability, and honesty are distinct facets, they all describe an individual’s skill to produce what is promised. When a trustor is choosing whom to trust and how much in terms of skill, he or she evaluates the trustee’s competence to meet expectations, the trustee’s reliability to do so, and the trustee’s honesty that matches word and actions. For example, a rock climber on a cliff trusts the skill of his belayer inasmuch as he believes the belayer is able to catch him if he falls (competence), the belayer consistently monitors (reliability), and the belayer fulfills his promises to keep the climber safe (honesty). The belief in a belayer’s competence alone is insufficient. Actual skill is only manifest when that belief in

competence is confirmed by reliable and honest results. It is not enough that the belayer *can* keep the rock climber safe. It also matters that the belayer *does* keep the rock climber safe. Competence, reliability, and honesty together comprise the belayer's skill. McAllister (1995) associates the skill side of trust with things like dependability, success of past interactions, and on perceived good reasons to trust.

Likewise, although benevolence and openness are distinct facets, they both describe an individual's willingness (or will) to meet expectations because of regard toward the trustor. When a trustor is choosing whom to trust and how much in terms of will, that trustor evaluates the trustee's benevolence or compassion toward him or her and the trustee's openness with information. Both benevolence and openness are not-so-subtle cues regarding the trustee's willingness to meet expectations. Additionally, empathy for another's vulnerability is included as a will facet to parallel the trustor's side of the trust equation. Referring to the rock climber example again, the climber trusts the will of the belayer inasmuch as he or she believes the belayer is compassionate toward him (benevolence), the belayer is forthcoming with relevant information (openness), and the belayer demonstrates understanding of the rock climber's precarious situation (empathy of vulnerability). These constructs reassure the rock climber that the belayer is willing to provide the promised safety. Benevolence, openness, and empathy of another's vulnerability together comprise the belayer's will. McAllister (1995) associates the will side of trust with emotional bonds between individuals, genuine care and concern for the welfare of others, and intrinsic value of relationships.

As described in the findings above, this research leads us to conclude that, with the notable exceptions of a principal's level of education and the school level, principal demographics (age, sex, tenure at school, and length of admin experience) and school

demographics (size, socioeconomic status, minority population, ELL population, proportion of students with disabilities, proportion of female teachers, and average age of the teachers) did not have a significant impact on faculty trust in the principal, the perceived skill of the principal, nor the perceived will of the principal. Because faculty trust in the principal has a bearing on student achievement (Bryk & Schneider, 2002; Sweetland & Hoy, 2000; Tschannen-Moran, 2001; Vescio et al., 2008), these findings merit further consideration. Because the school and most of the principal demographic variables were outside the control of the principal, these findings are empowering in the sense that the demographic variables are not holding principals back from achieving trust with their faculties. While no significant associations were found between most demographic factors and the facets of faculty trust in the principal, this lack of association is useful. These findings suggest that principals need not be paralyzed by the notion they are at a disadvantage to achieve trust from their faculty simply because they see themselves as too young, too inexperienced, the wrong sex, or too new to the school. Likewise, principals need not believe their situation is more challenging for achieving trust from their faculty if they lead a school that is too large, too small, too impoverished, too diverse, too inundated with special needs, too complex in native languages, too dominant in one sex among the staff, comprised of too young of teachers, or too old. The data showed none of these variables as being significantly associated with a faculty's trust in the principal or a faculty's ability to perceive the principal as highly skilled and willing. And, as stated earlier, because faculty trust in the principal is among the many variables associated with increased student achievement, knowing what does and does not influence faculty trust in the principal can be empowering.

A notable exception in the findings was the principals' level of education. Principals in the district used in this study are required to have at least a master's degree. Therefore, our

analysis compared the faculty-trust scores of principals with master's degrees against those with doctoral degrees. With all three outcome variables, the average scores of principals with master's degrees were significantly higher than the average scores of principals with doctoral degrees. This is a rather perplexing finding. Uniquely, level of education is one of the principal demographic variables that is within a principal's sphere of control, and, if this finding persists in subsequent studies and data sets, this may be a variable principals consider when striving for faculty trust. Could the reason for a negative relationship between a principal's level of education and faculty trust be related to the perceived relatability of that principal to the teachers? Is a doctoral degree an outward manifestation teachers use as evidence a principal is one step further removed from the critical work of teaching and learning? If so, principals with doctoral degrees would do well to moderate how they are perceived by their teachers. For example, they might not insist teachers always refer to them by the title of doctor, or they might reassure their teachers they love their position as principal and are not using it as a stepping-stone to a district position. Ultimately, this is an area of our study that requires further research.

Another notable exception in the findings was the school level's association with faculty trust in the principal, perceived skill of the principal, and perceived will of the principal. Although the statistical significance of this association was not as great as the association found between the outcome variables and a principal's level of education, a statistically significant difference was present between trust levels at the high school level when compared with the junior high school level, in favor of the junior high. Although it was not as pronounced as in the relationship between high school and junior high school, a low p-value was also present between trust levels at the elementary school when compared with the junior high school level, again in favor of the junior high. The data show higher faculty trust in the principal scores, higher skill



scores, and higher will scores in the junior high school level than in the high school level or the elementary school level. Although the structures of all three levels of school do vary enough to create different dynamics of relationships amongst teachers and principals, the exact reason why the junior high school level would have higher perceived trust, skill, and will than the other two levels remains unknown.

### **Conclusion**

In conclusion, this research has furthered the groundwork for a two-factor model of the facets of trust. Although called by different names, two distinct factors of trust have been discussed by multiple authors (Cook & Levi, 2005; Dirks & Ferrin, 2002; Edwards, 1990; Hallam et al., 2013; Kramer, 1999; Lewicki et al., 2006; Lewis & Weigert, 1985; McAllister, 1995). Our research and archival data set has reaffirmed the two-factor model of trust. A concise terminology to describe the two factors of trust is needed. We proposed using the terms skill (having the ability to produce what is promised) to describe the facets of competence, reliability, and honesty; and will (having the willingness to meet expectations) to describe the facets of benevolence and openness.

Additionally, this research might free principals from placing too much stock in personal or school demographic variables that, in fact, do not have a significant association with their faculty's trust in them. Faculty trust in the principal is among the many variables the literature shows has a positive impact on student achievement (Bryk & Schneider, 2002; Sweetland & Hoy, 2000; Tschannen-Moran, 2001; Vescio et al., 2008). The challenge for principals is knowing what will impact their teachers' trust in them (Blake & MacNeil, 1998) and, indirectly, what will have a positive influence over student achievement (Leithwood et al., 2004). This research has helped identify another piece of that puzzle.

Ultimately, schools are in the business of furthering student achievement. This research has built upon the strong literature foundation that student achievement is positively associated with faculty trust in the principal. Knowing which variables do not have an impact on faculty trust in the principal is as valuable as knowing which variables do. The data from this research suggests no significant association between faculty trust and a myriad of demographic variables that principals might otherwise concern themselves.

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## APPENDIX A: OMNIBUS T-SCALE SURVEY

## Omnibus T-Scale

**Directions:** Please indicate your level of agreement with each of the following statements about your school from **strongly disagree** to **strongly agree**. Your answers are confidential.

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1. Teachers in this school trust the principal.	1	2	3	4	5	6
2. Teachers in this school trust each other.	1	2	3	4	5	6
3. Teachers in this school trust their students.	1	2	3	4	5	6
4. The teachers in this school are suspicious of most of the principal's actions.	1	2	3	4	5	6
5. Teachers in this school typically look out for each other.	1	2	3	4	5	6
6. Teachers in this school trust the parents.	1	2	3	4	5	6
7. The teachers in this school have faith in the integrity of the principal.	1	2	3	4	5	6
8. Teachers in this school are suspicious of each other.	1	2	3	4	5	6
9. The principal in this school typically acts in the best interests of teachers.	1	2	3	4	5	6
10. Students in this school care about each other.	1	2	3	4	5	6
11. The principal of this school does not show concern for the teachers.	1	2	3	4	5	6
12. Even in difficult situations, teachers in this school can depend on each other.	1	2	3	4	5	6
13. Teachers in this school do their jobs well.	1	2	3	4	5	6
14. Parents in this school are reliable in their commitments.	1	2	3	4	5	6
15. Teachers in this school can rely on the principal.	1	2	3	4	5	6
16. Teachers in this school have faith in the integrity of their colleagues.	1	2	3	4	5	6
17. Students in this school can be counted on to do their work.	1	2	3	4	5	6
18. The principal in this school is competent in doing his or her job.	1	2	3	4	5	6
19. The teachers in this school are open with each other.	1	2	3	4	5	6
20. Teachers can count on parental support.	1	2	3	4	5	6
21. When teachers in this school tell you something, you can believe it.	1	2	3	4	5	6
22. Teachers here believe students are competent learners.	1	2	3	4	5	6
23. The principal doesn't tell teachers what is really going on.	1	2	3	4	5	6
24. Teachers think that most of the parents do a good job.	1	2	3	4	5	6
25. Teachers can believe what parents tell them.	1	2	3	4	5	6
26. Students here are secretive.	1	2	3	4	5	6

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## APPENDIX B: REVIEW OF LITERATURE

The literature foundation for this research centers on trust as it relates to student achievement and principal leadership. Although school principals are primarily held accountable for student achievement, they have only an indirect relationship with the construct (Darling-Hammond & Bransford, 2007; Hallinger & Heck, 1996; Supovitz, Sirinides, & May, 2010). Teachers affect student achievement directly, and principals affect teachers. Because the literature supports organizational performance being positively influenced by trust (Dirks, 2000; Forsyth, Barnes, & Adams, 2006), faculty trust in the principal is one variable principals affect in teachers that could have a positive impact on student achievement. The challenge for principals is knowing what will impact their faculty's trust in them (Blake & MacNeil, 1998) and, indirectly, what will have a positive influence over student achievement (Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004). This section examines the literature foundation for faculty trust in the principal, principal leadership, and student achievement.

### **Faculty Trust in the Principal**

Of the many things principals do, each action will have an effect on faculty trust in the principal. The literature supports faculty trust in the principal having a positive impact on student achievement (Bryk & Schneider, 2002; Sweetland & Hoy, 2000; Tschannen-Moran, 2001). Therefore, a careful analysis of trust, the definition of trust, and the impact of trust in schools is warranted.

### **Expectations and Vulnerability**

Although trust has been acknowledged as an influential construct in schools and other organizations, the literature varies regarding the definition of trust and its impact on relationships. However, even among these variations, critical commonalities emerge providing direction for school and organizational leaders.



Morton Deutsch (1958) did much of the early work in trust research. In fact, when Deutsch began his studies, an examination of the indices of many of the leading textbooks in social psychology found that the term *trust* did not appear at all. Unfortunately, Solomon and Flores (2001), writing almost a half century later, still acknowledged how difficult trust is to define. Deutsch defines trust as follows:

An individual may be said to have trust in the occurrence of an event if he expects its occurrence and his expectation leads to behavior, which he perceives to have greater negative motivational consequences if the expectation is not confirmed than positive motivational consequences if it is confirmed. (p. 266)

The Deutsch definition highlights the principle of expectancy. An individual chooses whether or not to trust based on expected outcomes. Those outcomes either reaffirm or discourage the individual to trust again in similar circumstances in the future. Julian Rotter (1967) defined trust similarly when he called it “an expectancy held by an individual” (p.652). The perceived trustworthiness of the trustee is also implied in Deutsch’s definition. The trustor must evaluate his or her perceptions of the trustee before choosing whether or not to trust.

In addition to the expectancy principle, Mayer, Davis, and Schoorman (1995) introduced the construct of vulnerability as a component of trust. They explain: “[T]he willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (p. 712). A willingness to be vulnerable becomes a commonality in many if not most definitions of trust (Chhuon, Gilkey, Gonzalez, Daly, & Chrispeels, 2008).

## Facets of Trust

Mayer et al. (1995) also spell out three facets of perceived trustworthiness that become foundational for later authors. These facets are ability (skills, competencies, and characteristics), benevolence (a desire to do good to the trustor), and integrity (adherence to an acceptable set of principles). Building upon these three constructs (in conjunction with a trustor's propensity to trust), Mayer et al. can predict trust levels in a given relationship.

While the three facets do not function in isolation in determining levels of trust, they do operate independently of each other. Mayer et al. (1995) explain, "Ability, benevolence, and integrity are important to trust, and each may vary independently of the other. This statement does not imply only that the three are unrelated to one another, but only that they are separable" (p. 720). Rather than a simple classification of *trustworthy* or *not trustworthy*, Mayer et al. describe a continuum based on varying levels of the three facets. Mayer et al. focus the trust discussion on these three constructs and acknowledge both the integration and independence of each.

Mishra (1996) expands upon the definition of Mayer et al. (1995). His trust definition was first published as "Trust is one party's willingness to be vulnerable to another party based on the belief that the latter party is (a) competent, (b) open, (c) concerned, and (d) reliable" (p. 5). Although Mishra does not recognize integrity in his definition, the rest of his definition seems to align with Mayer et al., with the addition of a new construct: reliability.

Hoy and Tschannen-Moran (1999) consolidated the definitions put forth by Mayer et al. (1995) and Mishra (1996). They describe, "Trust is an individual's or group's willingness to be vulnerable to another party based on the confidence that the latter party is benevolent, reliable, competent, honest, and open" (p. 189). Hoy and Tschannen-Moran's use of the term competence

seems synonymous with ability, just as their term honesty seems synonymous with integrity. However, Hoy and Tschannen-Moran expanded upon the work of Mayer et al. (1995) and Mishra (1996) in identifying openness as another facet of trust. Hoy and Tschannen-Moran describe openness as sharing and not withholding relevant information. Much like Mayer et al. and Mishra, Hoy and Tschannen-Moran describe trust as a willingness to be vulnerable even before any vulnerable action is taken.

Each of the five facets describes perceived characteristics of the trustee. The trustor bases his or her decision to trust largely on how he or she views the trustee in each of these characteristics—benevolence, reliability, competence, honesty, and openness. In an earlier work, Tschannen-Moran and Hoy (1998) take a closer look at the behavior of the trustor in light of a breach in one or more of the five faces of trust. They say, “Although trust tends to be extended bit by bit, building incrementally, when a violation occurs trust is shattered, often falling off catastrophically, leaving distrust in its place” (p. 338). Both Mayer et al. (1995) and Tschannen-Moran and Hoy view trust as a delicate composite of multiple facets. However, a significant breach in one or more of those facets deflates trust much quicker than the time it took to build. The trustor’s perceptions of the trustee shift, and trust evaporates.

The Hoy and Tschannen-Moran (1999) definition of trust seems to be the least-common denominator of other trust definitions. Or, in other words, most trust definitions seem to be encompassed within the five facets Hoy and Tschannen-Moran articulate. For example, Gillespie (2003) focuses on only two facets of trust when she describes, “two types of trusting behavior in interpersonal work relationships, namely reliance and disclosure” (p. 34). Gillespie’s focus is already encapsulated in Hoy and Tschannen-Moran’s five facets. Interestingly,

however, Gillespie's two constructs are the exact constructs not included in Mayer et al.'s definition.

### **Distrust**

According to Lewicki, McAllister, and Bies (1998), distrust and trust are not opposite ends of a single continuum. Our relationships are multifaceted, and it is possible to have varying levels of trust and distrust toward the same person. Lewicki et al. use an example of working with an individual who is excellent as a researcher, limited as a classroom teacher, terrible at keeping appointments, fabulous as a golfer, and completely at odds with others about political views. Clearly, this individual would warrant differing levels of trust and distrust on different things from those with whom he or she associates. Individuals are multifaceted, and low distrust does not necessarily mean high trust.

However, other researchers disagree with this outlook. Schoorman, Mayer, and Davis (2007) contend that trust and distrust are the opposite ends of the same continuum and use Webster's definition of distrust (the lack or absence of trust) as evidence. Schoorman et al. claim that the complete lack of trust and distrust are one and the same.

### **Trust as a Two-Party Construct: The Trustee and the Trustor**

As did Mayer et al. (1995) and Mishra (1996), Tschannen-Moran and Hoy (1999) view the construct trust as the result of more than the perceived characteristics of the trustee alone. Specifically, they recognize the trustor's willingness to accept vulnerability as a key factor in whether or not trust results. This paints a far more complex picture than if we were to consider perceived characteristics of the trustee alone. In a way, the characteristics of the trustee and those of the trustor intermingle in a delicate balance that creates varying and, at times, shifting levels of trust. Tschannen-Moran and Hoy (2000) point out, "Where there is no

interdependence, there is no need for trust” (p. 556). The trustee’s characteristics of ability, benevolence, integrity, reliability, and openness are irrelevant until a trustor chooses to be vulnerable to those characteristics. The level of vulnerability (whether sentiment or action) the trustor is willing to assume is decided upon as he or she evaluates the characteristics of the trustee. In their work, Tschannen-Moran and Hoy (1998) ask an important question relating to the interplay of the trustee and the trustor by describing a parent who leaves his or her child with a child care provider. They ask:

If a parent leaves his or her child with a child care provider with significant misgivings, but out of a perception of having no other alternatives, can the parent be said to have trusted the provider (action) or not to have trusted the provider (attitude)? (p. 337)

In this example, are the perceived characteristics of the child care provider (i.e. ability, benevolence, integrity, reliability, openness) or is the willingness to be vulnerable of the parent most responsible for the resulting trust (or lack of trust) in the relationship? Surely, trust is a result of the interplay or interdependence of the two individuals, and, as Tschannen-Moran and Hoy have so aptly demonstrated, that trust lies on a continuum that has different thresholds for sentiments as it does for actions.

Interestingly, the facets of trust described by Hoy and Tschannen-Moran (1999) vary in importance depending on the nature of the trusting relationship. Given the circumstances, we value ability, benevolence, integrity, reliability, and openness in different regards. Superiors typically value ability in their subordinates the most whereas subordinates typically value openness and benevolence in their superiors the most (Tschannen-Moran & Hoy, 1998).

According to this, our willingness to be vulnerable to another person depends largely on what we need from that person. A superior who needs his subordinates to produce will place his trust

more readily in individuals believed to be capable. A subordinate who needs to feel safe and protected on the job places his trust more readily in individuals believed to be benevolent. Both groups place their trust in those that make them feel less vulnerable. As Gillespie (2003) points out when analyzing the relationship of vulnerability to trust:

It is paradoxical that vulnerability is central to the definition of trust. A characteristic of high trust relationships is the absence of the experience of vulnerability, in the context of behavior which would lead to vulnerability if trust were violated. So the paradox is that vulnerability is central to trust, yet the subjective experience of vulnerability typically decreases as the level of trust in the relationship increases. (pp. 3-4)

Neither the superior nor the subordinate wants to feel vulnerable, and, therefore, both place their trust in the individual who makes them feel the least vulnerable.

Tschannen-Moran and Hoy (2000) may articulate the nature of vulnerability the best in their *Multidisciplinary Analysis of the Nature, Meaning, and Measurement of Trust* when they say:

Since the things we typically do care about and value include such things as we cannot single-handedly either create or sustain . . . we must allow many other people to get into positions where they can, if they choose, injure what we care about, since those are the same positions that they must be in in order to help us take care of what we care about. (p. 548)

This description aptly illustrates why the characteristics of the trustee and the vulnerability of the trustor are interdependent. To be of service or benefit to us, others must be placed in the very position where they could also do the most harm. Cook, Yamagishi, Cheshire, Cooper, Matsuda, and Mashima (2005) call this a “Catch 22” when they explain, “Each party must induce her or

his partner to be trusting before actually proving her own trustworthiness” (p. 122). Trust cannot be tested until vulnerability is demonstrated.

Rousseau, Sitkin, Burt, and Camerer (1998) define trust as, “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intention or behavior of another” (p. 612). In a simplified manner, Rousseau et al. have also recognized the dichotomy of trusting relationships by acknowledging the part held by the trustor (vulnerability) and the part held by the trustee (intention or behavior). This definition nestles in nicely with the Tschannen-Moran and Hoy’s (1999) definition. However, the Rousseau et al. definition simplifies the five facets into two groups: intentions and behaviors. Based on this definition, Dirks and Ferrin (2002) build a model that segregates trust into two factors: affect (relating to intentions) and cognition (relating to behaviors).

Costa (2003) breaks the mold somewhat in her definition of trust. Acknowledging the vast applicability of the term “trust,” she defines it “as a multi-component variable with distinct but related dimensions. These include propensity to trust, perceived trustworthiness, cooperative and lack of monitoring behaviors” (p. 605). At first, Costa’s dimensions seem rather unrelated to the facets we have discussed up to this point (with the notable exception of *propensity to trust*). However, closer examination of Costa’s dimensions shows she views trust in terms of traits, characteristics, or behaviors on both the side of the trustee and on the side of the trustor. A trustor has a propensity to trust based upon the trustor’s “personality, life experiences, cultural background, education and several other socio-economic facts” (p. 608). Additionally, a trustor engages in cooperative behaviors, which, as Costa explains, “refer to the actions that reflect the willingness to be vulnerable to others whose actions one does not control” (p. 608). Finally, a trustor manifests his or her trust through a lack of monitoring behaviors.

While the propensity to trust is a trustor's sentiment, cooperative behaviors and lack of monitoring behaviors are a trustor's actions.

The fourth dimension described by Costa (2003) focuses on the trustee. Perceived trustworthiness is described by Costa as "the expectations and considerations about other people's motives and intentions underlying their actions" (p. 608). Perceived trustworthiness is the result of the trustor's assessment of the trustee's characteristics. The facets ability, benevolence, integrity, reliability, and openness as described by Mayer et al. (1995), Hoy and Tschannen-Moran (1999), and Dirks and Ferrin (2002) are encapsulated in Costa's description of perceived trustworthiness. Although the characteristics belong to the trustee, one could argue perceived trustworthiness is actually another dimension related to the trustor because it is based on the trustor's perception, which may or may not correspond to reality. Unquestionably, however, the trustee has a part in shaping how he or she is perceived by others.

Gillespie (2003) developed a Behavioral Trust Inventory (BTI) to measure key facets of trust. Gillespie focused on the willingness to be vulnerable given that construct's centrality in so many definitions of trust. In addition, Gillespie focuses on two constructs that have been only glossed over thus far in this literature review: risk and interdependence. Gillespie explains, "Trust begins where rational prediction ends, and risk actually creates the opportunity of trust. In interpersonal relationships, uncertainty regarding how the other will act is a key source of risk" (pp. 4-5). As we've pointed out, a trust relationship requires two parties. The inevitable uncertainty between those two parties is the foundation for risk (and, indirectly, for opportunities to trust). Gillespie also explains interdependence. She says, "Interdependence occurs when the interest of one party cannot be achieved without reliance on the other party. That is, there is some level of dependence on the uncertain behavior of others" (p. 5). Again, the nature of



interdependence hinges on the delicate interplay between the trustee and the trustor in terms of both sentiment and behaviors. Hardin (2002) also alludes to interdependence when discussing what he calls encapsulated interest.

Although Gillespie (2003) focuses her view of trust largely on the interplay of willingness to be vulnerable, risk, and interdependence, drawing borders between these three constructs is difficult. For each of the other definitions we have analyzed up to this point, much of the focus has been on how we ascertain what to expect from another person in whom we might place our trust. The consensus of the literature seems to have settled in on the perceived characteristics of ability, benevolence, integrity, reliability, and openness. Gillespie takes issue with using a perception of trustworthiness as a proxy for trust. She says:

There are few trust scales or empirical studies that operationalize trust as the willingness to be vulnerable, and hence, capture the interdependence and risk that is central to trust.

Rather, empirical studies often measure perceptions of trustworthiness as a proxy for interpersonal trust. Several dimensions of trustworthiness . . . have been proposed in the literature including ability, integrity, benevolence, reliability, openness and loyalty. (p. 5)

Gillespie seems uncomfortable with equating these constructs to trust. Instead, she develops a measurement tool for the aforementioned constructs of vulnerability, risk, and interdependence. Interestingly, Gillespie proposes a focus on the half of the trust equation most often associated with the trustor—not the trustee, as many other authors do.

Although they limit the characteristics of the trustee to the narrower combination of ability, benevolence, and integrity, Burke, Sims, Lazzara, and Salas (2007) adopt the wide-angle, dichotic outlook of trust as the interplay between the trustee and the trustor. They describe characteristics of the trustor that help determine if trust will be extended. Burke et al. include the

trustor's propensity to trust, the trustor's perceived risk of the situation, the trustor's attributions, the trustor's leadership prototypes, and the trustor's prior history as components of the trustor's predisposition to trust. Their model fits well with earlier models.

Dirks and Skarlicki (2009) also acknowledge the dichotic nature of trust in their analysis as they discuss both tendencies of the trustor and characteristics of the trustee. They say, “[P]erceiving other organizational members to be trustworthy increases the likelihood that the trustor will take a risk (e.g., initiate an exchange relationship), which in turn can result in performance-related outcomes for the trustor” (p. 137). The likelihood of the trustor to take a risk speaks to one half of the trust dichotomy. The extent to which an individual will assume vulnerability goes a long way to describe the resulting trust. However, it is only half of the equation. As Dirks and Skarlicki explain it, perceiving others to be trustworthy is the foundation upon which a trustor builds his or her willingness to assume risk in the first place. Again, the characteristics (such as trustworthiness) belong to the trustee. The perception of those characteristics belongs to the trustor. Dirks and Skarlicki sum up their dichotic perception of trustworthiness well when they say, “Trustworthiness concerns the perceived characteristics of the trustee that serves as the primary basis on which individuals are willing to accept vulnerability” (p. 137).

As has been demonstrated to this point, authors vary in their definitions of trust. However, this ongoing dialogue among scholars demonstrates common themes from one definition to another. To summarize, Burke et al. (2007) define trust as a “psychological state comprising of the intention to accept vulnerability based upon positive expectations of another” (p. 610). Burke et al. elaborate that the positive expectations of another are based on the trustee's ability, benevolence, and integrity. Gillespie (2003) focused on, “two types of trusting

behavior in interpersonal work relationships, namely reliance and disclosure” (p. 34). Mishra and Mishra (2013) identified four basic aspects of trust: reliability, openness, competence, and compassion (p. 18). Hoy and Tschannen-Moran (1999) include all the aforementioned constructs in their definition explaining, “Along with general willingness to risk vulnerability, five faces or facets of trust emerged: benevolence, reliability, competence, honesty, and openness” (p. 186). Although authors differ in the nuances of their definitions, they all hover around the same constructs—both those that relate to the trustee and those that relate to the trustor.

### **Trust as a Two-Factor Construct**

As mentioned previously, Rousseau et al. (1998) provide an interesting way to organize the five facets. Each facet could be considered as relating to the trustee’s intentions—his or her desires or interests in the welfare of others—or as relating to the trustee’s behaviors—his or her actions or abilities. The combination of the trustee’s intentions and behaviors as perceived by the trustor are the foundation for whether or not a trustor will trust. The trustor chooses whether or not to be vulnerable as she evaluates the trustee with the basic questions: “Can he do it?” and “Will he do it?” The trustor’s answer to these two questions shapes the perceived trustworthiness of the trustee.

Other authors also discuss trust as a two-factor construct. Edwards (1990), McAllister (1995), and Dirks and Ferrin (2002) describe the two factors as cognition-based trust and affect-based trust. Similarly, Lewis and Weigert (1985) describe them as cognitive and emotional trust. Cook et al. (2005) call the two factors confidence and motivation and describe them as the two main aspects of trustworthiness. Kramer (1999) talks of rational choice and relational choice. Lewicki, Tomlinson, and Gillespie (2006) describe a behavioral tradition and a psychological tradition of trust research. Hallam, Boren, Hite, Hite, and Mugimu (2013) identify

the two factors as competence trustworthiness and relational trustworthiness. Lewis and Weigert (1985) explain, “Trusting behavior may be motivated primarily by strong positive affect for the object of trust (emotional trust) or by “good rational reasons” why the object of trust merits trust (cognitive trust), or, more usually, some combination of both” (p. 972). The literature supports two factors of trust, but authors vary in how to label the two factors and what to include within each.

### **Trust, Perceptions of Trustworthiness, and Trustworthiness**

Finally, to conclude our discussion on the definition of trust, we want to clarify the difference between the terms *trust*, *perceptions of trustworthiness*, and *trustworthiness*. *Trust* exists when a trustor chooses to be vulnerable to another because he or she perceives the trustee to be trustworthy. *Perceived trustworthiness* is the trustor’s assessment of the trustee’s skill and will. *Trustworthiness* is the actual skill and will of the trustee (Hallam et al., 2013). Because actual trustworthiness is impossible to measure, our work focuses largely on perceptions of trustworthiness.

### **Principal Leadership**

As more and more pressure has been placed on schools and the education system to produce results, principals have increasingly been held accountable to make it happen (School Leadership Review Group, 2003). This naturally leads principals to question what is effective principal leadership and how does it correspond to faculty trust in the principal and student achievement. The literature supports the notion that principals have an effect on student-learning outcomes, but the effect is indirect and related to other school and classroom factors, of which trust could be one (Blase & Blase, 2002; Leithwood et al., 2004; Supovitz et al., 2010; Witziers,

Bosker, & Krüger, 2003). A closer examination at what principals *do* affect will help us better understand effective principal leadership.

### **Focus on Student Learning**

Effective principals focus on learning (Knapp, Copland, & Talbert, 2003). Knapp, Copland, Honig, Plecki, and Portin (2010) called it learning-focused leadership. DuFour (2002) referred to such principals as “learning leaders,” and explained these types of principals shift from a focus on teaching to a focus on learning. This is a very subtle change, but it is an important one. Rather than mandate the *how*, effective principals work collaboratively toward the *what*. A focus on instruction (the *how*) doesn’t suffice. And, truthfully, effective instruction is such a nebulous construct, teachers and principals can only know they are achieving it when they focus on student-learning outcomes (the *what*). A focus on student learning pushes teachers and principals to try whatever it takes to get results. Principals shape the culture of their schools toward an academic press (Sweetland & Hoy, 2000). Hoy, Tarter, and Hoy (2006) clarify what is meant by an academic press when they explain, “Academic emphasis is the extent to which a school is driven by a quest for academic excellence – a press for academic achievement” (p. 427). When student learning is valued and prioritized as the constant, everything else becomes a variable to be adjusted. DuFour (2002) illustrates this well:

The shift from a focus on teaching to a focus on learning is more than semantics. When learning becomes the preoccupation of the school, when all the school’s educators examine the efforts and initiatives of the school through the lens of their impact on learning, the structure and culture of the school begin to change in substantive ways. Principals foster this structural and cultural transformation when they shift their emphasis from helping individual teachers improve instruction to helping teams of teachers ensure

that students achieve the intended outcomes of their schooling. More succinctly, teachers and students benefit when principals function as learning leaders rather than instructional leaders. (p. 13)

As DuFour so deftly demonstrates, principal leadership is the crux of the shift in focus from teaching to learning.

Shifting teachers' focus from "Did I teach it?" to "Did they learn it?" is not an easy thing. Hoy, Gage, and Tarter (2006) explain, "People are so accustomed and so efficient at one way of behaving that they become seduced by the nominal success of their routines" (p. 237). However, a focus on objective student-learning data can take the confrontation out of the discussion. Knapp et al. (2010) elaborate, "Teacher leaders often found they could redirect teachers' attention from a defensive posture or self-conscious worry about their inadequacies toward a problem-solving process that took specific student learning issues or hard-to-teach curricular topics as the starting point for conversation" (p. 17). By shifting their collective attention from teaching to learning (a far more elusive objective), teachers and principals become joint investigators, and the vulnerabilities of all parties are minimized. Educators embrace an objective that does not completely lie within their sphere of control and can, therefore, somewhat disassociate their own self-worth from the results. Blase and Blase (2002) assert principals have a significant influence over shaping the culture in a way that promotes a collaborative focus on teaching and learning in this manner. Tschannen-Moran and Hoy (2000) explain, "Teachers often must rely on the goodwill of principals as they experiment with new teaching strategies and make inevitable mistakes" (p. 557). If principals have adopted a focus on learning, teachers have wider discretion to try many things in an attempt to achieve that hard-to-hit goal.

Hoy et al. (2003) contend a focus on student learning (along with two other constructs) is enough to overpower Coleman's (1996) allegation that socioeconomic status was the only significant predictor of student achievement. Instead, Hoy et al. make the claim that academic emphasis, teacher efficacy, and trust in parents and students do seem to make a difference even when controlling for socioeconomic status. Hoy et al. describe these three, when taken together, as academic optimism.

In her work on the construct of trust in schools, Tschannen-Moran (2004a) acknowledges student learning as the bottom line. She says, "Trust is fundamental for learning. Consequently, establishing a trusting environment hits schools in their bottom line—student achievement" (p. 135). In many ways, trust and a focus on student learning are in a chicken-and-egg relationship. A focus on student learning creates a school culture that values and engenders student achievement. Student achievement creates faculty trust in the principal who, in turn, promotes a focus on student learning. Tschannen-Moran concludes, "Safety comes at the expense of student achievement" (p. 135). This is because we are not willing to be vulnerable when we do not trust, and a focus on student learning requires us to be vulnerable. Little puts teachers in a more vulnerable position among their colleagues than when they need to compare their student-achievement data with those of their colleagues. A genuine focus on student learning requires data be shared as a formative tool and leveraged to move students forward. Therefore, as Tschannen-Moran hints, teachers who choose to feel safe rather than vulnerable often do so at the expense of student achievement.

Vescio, Ross, and Adams (2008) assert, "[T]he knowledge teachers need to teach well is generated when teachers treat their own classrooms and schools as sites for intentional investigation" (p. 89). Teachers who can absorb their own vulnerabilities and focus on student

learning with “intentional investigation” are poised to buck the Coleman Report’s findings that only socioeconomic status predicts student achievement. Examining eight different studies, Vescio et al. claimed the common feature that facilitated success, “was a persistent focus on student learning and achievement by the teachers” (p. 87).

### **Instructional and Transformational Leadership**

A focus on student learning leads directly to a discussion about instructional and transformational leadership styles. Although much literature supports instructional leadership over transformational leadership in terms of student achievement (Hallinger, 2003; Hattie, 2009; Robinson, Lloyd, & Rowe, 2008), incorporating facets of both styles is often very appropriate (Hallinger & Heck, 2010). Put simply, instructional leadership focuses on instruction (teaching objectives, learning climate, teacher expectations, etc.) whereas transformational leadership focuses on transforming the organization through shared vision and a sense of moral purpose. Most relevant to a focus on student learning is instructional leadership.

Although the term *instructional leadership* is a popular one touted by many as the ideal focus for principals (Hattie, 2009; Robinson et al., 2008), the term is “often more a slogan than a well-defined set of leadership practices” (Leithwood et al., 2004, p. 6). Hallinger (2003) summarized instructional leadership models as “strong, directive leadership focused on curriculum and instruction from the principal” (p. 329). He goes further to describe characteristics of instructional leadership to include coordinating, supervising, and developing curriculum in the school; leading with a combination of expertise and charisma; being goal-oriented and focusing on the improvement of student academic outcomes; and being viewed as culture builders.



To contrast, transformational leadership provides a vision and shared direction and then allows for creativity and innovation within the organization. Further, transformational leadership engenders followers to share in the leadership and decision-making process (Leithwood, Day, Sammons, Harris, & Hopkins, 2006; Marks & Printy 2003). Hallinger (2003) describes transformational leadership as a *bottom-up* approach as opposed to the *top-down* approach of instructional leadership, meaning followers have a significant role in the direction-setting of the organization. Additionally, Hallinger emphasizes transformational leadership's increased focus on relationships rather than managerial tasks. Duke (1986) touched upon this component of transformational leadership when he explained "For . . . leadership to occur, an observer must find something about a leader meaningful" (p. 14). Tschannen-Moran (2003) summarizes several things transformational leaders bring to the table. Her list includes having followers do more than expected, shaping the motivation and goals of others, and transforming the values and beliefs of the organization.

Selecting the correct leadership style can be elusive. Robinson et al. (2008) make the claim instructional leadership trumps transformational leadership:

The comparison between instructional and transformational leadership showed that the impact of the former is three to four times that of the latter. The reason is that transformational leadership is more focused on the relationship between leaders and followers than on the educational work of school leadership, and the quality of these relationships is not predictive of the quality of student outcomes. Educational leadership involves not only building collegial teams, a loyal and cohesive staff, and sharing an inspirational vision. It also involves focusing such relationships on some very specific

pedagogical work, and the leadership practices involved are better captured by measures of instructional leadership than of transformational leadership. (p. 665)

Some of Robinson et al.'s findings may be attributed to the nebulous way in which transformational leadership is defined. As Robinson et al. points out in the above statement, the quality of relationships is not predictive of the quality of student outcomes. This may well be because measuring the type or quality of relationships is so elusive. Robinson et al.'s statement begs the questions, "What type of relationships?" or "To what end do the relationships focus?"

Hattie's (2009) large-scale meta-analysis echoes the findings of Robinson et al. (2008). He summarizes, "The evidence from the meta-analyses supports the power of [instructional leadership] over [transformational leadership] in terms of the effects on student outcomes" (p. 83). Hattie explains the reason for this is largely based on the leader's focus on challenging goals, student achievement, and instructional strategies. He enumerates effective instructional leadership strategies to include promoting and participating in teacher learning and development; planning, coordinating and evaluating teaching and the curriculum; strategic resourcing; establishing goals and expectations; and ensuring an orderly and supportive environment such as protecting time for teaching and learning by reducing external pressures and interruptions and establishing an orderly and supportive environment both inside and outside the classroom. He concludes, "It is leaders who pay more attention on teaching and focused achievement domains who have the higher effects" (p. 83).

So, does this mean leaders should abandon transformational leadership styles in favor of instructional leadership styles? The landscape of this issue is not quite so simple as to readily answer that question affirmatively. Most authors stop short of suggesting abandoning either transformational or instructional leadership practices. Rather, the consensus seems to revolve

around drawing principles from both (Hallinger & Heck, 2010; Marks & Printy, 2003). Hallinger (2003) concludes the correct leadership approach depends largely on the circumstances. Writing almost a decade later, Hallinger and Heck (2010) discuss the term “Leadership for Learning,” a combination of instructional leadership and transformational leadership best described as collaborative leadership. Hallinger and Heck’s research found significant direct effects on the school’s academic capacity (a composite of the school’s emphasis on standards, action-orientation, quality of student support, and professional capacity) and indirect effects on student achievement. Adopting principles of both transformational and instructional leadership styles fits with what Deal and Peterson (1994) called being *bifocal*, and they assert education may be best served by principals who can do so.

Marks and Printy (2003) call such a blend “integrated leadership” and describe it as transformational leadership coupled with shared instructional leadership. Ultimately, Marks and Printy’s research does not minimize the importance of transformational leadership but, rather, describes it as a key component for strong outcomes. They say, “When transformational and shared instructional leadership coexist in an integrated form of leadership, the influence on school performance, measured by the quality of its pedagogy and the achievement of its students, is substantial” (p. 370). Another subtle variance in Marks and Printy’s integrated leadership is the term “shared instructional leadership” instead of just “instructional leadership.” The *shared* component resonates with many of the principles most often associated with transformational leadership. A shared instructional leadership model makes the principal less of an inspector and more of a facilitator. In this model, the principal provides teachers with resources and instructional support. Additionally, the principal maintains a firm focus on the educational program and outcomes. Teachers, then, grapple with how to best achieve the desired

instructional outcomes and hold one another accountable to act in a way that supports those outcomes. The instructional leadership is, therefore, shared by principal and teachers alike.

As explained, the research and literature surrounding the two camps of instructional leadership versus transformational leadership do not unequivocally settle the discussion about which is the most appropriate model, although, when viewed in isolation, instructional leadership is supported over transformational leadership by the data (Hallinger, 2003; Hattie, 2009; Robinson et al., 2008). The consensus seems to encourage drawing principles from both models (Hallinger & Heck, 2010; Marks & Printy, 2003). Further, much of the disparity in the findings might be attributed to the different ways both instructional leadership and transformational leadership are operationally defined. Many of the blend models that promote either instructional leadership or transformational leadership principles are more dialed into those principles than the overarching terms.

### **Shared Leadership**

Marks & Printy's (2003) description of shared instructional leadership and Hallinger's (2010) study of collaborative leadership is an appropriate segue to a discussion of the literature on shared leadership. Wahlstrom and Louis (2008) advocate a shared leadership approach with data showing instruction being positively affected when the power differential between principals and teachers is lessened. Specifically, Wahlstrom and Louis acknowledge a critical reality that makes shared leadership such an appealing approach in education. They describe, "In the end, teachers still have the ultimate control over how they spend their time with their students. Understanding how leaders may influence those private choices will be the key to linking effective leadership with quality instruction" (p. 485). No mandate from a school leader is nonnegotiable because schools are set up in a way that makes it impossible for an

administrator to ever supervise the implementation of the instruction in all classrooms, all of the time. When that classroom door closes, educators will make the best decisions they see fit for their circumstances and their students. Only by winning the hearts and minds of those educators can principals ultimately influence what happens in the classroom. Tarter, Bliss, and Hoy (1989) explain, “Principals who are friendly, open, and collegial with teachers command respect and trust, and trust increases as they protect teachers from unreasonable outside demands” (p. 305). This requires lessening the power differential between principals and teachers and fostering shared leadership in the school (Spillane, Halverson, & Diamond, 2001).

When teachers are involved in instructional decision-making that will affect their work, they are strengthened in their resolve and commitment to the decision (Wahlstrom & Louis, 2008). Furthermore, teachers are positioned in the front line of the work of education. No principal can adequately grapple with the complex issues found in multiple grade levels, multiple disciplines, and multiple students. One teacher focusing on the learning outcomes for one class in one discipline would need to reflect on approximately 2,000 different levels of mastery. Expand that just to the core subjects of math, science, language arts, and social studies, and consider it in terms of pre and post assessments, and the number blooms to over 17,000 different levels of mastery. If it seems unrealistic for any one teacher to fully manage this amount of data in decision making, imagine how much less plausible it is for an educational leader to do so times the number of classes in the school.

The answer to this dilemma is that neither the principal nor the teacher should be tackling such a task on his or her own (Tschannen-Moran, 2001). Wahlstrom and Louis (2008) state, “Sharing leadership may have its greatest impact by reducing teacher isolation and increasing commitment to the common good” (p. 461). Wahlstrom and Louis later add, “[T]here is

increasing recognition everywhere that there is a need for more leadership from more people to get needed work done” (pp. 461-462). Shared leadership must be harnessed to meet the unrealistic demands at work in our schools. The alternative is neglect simply because the task is too big for any one person to lead in isolation. Hallinger and Heck (2010) found significant direct effects of collaborative leadership on change in the schools’ academic capacity and indirect effects on rates of growth in student reading achievement. Teachers who are focused on student-learning outcomes cannot possibly manage the task of evaluating 17,000 different levels of mastery by themselves. Likewise, principals cannot manage the task of evaluating a minimum of 340,000 different levels of mastery for the whole school. Principals must rely on shared leadership with their teachers, and they must empower their teachers to be the instructional and curriculum experts in their schools. Teachers, likewise, must rely on their colleagues to share the load of being such instructional leaders in the school (Louis & Whalstrom, 2011). Tschannen-Moran (2009) elaborates:

As we have seen, a highly bureaucratic leadership style tends to keep teachers in low development level. Although such a leader can enforce compliance with contractual specifications, students will not be well served if teachers do only what they are contractually obligated to. The work of schools is too complex to be clearly delineated in a written contract. For schools to fulfill their duty to students, a context must be cultivated that is responsive to student needs. This necessitates treating teachers as professionals, granting them discretion, and fostering trusting relationship throughout the school. (p. 242)

As this discussion has quantified, the work of schools really is too complex to not take advantage of shared-leadership principles. Because school leaders could never delineate in a written

contract or adequately mandate the teachers' job description that will best lead to high levels of student achievement, they would do well to embrace the advantages teacher leaders can bring to the table as professionals with discretion.

### **Professional Learning Communities**

Professional Learning Communities (PLCs) are a substantial manifestation of shared leadership and fit well with our discussion of principal leadership. PLCs are encompassed by a culture of collaboration, a focus on student learning, a collective inquiry into best practice and current reality, a focus on learning, an action orientation, a commitment to continuous improvement, and a results orientation (DuFour, DuFour, Eager, & Many 2006; Tschannen-Moran, 2004a; Whalstrom & Louis, 2008). Schools and leaders who adopt a PLC culture focus on four fundamental questions: What do we want our students to learn? How will we know our students have learned it? How will we respond when some students don't learn? and How will we extend and enrich the learning for students who already know it? As was the case in our discussion about shared leadership, these questions cannot be answered by the principal alone. In fact, these questions cannot be answered by the teacher alone, either. Only through a collaborative shared-leadership approach that holds these questions as a constant do educators maximize student learning (Blase & Blase, 2002; School Leadership Review Group, 2003; Sweetland & Hoy, 2000). These questions are tight. Schools must be committed to answering them in a systematic way. The answers to the questions are loose. Principal, teachers, and teacher teams may vary widely in how they answer these questions, but the fact they are committed to finding an answer and adjusting as often as necessary assures the appropriate focus on student learning.

Professional Learning Communities alter the culture of a school. Louis & Whalstrom (2011) say, “We found that changing a school’s culture requires shared or distributed leadership, which engages many stakeholders in major improvement roles, and instructional leadership, in which administrators take responsibility for shaping improvements at the classroom level” (p. 54). As discussed previously, shared leadership and PLCs require decision makers to include more than a single school leader. PLCs are a form of lateral coordination that can improve student achievement (Goddard, Goddard, & Tschannen-Moran, 2007; Marshall, 2005; Tschannen-Moran, 2001). Goddard et al.’s study demonstrated that teacher collaboration was positively related to increases in literacy and math scores after controlling for race, sex, socioeconomic status, and prior achievement. However, student achievement is not the only positive benefit of teacher collaboration. Other benefits include improved efficiency, increased positive attitudes toward teaching, and higher levels of trust (Goddard et al., 2007; Moye, Henkin, & Egley, 2005). With such worthwhile outcomes associated with PLCs, it is important to remember that effective collaboration is the process rather than the goal. The goal remains increased student achievement (Vescio et al., 2008).

As mentioned earlier, schools that embrace Professional Learning Communities in their culture grapple with a tug-of-war between “loose” and “tight” leadership approaches (DuFour et al., 2006). As Tschannen-Moran (2009) describes it, “[T]wo rationales are evident in reform efforts in schools: on one hand, in [the move] toward greater standardization of work processes, such as “teacher-proofing” the curriculum; on the other, in the move toward professional development and coaching as coordinating mechanisms” (p. 220). A PLC and shared-leadership approach requires school leaders to embrace the latter. DuFour et al. (2006) have argued that a PLC must simultaneously be both loose and tight. Principals must be tight about what questions



teachers, teacher teams, and the schools focus on (i.e. What do we want our students to learn? How will we know they've learned it?). But, principals can and should be loose on how teacher teams answer those questions, allowing for teachers to be the experts and professionals regarding the relationship between the curriculum and their students' development. Hoy and Sweetland (2001) emphasize the same principle when they describe bureaucracies that alienate, hinder, and demoralize compared to bureaucracies that guide, clarify, and enable.

Maybe more importantly than anything else they do, principals shape a culture conducive to a Professional Learning Community. Leithwood et al. (2004) make the powerful claim that principal leadership is second only to the teacher in influencing student achievement. They describe setting direction, developing people, and making the organization work as things leaders do that foster PLCs and shared leadership. As Tschannen-Moran (2001) describes:

The problems facing schools are larger than any one person or group can solve alone, and finding solutions will require cooperation and collaboration. Collaboration holds the possibility of higher quality decisions. As principals collaborate with teachers, they make use of the knowledge and expertise of those organizational participants most often in touch with the primary constituents of the school—the students. (p. 327)

Although PLCs are not a silver bullet (Dooner, Mandzuk, & Clifton, 2008), they do enable schools to redistribute the important work of student achievement more toward the individuals most appropriately placed to make a difference—namely, the teachers. A culture conducive to a Professional Learning Community begins with principal leadership and a willingness of that principal to share leadership with teachers.

## **Summary of Principal Leadership**

Principal leadership impacts school culture, teachers, and student achievement, whether directly or indirectly (Day et al., 2009; Hallinger & Heck, 2010; Supovitz et al., 2010). Robinson et al. (2008) emphasize, “The closer educational leaders get to the core business of teaching and learning, the more likely they are to have a positive impact on students’ outcomes” (p. 664). Leithwood et al. (2006) describe leadership accounting for 27% of the variation in student achievement across schools. In education, leaders who focus on student learning outcomes; who draw upon strong principles of instructional, transformational, and shared leadership; and who organize and cultivate a culture of Professional Learning Communities can make a significant difference in the success of schools. Ultimately, as Leithwood et al. emphasize, leadership is second only to teaching among school-related factors in its impact on student-learning outcomes.

## **Student Achievement**

For the sake of our study, faculty trust in the principal and principal leadership matter inasmuch as they can impact student achievement. The literature surrounding student achievement is rich and describes the construct as elusive (Coleman, 1966). Because student achievement is the sought-after outcome, a discussion of the construct is inherently tied to other constructs that act as predictors or moderators. Coleman shocked the nation in 1966 with his report alleging schools had only a marginal influence on student achievement. Since their report, researchers have clamored to the topic, putting forward both evidence that supports Coleman’s findings (Hanushek & Raymond, 2005; Jencks, 1972) and evidence that refutes them (Hoy et al., 2006a). At the foundation of our research is the question “Do principals make a difference?” in regard to student achievement (Hallinger & Heck, 1996). The literature supports the notion that principals do have a positive, indirect effect on student learning outcomes (Bryk, Bender,

Allensworth, Luppescu, & Easton, 2010; Day et al., 2009; Hallinger & Heck, 2010; Marzano, Waters, & McNulty, 2005; Robinson et al., 2008; School Leadership Review Group, 2003; Supovitz et al., 2010). Principals directly affect teachers, and teachers directly affect student achievement.

Given student achievement is education's prime objective, discovering what influences it is a worthwhile endeavor. Research has demonstrated that socioeconomic status of the student's family (Coleman, 1966), accountability systems (William, 2010), principals (Supovitz et al., 2010), and teachers (Goddard et al., 2007) influence student achievement. Some of these are controlled by the school while others are not. School leaders, therefore, would do well to analyze what they can control that influences student achievement and to prioritize their attention on those things.

### **Socioeconomic Status of the Student's Family**

*Equality of Educational Opportunity* by J. S. Coleman (1966), better known as *The Coleman Report*, examined student achievement through the lens of the socioeconomic status of the student's family, among other things. *The Coleman Report* examines education in terms of student-achievement outcomes rather than inputs. In other words, the study seeks to find if the student-achievement results between schools are equitable rather than whether the inputs between schools are equitable. Surprisingly, the study concluded the school quality had little to do with the student achievement when student background was taken into account. That is to say, students of similar background performed similarly regardless of the inputs at the school. Additionally, the report noted it was not only the background of the student that seemed to predict student-achievement results but, also, the background of the student's peers that seemed to have an effect.

*The Coleman Report* has often been used to further the argument that “schools don’t matter, only families matter,” but that rather oversimplifies things. Coleman does acknowledge that after factors of student background are controlled for, “it appears that differences between schools account for only a small fraction of differences in pupil achievement” (pp. 21-22). This statement maintains that schools do have an effect on students, albeit a less significant effect than family background. Furthermore, the school’s effect can be more appropriately analyzed when the influences of student background are controlled for. Still, any discussion of student achievement in education would be incomplete without acknowledging the effects of socioeconomic status. It has a significant influence on student achievement.

Hoy et al. (2006a) assert, “Coleman was not entirely right” (p. 426). They consider school characteristics that predict student achievement after having controlled for socioeconomic factors and conclude some school characteristics consistently predict student achievement, even after controlling for socioeconomic factors. Among those characteristics, Hoy et al. list the academic emphasis of the school, the collective efficacy of the faculty, and the faculty’s trust in parents and students. The takeaway of their findings in terms of our discussion would be to bring into question the assertion made by Coleman that little beyond the socioeconomic status of the students’ families influences student achievement.

Bryk and Schneider (2002) acknowledge the effects of socioeconomic status on student outcomes, but they view those effects through a lens of perpetuated distrust between parents and teachers. Goddard, Salloum, and Berebitsky (2009) also concluded the effect of socioeconomic status was indirect saying, “[A]chievement may be lower in schools characterized by high levels of disadvantage because trust relations tend to be strained in such schools” (p. 308). This relegates socioeconomic status to an antecedent role. Tschannen-Moran’s (2011) findings also

support both a correlation between socioeconomic status of the students and levels of trust and a correlation between levels of trust and student achievement. Goddard, Tschannen-Moran, and Hoy (2001) also consider trust as a mitigating factor to the effects of socioeconomic status on student-achievement outcomes. They explain, “[T]he amount of trust teachers have in students and in parents outweighed the effects of poverty, because school SES is not a significant predictor of differences between schools in student achievement when the effect of trust is considered” (p. 14). Rotter’s (1967) research supported this finding and correlated more trust with higher levels of socioeconomic status and less trust with lower levels of socioeconomic status.

### **Accountability Systems**

Student achievement is most commonly measured and compared through standardized test scores. However, the hierarchy that is created between schools based on the standardized test scores is misleading. Differences in schools account for no more than 10% of the differences in test results (Wiliam, 2010). The vast variability that will exist in the effectiveness of schools shows up in a mere 10% of the variability of test results. Given that our education system places so much weight on the outcomes of standardized testing results, this encourages the discussion about whether or not this is the best measure of student achievement or if quite so much weight should be attributed to these test results alone.

Wiliam (2010) does, however, make a strong case for the presence of a standardized, high-stakes accountability system as a correlate for improved student achievement. This creates somewhat of a paradox in that the results of standardized tests are suspect as a differential tool between schools, but the presence of the standardized test itself does seem to be a motivator that raises student achievement. Wiliam sums up the paradox well, “Given the evidence that

accountability systems can have positive effects on student achievement, it would seem appropriate to explore whether the negative effects of high stakes assessment might be ameliorated while still maintaining the positive impact previously described” (p. 118). Negative effects associated with high-stakes, standardized testing does throw into sharp relief the level of value the testing provides. The balance that must be sought after is a way to minimize negative effects (including a disproportionate focus on tested content, demoralization of teachers, and undue pressure on students) and to maintain the positive increase in student achievement that is associated with the presence of high-stakes accountability testing.

### **Principals**

Although many researchers contend principals have an effect on student achievement, that effect is indirect. Hoy, Hoy, and Kurz (2008) assert “Good schools [are] the product of good administrators,” (p. 425) but they agree a direct influence of administration on student achievement has been elusive. Supovitz et al.’s (2010) findings support, “the common sense notion that the main impact of principals is not directly on students but on teachers who interact with students directly on a daily basis” (p. 47). Supovitz et al. contend principals have a broad influence that must be channeled through other school leaders to impact students in the classroom. Marzano et al. (2005) examined 69 studies involving 2,802 schools, 1.4 million students, and 14,000 teachers and found principals’ leadership could explain 25% of the changes in student achievement results across schools. Such an impact is significant when considering constructs that affect student achievement. Hallinger and Heck (1996) describe the indirect impact of principal leadership on student achievement as using means such as school climate, school culture, instructional organization, etc. Although the principal does not directly affect student achievement, many school constructs are directly affected by the school principal (Hoy,

Smith, & Sweetland, 2002). The challenge for the school administrator is deciding what to prioritize to create that indirect effect on student achievement.

Hallinger and Heck's (1996) work examines the relationship between principal leadership and student achievement. Although Hallinger and Heck agree with other researchers that the principal's effect is indirect, Hallinger and Heck insist that should in no way minimize the principal's importance. They say, "A finding that principal effects are mediated by other in-school variables does nothing whatsoever to diminish the principal's importance" (p. 39) and "achieving results through others is the essence of leadership" (p. 39). Couple these statements with Marzano et al.'s findings that principals were responsible for 25% of the difference between schools, and the data seem to answer the question that yes, principals do make a difference. That being said, the right question to ask may not be "Do principals make a difference?" but, rather, "What do principals do to make a difference?" This is a subtle but critical change when considering student achievement.

One influential variable that shows up with frequency that is under the principal's control is that of school goals (Hallinger & Heck, 2010). Darling-Hammond and Bransford (2007) include cultivating a shared vision as among those practices found to be associated with school success. Tschannen-Moran (2011) emphasizes the importance of a compelling collective vision for school leaders to cultivate trust, which, in turn, correlates with student achievement. Goal setting is so important in affecting student achievement because it signals to staff members that, although many things are important, some things should be prioritized over others (Robinson et al., 2008). Goal setting engenders commitment to those prioritized things (Costa & Anderson, 2010). Day et al. (2009) acknowledge statistically significant correlations between what is valued and strategically pursued and pupil outcomes. Leithwood et al. (2004) describe the

principal as second only to the teacher in influencing student achievement and contend those leaders make such an impact through goal setting, establishing high expectations, and charting progress with data. Hallinger and Heck (1996) sum it up adequately when they say, “Interestingly, when the studies that report positive findings are reviewed, only one mediating variable shows up with consistency as a significant factor interacting with principal leadership: school goals” (p. 38). Goal setting is directly in the principal’s sphere of control, and goal setting affects student achievement.

Other aspects of principal leadership also show correlations to student achievement. Those include promoting teacher learning and development (Robinson et al., 2008), engaging in collaborative leadership (Blase & Blase, 2002; Hallinger & Heck, 2010; School Leadership Review Group, 2003), using the appropriate values and attributes in the right contexts (Day et al., 2009), establishing a focus on learning (Blase & Blase, 2002; Goddard, Sweetland, & Hoy, 2000; Knapp et al., 2003), evaluating students frequently (Goddard, Hoy, & Hoy, 2000), developing trusting relationships (Blase & Blase, 2002; Tschannen-Moran, 2004b), and even using humor in the workplace (Hurren, 2006).

The literature supports the principal’s impact on student achievement; however, that impact is indirect. Principals are left with the overwhelming task of determining which of all the many things they do will have a positive impact on student achievement (School Leadership Review Group, 2003). As more and more pressure continues to be placed on schools and the education system to produce student-learning results, principals will increasingly be held accountable to make it happen.



## Teachers

If principals are the second most influential factor in determining student achievement, according to Leithwood et al. (2004), our discussion must consider the most influential factor: the classroom teacher. Coleman (1966) asserts, “The quality of teachers shows a stronger relationship [than facilities and curriculum] to pupil achievement” (p. 22). When considering student achievement, the quality of teaching and instruction cannot be overemphasized (Vescio et al., 2008). Unfortunately, the definition of *good teaching* is rather elusive and nebulous. Tschannen-Moran (2004a) asserts, “Teaching is more than disseminating information, and much of what inspires children to learn happens in the interpersonal space between student and teacher” (p. 58). Very little of a teacher’s best practices can be spelled out in a contract or even a job description. Elmore (2004) includes such practices in “the core” of schooling and laments that they are often the least influenced by change initiatives.

Speaking on change initiatives, Bryk and Schneider (2002) discuss two approaches that both center on teacher instruction. The first advocates to change institutional arrangements to further incentivize teachers. The second emphasizes transforming teacher practices. But, both initiatives and the research of these other authors acknowledge the great importance teaching is on student achievement.

Following up on Bryk and Schneider’s work, Louis (2007) pointed to a clear association between trust and change. Higher levels of faculty trust in the principal corresponded to an increased willingness to engage in change initiatives. If teachers really are the most influential factor at determining student achievement, as Leithwood et al. (2004) assert, the teachers’ willingness to change and adopt more effective practices makes all the difference in the world when considering student achievement. According to Louis’ findings, that change (and

ultimately that level of student achievement) is contingent upon the principal winning the hearts and minds of his or her teachers through increased trust. Adams (2008) contends those relationships dictate the effectiveness of the schools. He explains:

For all the talk of technology, resources, and curricular alignment, the successful operation of schools depends on effective relationships within and between school role groups. Schools are highly interactive environments that are defined by the quality of interpersonal exchanges that occur within their operating core, making communication between and among teachers, principals, students, and parents an essential operational component. (pp. 31-32)

Teachers are the most influential difference makers on student achievement, and teachers are influenced by principals they trust.

### **Conclusion**

In this literature review, we have examined trust as it relates to student achievement and principal leadership. Because principals have only an indirect relationship with student achievement (Darling-Hammond & Bransford, 2007; Hallinger & Heck, 1996; Supovitz et al., 2010), this literature review provides evidence on what principals might do to best influence student learning. Teachers affect student achievement directly, and principals affect teachers. Faculty trust in the principal is one variable principals affect in teachers that could have a positive impact on student achievement. The challenge for principals is knowing what will impact their faculty's trust in them and, indirectly, what will have a positive influence over student achievement (Leithwood et al., 2004).

## APPENDIX C: METHODS

Student achievement is an elusive construct. Its high priority and nebulous nature require concrete statistical methods to avoid driving policies and decisions based on subjective evidence. Although this study did not attempt to measure student achievement directly, we argue the measurement and implications of a focus on faculty trust in the principal are of equally high stakes inasmuch as they have an indirect effect on student achievement. Additionally, because our focus is on the level of faculty trust in the principal and the facets associated with it (another nebulous set of constructs), we require a concrete methodology and unit of measurement to make appropriate comparisons. This section will address that methodology.

### **Sampling**

The archival data for our study included over 1,700 completed surveys from elementary, junior-high, and high-school teachers of the Omnibus T-Scale survey. Participation at each of the 64 schools ranged from 60% of the faculty to over 90%. At each site, teachers evaluated their own principal when responding to each item on the survey. 73% of the principals were male. The mean age of the principals was 47 years (SD 9.00), and the principals averaged 4.5 years (SD 3.30) at their school when the survey was given. All principals had at least a master's degree, and 9% of the principals had a doctoral degree.

The archival data consisted of 45 elementary schools, 11 junior high schools, and 8 high schools. The number of students at each school ranged from 409 to 2331, and faculty sizes ranged from 6 to 50 teachers. The percentage of students on free or reduced-price lunch at each school ranged from 8.9% to 83.1% with an average of 32.3%. English-language learners at each school ranged from 0% to 40.2% with an average of 7.1%. Ethnic minority students at each school ranged from 5% to 59.8% with an average of 18.1% (see Table C.1).

Table C.1

*Data Points from Sample*

Data Points	Elementary	Junior High	High School	Totals
<b>School</b>				
Number of Schools	45	11	8	64
Mean School Size— Students	780	1314	1792	998
% of Poverty Students	30%	29%	24%	28%
% of Minority Students	16%	17%	16%	16%
% of ELLs	7%	3%	2%	5%
% of IEPs	12%	11%	8%	11%
Average Age of Teachers	41	41	42	41
% of Faculty Female	90%	60%	52%	76%
<b>Principal</b>				
Mean Age	48	44	45	47
Sex – # Male	29	11	7	47
Sex – # Female	16	0	1	17
Mean Tenure at School	5.00	3.64	2.88	4.50
Mean Years in Admin	7.71	10.18	11.75	8.64
# of Masters Degrees	41	10	6	57
# of Doctorate Degrees	4	1	2	7

The Omnibus T-Scale survey created by Hoy and Tschannen-Moran (2003) was distributed as a census sample to a district population of 3314 teachers. That group has the following demographics: 74.4% are female, 25.6% are male; 23.8% are between the ages of 20 and 29, 25.9% are between the ages of 30 and 39, 21.1% are between the ages of 40 and 49, 20.2% are between the ages of 50 and 59, and 9.0% are 60 or older; less than 1% identify themselves as either Asian, Black, Hispanic, Indian, or other with over 99% identifying themselves as White. This demographic information describes the teachers who were sent the survey and presents possible confounding variables given that the demographic data of respondents is not available at the individual participant level.

### Data Collection

For this study, we used an archival data set acquired originally using quantitative methods. The data originated from teacher surveys completed between the spring of 2013 and the spring of 2014 from a large suburban school district in the western United States. Our analyses had to be tailored to the limitations of the data set. This correlational study sought to discover which demographic variables were associated with the competence, reliability, and honesty of the principal, and which were associated with the benevolence, openness, and vulnerability of the principal. A score for faculty trust in the principal, a score for perceived competence, reliability, and honesty of the principal, and a score for perceived benevolence, openness, and vulnerability of the principal served as the dependent or outcome variables. Principal and school demographic variables were independent or control variables. These demographics were acquired from the district's Human Resources department for the timeframe the survey was administered. These included principal age, principal sex, principal length of tenure at the school, principal length of administrative experience, principal level of education, school level, school size, socioeconomic status of the students, percentage of ethnic minorities, percentage of English language learners, percentage of students with disabilities, the percentage of female teachers, and the average age of the teachers.

Faculty trust in the principal was measured using the Omnibus T-Scale developed by Hoy and Tschannen-Moran (2003). The instrument consists of 26 Likert items that measures faculty trust in the principal, faculty trust in colleagues, and faculty trust in clients (students and parents). However, the data for this study were gathered using only the eight items associated with the subscale of faculty trust in the principal. Teachers scored their level of agreement on a 6-point Likert scale from *Strongly Disagree* to *Strongly Agree* for each of the eight items

associated with faculty trust in the principal. Because Hoy and Tschannen-Moran have correlated each of the eight items to one of their five facets of trust or vulnerability, we were also able to determine scores for the perceived competence, reliability and honesty of the principal and the perceived benevolence, empathy, and vulnerability of the principal using these items.

### **Trust Measures**

We examined trust according to the facets described by Wayne K. Hoy and Megan Tschannen-Moran (1999): competence, integrity, benevolence, openness, and reliability. These facets focus on perceptions of the trustee. Additionally, Hoy and Tschannen-Moran consider the trustor's willingness to be vulnerable. Hoy and Tschannen-Moran equate each item on their survey (the Omnibus T-Scale) to either vulnerability, competence, integrity, benevolence, openness, or reliability. One of our research questions attempts to examine how the facets themselves, when grouped by those relating to competence, reliability and honesty of the principal and those relating to benevolence, empathy and vulnerability of the principal are associated with principal and school demographics. The survey items are grouped as follows:

#### *Perceptions of competence, reliability, and honesty*

- The teachers in this school have faith in the integrity of the principal.
- The principal in this school typically acts in the best interest of teachers.
- Teachers in this school can rely on the principal.
- The principal in this school is competent in doing his or her job.

#### *Perceptions of benevolence, empathy, vulnerability*

- Teachers in the school trust the principal.
- The teachers in this school are suspicious of the principal's actions.\*

- The principal of this school does not show concern for the teachers.\*
- The principal doesn't tell teachers what is really going on.\*

The eight items included here are the items from Hoy and Tschannen-Moran's trust survey that correspond to faculty trust in the principal. Starred items (\*) are reverse scored.

### **Operational Definitions**

Each construct analyzed in our study has an operational definition describing how we measured that construct. These definitions are important in context of the research design. They include:

- K-12 Traditional Public School – Publicly funded school other than a charter or specialty schools
- Principal – The leader of the school—not including assistant principals
- Teacher – Certified full-time teacher equivalent (FTE)
- Faculty trust in the principal – Score on the Omnibus T-scale composite of five facets: competence, benevolence, integrity, openness, and reliability (Developed by Hoy and Tschannen-Moran, 2003)
- Student Achievement – School letter grade based on the end-of-year state testing results
- Demographic Factors of the Principal – Principal's age, sex, number of years as a principal, length of tenure at school, or level of education achieved
- Demographic Factors of the School – School level, school size, socioeconomic status of the school (based on percentage of free or reduced-price lunch), percentage of English-language learners, percentage of students with a disability,

percentage of ethnic minority students, percentage of female teachers, and average age of the teachers

### **Independent and Dependent Variables**

Principal and school demographic data were used as independent or explanatory variables. We acquired demographic data on each principal evaluated by the Omnibus T-Scale including age, sex, length of tenure at that school, length of administrator experience, and level of education. Additionally, we acquired demographic data on the corresponding school including school level (elementary, junior high, or high school), school size, socioeconomic status of students' families (percentage of free/reduced-price lunch), percentage of English language learners (ELL), percentage of ethnic minority students, percentage of female teachers, and average age of the teachers.

Faculty-trust-in-the-principal scores were the outcome or dependent variables of our analyses. Additionally, the dependent variables were grouped by perceived competence, reliability, and honesty and perceived benevolence, empathy, and vulnerability of the principal.

### **Confounding, Latent, and Control Variables**

Potential confounding variables in this research not being considered with this study involve teacher demographics. These variables are not being considered because they are not included in the archival data. A good example of this is the length of teacher tenure at the school. Teachers who have longer tenure at a school have likely seen more principals come and go than those who have shorter tenure. This frequent turnover could, potentially, breed distrust in the principal position and, thus, influence this research. Additionally, a latent variable at play in the relationships analyzed in this study involves an influence of a dominant conservative culture among teachers from whom the archival data came. A control variable of this study is



that the data come from a single school district that has had a very specific focus on, early adoption of, and is well immersed in Professional Learning Communities (PLCs).

### **Data Analysis**

The first step of data analysis included determining the mean trust score; a score for competence, reliability and honesty; and a score for benevolence, empathy, and vulnerability for each principal. Demographic data points of the other control variables including principal age, sex, length of tenure at that school, length of administrator experience, level of education, school level (elementary, junior high, or high school), school size, socioeconomic status of students' families (percentage of free/reduced-price lunch), percentage of English language learners (ELL), percentage of ethnic minority students, percentage of female teachers, and average age of the teachers were determined for each principal-and-school combination. Descriptive analyses included univariate analysis (including distribution, central tendency, and dispersion) on each of the variables.

The next level of analysis considered possible relationships among and between the perceived competence, reliability and honesty vs. the perceived benevolence, empathy, and vulnerability of a principal and the principal/school demographics. As mentioned, this study hypothesized that principal and school demographics influence the perceived competence, reliability, and honesty of the principal; the perceived benevolence, empathy, and vulnerability of the principal; and faculty trust in the principal overall. Correlation analyses between the explanatory variables (principal and school demographics) and the dependent variables (faculty trust in the principal; perceived competence, reliability, and honesty of the principal; and perceived benevolence, empathy, and vulnerability of the principal) were completed. For the initial analysis, Pearson's R was calculated for each relationship as seen in Tables C.2 & C.3

Table C.2

*Correlations of Faculty Trust in the Principal and Principal Demographics*

Measure	1	2	3	4	5	6	7	8
1. Perceived Competence, Reliability and Honesty of the Principal		.000*	.000*	.379	.500	.777	.003*	.155
2. Perceived Benevolence, Empathy, and Vulnerability of the Principal			.000*	.733	.975	.542	.009*	.147
3. Faculty Trust of the Principal				.554	.770	.641	.005*	.146
4. Principal Sex					.005*	.763	.901	.019
5. Principal Age						.000*	.981	.000*
6. Principal's Time at School							.502	.000*
7. Principal Level of Education								.874
8. Principal Years of Experience								

\*p&lt;.05

below. This was followed up with several simple linear models or analyses of variance (ANOVA) depending on whether the demographic data was categorical or continuous. The results of these analyses can be seen in Tables C.5 & C.6 in the next section.

The final level of analysis included a confirmatory factor analysis. Given the literature supports a two-factor model of trust (Cook et al., 2005; Dirks & Ferrin, 2002; McAllister, 1995), we conducted a confirmatory factor analysis (CFA) of our survey data. Using items 1, 2, 5, and 8 from the Omnibus T-scale survey as indicators of the latent variable associated with affect trust and using items 3, 4, 6, and 7 as indicators of the latent variable associated with cognitive trust and acknowledging a correlation between both latent variables, we conducted a confirmatory factor analysis according to Figure C.1.

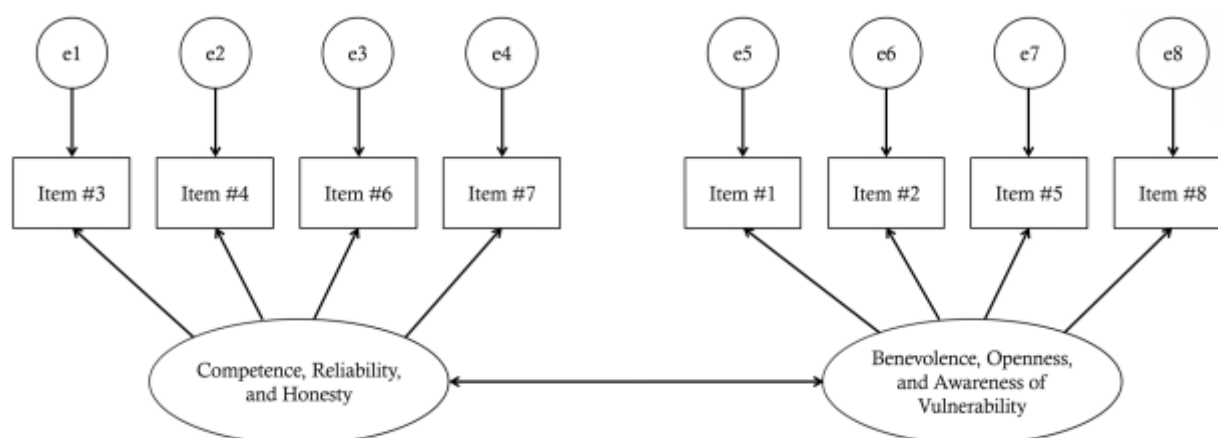
The goodness-of-fit measures indicate our survey data set fits this two-factor model well. The Comparative Fit Index (CFI) returned a value of .978, and the Root Mean Square Error of

Table C.3

*Correlations of Faculty Trust in the Principal and School Demographics*

Measure	1	2	3	4	5	6	7	8	9	10
1. Perceived Competence, Reliability and Honesty of the Principal		.000*	.000*	.705	.469	.335	.239	.793	.864	.769
2. Perceived Benevolence, Empathy, and Vulnerability of the Principal			.000*	.862	.766	.529	.328	.480	.445	.870
3. Faculty Trust of the Principal				.937	.619	.429	.280	.610	.618	.822
4. School Ethnic Minority %					.000*	.000*	.014	.711	.039*	.856
5. School ELL %						.000*	.008*	.011*	.003*	.743
6. School Econ. Disadv. %							.000*	.203	.002*	.614
7. School Special Ed. %								.001*	.000*	.784
8. % Female Teachers on Staff									.000*	.676
9. School Size										.435
10. Teacher Average Age										

\*p&lt;.05

*Figure C.1.* Confirmatory factor analysis of two groupings of the trust facets.

Approximation (RMSEA) returned a value of .079. These goodness-of-fit indices demonstrate the two-factor model fits the data set well.

### Findings

The findings supported the appropriateness of using a two-factor model of trust in which trust facets are grouped by the competence, reliability, and openness of the trustee and by the benevolence, openness, and awareness of vulnerability of the trustee. By conducting a confirmatory factor analysis (CFA), the goodness-of-fit measures indicated our survey data did fit a two-factor model. The Comparative Fit Index (CFI) returned a value of .978, and the Root Mean Square Error of Approximation (RMSEA) returned a value of .079. With only three exceptions, all principals scored higher on the indicators related to competence, reliability, and openness (mean of 5.20) than they did on indicators related to benevolence, openness, and awareness of vulnerability (mean of 4.98). The average difference between the two types of trust at each school is -0.22 with a 95% confidence interval of -0.25 to -0.19 favoring the facets competence, reliability, and openness. With a p-value of essentially 0, the difference between these means is statistically significant (see Table C.4).

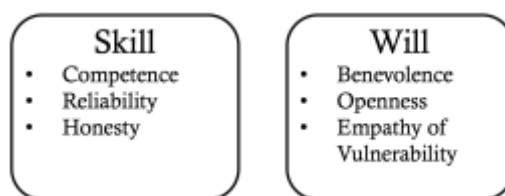
Table C.4

#### *Omnibus Trust Scores*

Mean Trust Scores	Elementary	Junior High	High School	Totals
Competence/Reliability/Honesty	5.20	5.35	5.00	5.20
Benevolence/Openness/Vulnerability	5.00	5.13	4.66	4.98
Overall Faculty Trust	5.10	5.24	4.83	5.09
Overall Faculty Trust (Scaled)	624	644	587	623

Having established that a two-factor model is appropriate, a concise terminology to describe the two factors of trust is needed. We propose labeling the factor related to the

competence, reliability, and honesty of the principal as *skill* and labeling the factor related to the benevolence, openness, and awareness of vulnerability of the principal as *will* (see Figure C.2).



*Figure C.2.* The trust facets grouped as perceived skill and perceived will.

The findings addressing the second research question on the association of principal and school demographics with overall faculty trust in the principal are provided in Tables C.4, C.5, and C.6. Based upon bivariate correlations, analyses of variance (ANOVA), independent-sample T-tests, and multi-linear regressions, no relationship was found between most principal demographics (including age, sex, length of tenure at the school, and length of admin experience) and faculty trust in the principal (including faculty trust in the principal when broken down into the two separate factors). The only principal demographic data point that was associated with each of our outcome variables was the principal's level of education (see Table C.5). Analyses also demonstrated that, in this data set, principals with a master's degree had higher overall faculty trust, higher perceived skill, and higher perceived will than did principals with a doctoral degree.

When considering school demographics, none of the explanatory variables (including school level, school size, school socioeconomic status, school percentage of ethnic minorities, school ELL population, school percentage of students with disabilities, school proportion of female teachers, and the school's average age of teachers) had a significant relationship with the outcome variables of perceived skill, perceived will, and overall faculty trust (see Table C.6) with the exception of school level (elementary, junior high, and high school). Based on the analyses, principal and school demographic variables were not significantly associated with

Table C.5

*Principal Demographics Associated with Faculty Trust in the Principal*

Principal Demographics	Perceived Skill			Perceived Will			Overall Trust		
	$\beta$	SE	Sig.	$\beta$	SE	Sig.	$\beta$	SE	Sig.
Principal Age	-.004	.006	.500	.000	.007	.975	-.002	.006	.770
Principal Tenure at School	.004	.015	.777	.011	.018	.542	.008	.016	.641
Principal Admin. Experience	.011	.008	.155	.014	.019	.147	.012	.008	.146
Principal Gender (Male Compared to Female)	.097	.110	.379	.045	.132	.733	.071	.120	.554
Principal Education (Doctoral Compared to Masters)	-.447	.146	.003*	-.478	.177	.009*	-.463	.159	.005*

\*p&lt;.05

Table C.6

*School Demographics Associated with Faculty Trust in the Principal*

School Demographics	Perceived Skill			Perceived Will			Overall Trust		
	$\beta$	SE	Sig.	$\beta$	SE	Sig.	$\beta$	SE	Sig.
School Size	-.001	.003	.864	-.003	.004	.445	-.002	.003	.618
School Socioeconomic Status	.258	.266	.335	.203	.320	.529	.230	.289	.429
School % of Minorities	.151	.397	.705	-.083	.475	.862	.034	.432	.937
School % of ELL	.389	.534	.469	.192	.641	.766	.290	.581	.619
School % of IEPs	1.551	1.303	.239	1.539	1.565	.329	1.545	.1418	.280
School % of Female Teachers	.075	.286	.793	.242	.341	.480	.159	.310	.610
Average Age of Teachers	-.004	.015	.769	-.003	.018	.870	-.004	.016	.822
School Level (Elementary Compared to Junior High)	-.156	.128	.228	-.131	.152	.393	-.143	.138	.305
School Level (High School Compared to Junior High)	-.359	.177	.047*	-.468	.210	.030*	-.413	.191	.035*

\*p&lt;.05

faculty trust in the principal, perceived skill of the principal, nor perceived will of the principal (with the notable exceptions of the principal's level of education and the school level).

### Reporting Conclusions

Our intent in this methods appendix has been to represent the data and map out the processes used in a way that could be replicated by other researchers and practitioners and to allow our readers to make their own judgments about the soundness of the conclusions we draw.

Many of those conclusions are worthy of attention. As described in the findings above, this research concludes that, with the notable exception of a principal's level of education, principal demographics (age, sex, tenure at school, and length of admin experience) and school demographics (level, size, socioeconomic status, minority population, ELL population, proportion of students with disabilities, proportion of female teachers, and average age of the teachers) do not have a significant impact on faculty trust in the principal; the perceived competence, reliability, and honesty of the principal; nor the perceived benevolence, empathy, and vulnerability of the principal. Although no significant association between the demographic factors and the facets of faculty trust in the principal were found, the lack of an association in this regard is as useful as an association would be. We propose these findings should liberate principals from feeling their faculty's trust is tied to the aforementioned demographics and, therefore, frequently outside the principal's control.

Also of significance in this analysis is the finding that the data set showed the factors relating to perceived competence, reliability, and honesty of the principal are almost always scored higher by teachers than the factors relating to perceived benevolence, empathy and vulnerability of the principal. Our findings are consistent with that of McAllister (1995) who said, "[F]ollowers' perceptions of leader competency trustworthiness is higher than perceptions of relational trustworthiness" (p. 9). Contrastingly, other research by Tschannen-Moran and Hoy (1998) asserts subordinates, "[look] to superiors for openness and benevolence when extending trust" (p. 341). Subordinates recognize a capable leader even though they prefer an open and benevolent leader who sympathizes with the subordinate's vulnerability.

We have striven to present our methods in a way that enables readers to see these conclusions as the natural result of the data. Because faculty trust in the principal has such a

bearing on student achievement (Bryk & Schneider, 2002; Sweetland & Hoy, 2000; Tschannen-Moran, 2001; Vescio et al., 2008), these conclusions are worthwhile. Furthermore, because so many of the demographic variables are outside the principal's control, these conclusions are empowering because they suggest the demographic variables do not hold principals back from achieving trust with their faculties.



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