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RESEARCH ARTICLE

Relating Principals' Invitational Leadership to Teacher Job Satisfaction and Principal Effectiveness in High-Poverty Rural Elementary Schools

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Despite a third of students in the United States attending rural schools, research concerning rural school leadership is sparse. The purpose of this study was to examine the relationships between rural school principals' Invitational Leadership and teacher satisfaction, as well as teacher perceptions of principals' effectiveness. Multiple regression was used to model these relationships while considering possible interactions with school academic performance level (low- or high-performing). A total of 240 teachers from 23 rural Title I elementary schools completed a leadership survey. The 49-item instrument measures leaders' Invitational Leadership behaviors as well as teachers' job satisfaction and teacher perceptions of the principals' effectiveness. Results indicated statistically significant positive relationships between both teacher job satisfaction and teacher perception of principal effectiveness and principals' Invitational Leadership. However, the strength of the teacher satisfaction-Invitational Leadership relationship was dependent on a school's academic performance level, with a significantly stronger relationship found in high-performing schools.

Keywords: school leadership, rural schools, invitational leadership, caring school leadership

Concerns regarding student achievement and proficiency gaps for economically disadvantaged students as compared to their non-economically disadvantaged "peers" has been an enduring issue that has led to continued calls for education reforms around accountability and student growth. Since 2001, mandated accountability standards have been thrust upon schools, teachers, and students (Burns & Martin, 2010; Camera, 2014; Partee & Sammon, 2001; Stecher et al., 2004). Consequently, educational leaders have more accountability around academic achievement as measured by standardized test scores than educational leaders in previous decades (Aldridge, 2003; Byun-Kitayama, 2012). This increased accountability has led to a shift in school leader

responsibilities, expectations, and core competencies needed for success. While leadership models such as Transformational (Bass, et al., 2003; Burns, 1978) and Servant Leadership (Greenleaf, 2002) have greatly influenced educational leadership, the shifting accountability landscape in public education requires additional theories of leadership (Burns & Martin, 2010).

One such model of leadership, Invitational Leadership Theory (Purkey & Siegel, 2003) offers a caring approach to school leadership focused on addressing "the total environment in which educational leaders function by communicating caring and appropriate messages intended to summon forth the greatest human potential as well as for identifying and changing those forces that defeat and destroy potential" (p. 1). The theory relies on basic assumptions which exemplify the characteristics of Invitational Leaders: optimism, respect, trust, caring and acting with intention. Invitational Leaders create an environment where they are intentionally showing respect for others, both personally and professionally. According to Purkey and Siegel (2003), Invitational Leadership encompasses features of other leadership models and is more of an "internal holistic process" that influences "the way we balance and live our lives," as opposed to a set of skills, habits, or behaviors (p. 2). In other words, Purkey and Siegel believe that Servant Leadership, for example, is *one component of* Intentional Leadership (albeit a critical component) but does not fully define the concept.

PURPOSE

This study focuses on rural public schools to address the dearth of research concerning rural schools in general and rural school leadership in particular (Arnold et al., 2005; Hardré & Sullivan, 2008; Hardré et al., 2009; Tieken, 2014). Specifically, we examined Title I, rural elementary school principals in a southeastern region of the United States to determine if there were relationships between their inviting leadership behaviors and teacher job satisfaction or their inviting leadership behaviors and teacher perception of principal effectiveness. As part of this examination, we considered if these relationships differed across school academic performance level (high- and low- performing schools). While previous studies have identified relationships between Invitational Leadership and teacher satisfaction and perception of principal effectiveness (Asbill and Gonzalez, 2000; Nivens, 2006), understanding these relationships in the context of rural schools is important given the impact of positive, inviting climates on these schools (Evans, 2019) and schools with high numbers of students from low socioeconomic backgrounds (Chenoweth, 2010). The findings from this study can better inform school and district leaders regarding effective leadership practices in rural schools, thereby influencing principal preparation, hiring, professional development, and principal placement, among other school leadership considerations. The current study was guided by three key questions:

1) What is the relationship between principals' Invitational Leadership and teacher satisfaction in rural schools?
2) What is the relationship between principals' Invitational Leadership and teacher perceived principal effectiveness in rural schools?
3) Are the relationships between principals' Invitational Leadership and teacher satisfaction and principals' Invitational Leadership and teacher perceived principal effectiveness similar in high performing and low performing schools?

To address all three research questions, we first reviewed pertinent literature, then detailed the methods utilized to answer each research question including the regression models for questions one and two and interaction terms for question three. After presenting results, we conclude with a discussion of the findings, study limitations, implications for practice, and directions for further research.

LITERATURE REVIEW

A Nation at Risk, the 1983 report by the *National Commission on Excellence in Education,* made a compelling case that American students would be unable to compete in the global market due to the inadequate education offered in American schools. Since that publication, the beliefs that our workforce was poorly educated, was falling behind international peers, and would struggle to compete in a global market were the catalysts for many school reform initiatives (Masumoto & Brown-Welty, 2009) and a significant body of research on school effectiveness in the decades that followed. Since the passage of the No Child Left Behind Act of 2001 (NCLB), many mandated accountability standards have been placed upon schools, teachers and students (Stecher et al., 2004), resulting in additional pressure on educational leaders to improve test scores (Aldridge, 2003).

As research conducted in recent decades identified strong leaders and leadership as key characteristics of effective schools, a rich literature base has been established on the topic of school leadership. While many of these leadership theories have gained traction, Transformational Leadership (Bass et al., 2003; Burns 1978) and Servant Leadership (Greenleaf, 2002) have greatly influenced the field of educational leadership and principal preparation, stressing the importance of ethical and positive behaviors in themselves and their employees (Burns & Martin, 2010).

Theoretical Framework

Notions of caring and positive school leadership have gained scholarly attention in recent years as it has been shown that concentrating mostly on improving instruction and academic outcomes is not the only way to positively impact student achievement (Crosnoe, 2011; Leithwood et al., 2010). Some models of leadership center largely on hierarchical and heavily regulated accountability that tends to favor the individual over the collective good (Arjoon, 2000; Mackay, 2001; Neal, 1999). Positive School Leadership Theory, as defined by Murphy and Louis (2018), draws from many of the "positively grounded models of organizational management that assume that leading organizations well is invariably a value-based calling" (p. 3). Similarly, Caring School Leadership (Smylie et al., 2020) is "grounded in and driven by motivation toward the betterment of others" (p. 18). This type of caring leadership can influence teacher beliefs and actions, thereby impacting broader organizational outcomes (Walls & Kudlats, 2022).

Invitational Education Theory (IET)

Situated within these broad constructs of positive and caring leadership is Invitational Education Theory (IET). Arguing that schools that are collaborative in nature, Purkey (1978) established IET

to better identify schools where there is a shared sense of responsibility and where everybody is treated as a valued individual who has the capability to be successful. Purkey (1978) stressed that positive, inviting environments yield the best opportunities for collaboration and learning. The tenets of IET create conditions in schools and classrooms that support a productive work and learning environment (Asbill & Gonzalez, 2000; Brandt, 2003; Purkey & Stanley, 1991).

IET is built on the belief that interactions are based on positive and negative signals that exist in human experience. It highlights the need for communicating caring messages that convey support and understanding to help people reach their potential, while productively identifying the negatives that can inhibit reaching that potential (Purkey & Stanley, 1991; Purkey, 1992; Purkey & Novak, 2008). IET supports the notion that school and classroom climates can be transformed by invitational practices (Asbill & Gonzalez, 2000; Brandt, 2003).

The theory rests on a foundation of respect, trust, optimism, and caring. It relies on intentionality amongst all stakeholders in a school community—administration, teachers, parents, students, and the broader community. Actively engaging these constructs allows for conditions that support a productive working and learning environment (Purkey & Novak, 2015; Purkey & Stanley, 1991). According to Purkey and Stanley (1991), all people have potential in all areas of human development, and the optimum realization of this potential happens through places, policies, processes, and programs that intentionally invite development. Such work must be led by people who are intentionally inviting to others, both in professional and personal matters.

Purkey and Stanley (1991) elaborate on this concept of being intentionally or unintentionally inviting. They describe four "stances" which characterize individuals' personal and professional functioning:

- *Intentionally disinviting* stance is evidenced by personal and/or professional functioning that is intentionally negative in its impact on the realization of human developmental potential.
- *Unintentionally disinviting* stance also has a negative impact on the realization of human potential but occurs because of inappropriate or careless functioning.
- *Unintentionally inviting* has a positive impact on the development of human potential, but this impact occurs despite a lack of purpose, direction, or consistency.
- *Intentionally inviting* stance has a positive influence on the realization of human potential, and accomplishes this with deliberate purpose, direction, and consistency.

Purkey and Stanley (1991) stress that appropriate "stances" are crucial to creating an effective learning environment. "Invitational teaching requires that the feelings, wishes, and aspirations of others be taken into account" (p.57). For example, inviting behaviors might include writing positive notes, talking to students about out of school activities, having a sense of humor, treating students like they are responsible, and involving students in decision making (Amos et al., 1985; Purkey & Stanley, 1991). Teachers who are more intentionally inviting are better able to read students' "cues" and thus, more responsive to students' needs.

Invitational Leadership

Extending IET to school leadership, Asbill and Gonzalez (2000) applied the basic assumptions of IET to elementary school principals, focusing on principal-teacher relationships. Purkey and Siegel

(2003) also extended IET towards the development of a theoretical framework for Invitational Leadership. Invitational Leadership identifies school leadership behaviors that intentionally create collaborative and supportive school cultures. By being intentionally collaborative and creating cooperative school environment relationships, growth and development are improved (Asbill & Gonzalez, 2000; Novak, 2002). Several previous studies about Invitational Leadership support that these behaviors are positively correlated with job satisfaction, a significant finding given the correlation between teacher job satisfaction and teacher retention (Berry & Fuller, 2007; Boyd et al., 2011; Ingersoll & Merrill, 2010). Branscum (1983) found that in rural schools, both principals and teachers identify similar responsibilities as crucial for principal competency: improvement of education, community relations, pupil services, pupil control, and personnel services. Research supports that a principal's inviting leadership qualities are positively related to perception of principal effectiveness as well. These studies support the importance of Invitational Leadership as it relates to teacher job satisfaction and teachers' perception of principal effectiveness and even to school performance and highlight the need for more research in this area (Asbill & Gonzalez, 2000; Burns & Martin, 2010; Egley, 2003; Nivens, 2006; Novak, 2002).

Aligned with widely accepted notions of leadership as "the art of mobilizing others to want to struggle for shared aspirations" (Kouzes & Posner, 1995, p. 30), Purkey and Siegel (2003) posit that IET and Invitational Leadership are able to meet that challenge. Their model requires more "connectedness, cooperation and communication" (Purkey & Siegel, 2003, p.1) with staff, teachers and students and it relies on creating inviting spaces where all can meet their potential (Novak, 2002). Invitational Leadership highlights administrative behaviors that focus on human growth and development through attention to human relationships, intentionally creating collaborative, cooperative school cultures (Asbill & Gonzalez, 2000). Purkey and Siegel (2003) explain:

> Invitational Leadership is a theory of practice that addresses the total environment in which educational leaders function. It is a process of communicating caring and appropriate messages intended to summon forth the greatest human potential as well as for identifying and changing those forces that defeat and destroy potential (p.1).

Purkey and Siegel (2003) and Purkey and Novak (2015) describe the following critical Invitational Education principles:

- *Respect* – belief that all people are valuable and should be treated with care because they are valuable;
- *Trust* – possessing confidence and predictability of others' abilities and integrity;
- *Optimism* – believing that human potential is untapped and that every person is capable;
- *Intentionality* – leaders choose appropriate caring and leading strategies personally and professionally with staff; being respectful, trustworthy and optimistic.
- *Care* – showing actions such as warmth, empathy, and positive regard, towards others; being a beneficial presence in one's own life and the lives of others.

Adapting Purkey and Stanley's (1991) aforementioned invitational stances to leadership, Purkey and Siegel (2003) describe *intentionally inviting* leaders as using intentionally caring messages in their personal and professional lives. They have direction, purpose, and skill in their building positive relationships and increased choices. To Purkey and Siegel (2013), being intentionally inviting may include behaviors or actions like, creating a wellness program for

employees, sending cards for birthdays or loss of loved ones, placing plants around the building, adding cheerful posters, or handling difficult situations in a kind and caring manner.

The actions or behaviors of *unintentionally inviting* leaders may be similar to those of the intentional leaders, but due to their unintentional nature, inconsistencies may be present. *Unintentionally disinviting* leaders may act in ways that appear counter-productive to building positive relationships and creating a collaborative workspace, though they are likely unaware that their actions may have these outcomes. Intentionally disinviting leaders are fully aware that their approach is negative and/or toxic, intentionally meaning to "demean, dissuade, discourage, defeat and destroy" (Purkey & Novak, 1984, p.4).

The Influence of Invitational Leadership in the Educational Context

The body of research on Invitational Leadership thus far has been relatively limited. One study by Asbill and Gonzalez (2000) used a survey to better understand the relationships between principals' Invitational Leadership behaviors, which they called their *Invitational Quotient*, teacher job satisfaction and perceptions of principal effectiveness in New Mexico elementary schools. Egley (2003) studied principals' Invitational Leadership behaviors as they related to teacher job satisfaction, teachers' perceptions of principal effectiveness, and the Computed Accreditation Performance Index of Mississippi high schools. Burns and Martin (2010) studied the effectiveness of male and female principals who had an Invitational Leadership style. While this study revealed no difference in effectiveness between male and female leaders, differences were noted between Invitational Leadership qualities of leaders in effective and less effective schools. In a qualitative multi-case study of adult learners, McKnight (2013) examined administrator effectiveness in creating a learning environment through the lens of Invitational Leadership theory. Using the same survey instrument created by Asbill and Gonzalez (2000), Nivens (2006) studied principals' Invitational Leadership behaviors as they relate to teacher job satisfaction and perception of principal effectiveness in public elementary schools in North Carolina. Evans (2019) found that implementing the tenets of Invitational Education in a rural school resulted in significant positive change. Notably, Evans (2019) indicated that implementing these tenets resulted in greater trust between families and the school, improved student behavior, and an overall improvement in the school culture, which ultimately extended beyond the school into the community.

All studies demonstrated Invitational Leadership behaviors and teacher job satisfaction as being strongly correlated, however, Nivens's findings are most aligned with this study. Nivens (2006) sent the Leadership Survey to high-performing and low-performing schools. Nivens found strong positive correlations between the principals' professionally and personally inviting behaviors and teacher job satisfaction. Additionally, the research found a strong positive correlation between principals' Invitational Leadership and teacher perception of principal effectiveness. A statistically significant difference was found between principals in high-performing and low-performing schools, with principals in high-performing schools having a higher degree of Invitational Leadership than their counterparts in lower performing schools.

Furthermore, Egley (2003), Nivens (2006), and Burns and Martin's (2010) studies found that principals' inviting leadership behaviors were positively related to school performance. These studies support the importance of Invitational Leadership as it relates to teacher job satisfaction,

teacher perception of principal effectiveness, and school performance. None of these studies focused specifically on high-poverty, rural schools, thus revealing a gap in the literature**.**

Rural Schools, Poverty, and the Impact of Leadership

Coladarci (2007) states that there is no clear and consistent definition of what is *rural* in research. Hill (2014) builds upon this notion, explaining that it is difficult to truly understand rural issues without truly knowing the place. Still, the United States Census Bureau (2010) describes the differences between urban and rural based solely on population. Urban is broken up into two categories, Urbanized Areas and Urbanized Clusters. Urbanized Areas have 50,000 or more people; Urban Clusters consist of at least 2,500 and less than 50,000 people and rural encompasses all population, housing, and territory not included within an urban area.

While research shows that approximately 30 percent of United States schools are in rural communities, only about six percent of the research conducted included rural schools (Hardré & Sullivan, 2008; Hardré et al., 2009). Arnold et. al., (2005) concluded that based on their review of literature, "a significant gap may exist in the knowledge base about the professional growth of rural teachers and the work of rural school administration" (p.15).

Rural students face many of the same challenges that their peers in urban areas do. Like urban schools, rural schools face issues of teacher retention, staffing high needs schools, insufficient resources and inadequate school leadership (Gates et al., 2003; Lashway, 2003; Roza et al., 2003). However, rural schools are often geographically isolated, without nearby institutions that could provide students with choices and possible options to transfer from low-performing rural schools (NCDPI, 2016c). Warren and Peel (2005) note that rural school principals often had limited resources and few options for support. Enrollment in rural schools is increasingly made up of students from low-socioeconomic status backgrounds, is more diverse, and has students with a variety of special needs (Strange et. al, 2012).

Hill (2014) explains that federal initiatives and state policies like those tied to the *Elementary and Secondary Education Act* and more recently, *Every Student Succeeds Act*, do not accurately fit the needs of many rural schools. Strange et al., (2012) argue that the country cannot try to educate our rural students and run our rural schools exactly the same way we educate our urban students. They contend that rural education needs to be supported in a way that considers the unique needs and challenges of being a rural school.

According to the Organization of Economic Cooperation and Development (2011), student achievement is more strongly correlated with family income than any other factor. Welburn (2009) concluded that the largest percentages of school dropouts come from low-income rural and urban communities. Families living in poverty are often less likely to identify or address school and academic issues, thus, students in low-income families are more reliant on the schools for their education (Chenoweth, 2009). This reinforces that quantifying the conditions that allow for success in schools where large numbers of students come from low-socioeconomic backgrounds is necessary to minimize opportunity gaps (Starks, 2013).

To do this, Starks (2013) calls for education leaders to address the complex needs of students from low-socioeconomic backgrounds for these students to consistently experience academic success. Effective school leadership can depend largely on the relationship between the school and the community. Barton (2004) highlights relationship-building as an important strategy for school leaders to address student success for those in poverty. Starks (2013) suggests rural

school leaders make an intentional effort of connecting the home and school, arguing that this connection is vital to maximizing student learning. Chenoweth (2010) found that leaders in high-poverty, high-performing schools create a positive climate for teachers to support their students.

The aforementioned studies supporting the importance of Invitational Leadership as it relates to teacher job satisfaction, teacher perception of principal effectiveness, and school performance are particularly noteworthy given the unique contexts and considerations of rural schools, the importance of leadership in these schools, and the dearth of research concerning rural schools and rural school leadership in particular. The present study aims to fill a significant gap in the literature by specifically focusing on high-poverty, rural schools.

METHODOLOGY

This study examined the principals' Invitational Leadership-teacher job satisfaction relationship and the principals' Invitational Leadership-teacher perceived principal effectiveness relationship in rural schools. Additionally, we considered the possibility that these relationships vary depending on the academic achievement level of the school. A pair of regression analyses were conducted to quantify these relationships with interaction effects included to gauge dependency on school academic achievement level. Below we detail the participants, procedures, instruments, and analyses.

Participants and Settings

Participants in our study all hail from Title I rural elementary public schools in the southeast United States serving grades K-5 and Pre-K-5. Title I (i.e. economically disadvantaged or high-poverty) schools are those where between 40 and 100 percent of the student population qualifies for free and reduced price lunch. The rural schools in the study were situated within a Local Education Agency serving only schools with a National Center for Education Statistics school locale code of seven or eight or they were in an area of a state defined as rural by a governmental agency. Of the 2,716 public and charter schools in the target region, 1,068 were identified as rural schools. Of the rural schools, 942 were also identified as Title I, and 415 of these were elementary schools (K-5 and Pre-K-5). Excluding "rural fringe" schools due to their close proximity to cities, a total of 194 possible schools remained for consideration. A total of 23 school principals from the 194 possible schools agreed to participate in the study. This limited response rate reflects the well-established difficulty of conducting research in rural schools (e.g., Autio & Deussen, 2017). Of the 23 elementary schools in the study, 15 were high-performing and 8 were low-performing as defined by school performance grades. These grades are produced yearly by the North Carolina Department of Public Instruction (NCDPI). Specifically, we used pre-existing data compiled from NCDPI (2016b) from the 2015-2016 school year to identify the schools as high-achieving and low-achieving. We have designated schools receiving an A+, A, or B grade as high-performing and schools receiving a C, D, or F grade as low-performing.

A total of 240 teacher respondents (which may have included facilitators, and coaches) from these 23 schools were included in the study. The low-performing and high-performing schools had response rates of approximately 44 percent and 50 percent, respectively. Seventy-six (76) respondents (approximately 32% of the total) were from low-performing schools, and 164

respondents (approximately 68% of the total) from high-performing schools. An additional 28 respondents were removed from the analysis due to missing responses resulting in a final sample for the analyses of 65 respondents from low-performing schools, and 147 respondents from high-performing schools.

Instrumentation

The 212 respondents completed the Leadership Survey (Asbill & Gonzalez, 2000) composed of 44 Likert-Type items. The survey is designed to gauge the components of Invitational Theory by addressing (a) teachers' perception of their leaders' invitational leadership behavior, (b) teachers' perception of their leaders' effectiveness, and (c) teachers' level of job satisfaction. Leadership Survey items separate into three subscales to measure these three components with 37 items capturing leaders' invitational leadership behavior, four items capturing perceived effectiveness, and three items capturing teacher satisfaction. Items and their factor loadings are presented in Appendix A along with subscale reliability and variance explained. The survey was developed in conjunction with experts in the field of education, experts in Invitational Leadership and practicing educators. More details regarding instrument development and validity evidence can be found in Asbill & Gonzalez (2000).

Factor Analysis

As an initial step in our investigation, we conducted an exploratory factor analysis to ensure the Leadership Survey provided reliable measures of each construct. In addition, this analysis was used to produce factor scores representing invitational leadership, effectiveness, and teacher satisfaction. Rather than assume each item provides equivalent information about the variable of interest as done in a sum or total score, a factor score incorporates the relationship between the items and the underlying construct (e.g., invitational leadership, effectiveness, teacher satisfaction). Items with a greater relationship to the construct have a greater influence on the factor score (DiStefano et al., 2009).

To begin our factor analysis, we established the factorability of the three Leadership Survey subscales. We found data from all three subscales were suitable for a factor analysis based on several common criteria (e.g., correlation among items, Kaiser-Meyer-Olkin's measure of sampling adequacy, and Bartlett's test of sphericity; see Thompson, 2004 for detailed explanation of determining factorability). The actual factor analysis was conducted using maximum likelihood extraction and Promax Rotation methods to increase interpretability. The maximum likelihood extraction method has long been a preferred technique for producing parameter estimates (e.g., Fabrigar et al., 1999), while Promax Rotation minimizes the complexity of factor loadings making the structure simpler to interpret (Thompson, 2004).

Regression Analysis

After establishing reliability and validity evidence for our measures, we conducted a pair of regression analyses using factor scores from our measurement model and the school performance

level variable to establish the relationship between (a) invitational leadership and teacher satisfaction while considering school academic performance level and (b) invitational leadership and effectiveness while considering school academic achievement level. In both regression models, invitational leadership serves as an independent or predictor variable along with school academic achievement level. To investigate a possible dependency in the relationship between invitational leadership and the outcomes of interest (teacher satisfaction and effectiveness) on school academic achievement level, we included an interaction term operationalized as the product of invitational leadership factor scores and school academic achievement level. We utilized single-level regression models as anonymized data used in the analysis did not include school or principal indicators with participant responses. The two regression analyses address our first two research questions, respectively while the inclusion of the interaction term in both models addresses our third research question. All analyses were conducted in *R* (R Core Team, 2021) with interaction plots produced using the *sjPlot* package (Ludecke, 2021).

RESULTS

Leadership Survey Factor Analysis

We found scores from the Leadership Survey to be reliable and valid measures of principal invitational leadership, teacher-perceived principal effectiveness, and teacher satisfaction. Appendix A includes the overall reliability of each subscale as indicated by Cronbach's Alpha, the factor loadings of items from each scale, and the variance explained in each variable by all items included in the subscale. Our factor analysis results, along with theory and survey use in previous literature (e.g., Asbill and Gonzalez, 2000), supported a one factor solution for each subscale and indicated each construct was measured appropriately. The invitational leadership subscale was found to have a high degree of reliability, $\alpha = .97$, indicating a high degree of internal consistency and paralleling previous findings (e.g., Asbill & Gonzalez, 2000). Effectiveness and teacher satisfaction subscales also demonstrated adequate reliability with $\alpha = .90$ and $\alpha = .78$ respectively. Factor loadings for all but two items across all subscales exceeded .5, with a minimum factor loading 0.43. A single factor solution for each subscale also ensured at least three items per factor, was most interpretable and produced variance explained in the variable of interest (e.g., invitational leadership, effectiveness, teacher satisfaction) of >.5. Using factor analysis results, we calculated an invitational leadership, perceived principal effectiveness, and teacher satisfaction factor score for each participant using the regression method (DiStefano et al., 2009, Thurstone, 1935). These composite scores have a mean of 0 and a variance of 1 and represent a participants relative standing on each construct (i.e., invitational leadership, perceived principal effectiveness, and teacher satisfaction). As described earlier, these factor scores are influenced more by items with stronger relationships to the underlying construct. The factor scores were used as variables in our regression analysis to examine the relationships among invitational leadership, effectiveness, and teacher satisfaction just as one would use any composite score (e.g., total score) from the Leadership Survey.

Regression Analysis

We utilized two multiple regression models in our regression analyses each with principal invitational leadership as the focal independent or predictor variable. School academic achievement level was also included in both models as an independent variable but we focused on its role as a possible moderator between principal invitational leadership and the outcome of interest (i.e., teacher satisfaction and perceived effectiveness). The first regression model included teacher satisfaction as the dependent variable or outcome of interest and the second model included teacher-perceived principal effectiveness. The use of structural equation modeling was considered given recent advances with latent interactions and small sample sizes but regression with factor scores has demonstrated appropriate accuracy and efficiency (Cox & Kelcey, 2021). Post-analysis assumption checks included a review of residual distributions and residual-fitted value scatter plots. These checks indicated that assumptions of normality, linearity, and homoscedasticity had been sufficiently met.

Teacher Satisfaction

To address research question one and three, we conducted a multiple regression analysis with teacher reported satisfaction as the outcome and principal invitational leadership, school achievement level, and their interaction as the predictors. This analysis allowed us to establish the unique relationship between each predictor and the outcome addressing research question one and capture if these relationships are dependent on each other addressing research question three. Put differently, we captured the relationship between invitational leadership and teacher satisfaction, possible differences in teacher satisfaction between school academic performance levels (i.e., High vs. Low), and if the invitational leadership-teacher satisfaction relationship was consistent across school academic performance level. Assumption checks did identify an outlier with a studentized residual of 5.01. This participant had an extreme response pattern (e.g., using mostly one and five response categories on the Likert scale) resulting in a near minimum score for principal invitational leadership and a high score for satisfaction. Based on the excessive studentized residual and response patter, the individual was removed from the analysis to improve overall model performance.

After removing the outlier, the model explained nearly 55% of the variance in teacher satisfaction based on the adjusted R^2 value. We found invitational leadership had a significant positive relationship with teacher satisfaction (see Table 1).

Table 1

Teacher satisfaction regression

Variable	*B*	*SE*	*t*	*p*
Intercept	-0.004	0.075	-0.058	0.954
Invitational Leadership	0.527	0.075	6.982	<0.001*
School Achievement Level	-0.023	0.09	-0.254	0.8
Invitational Leadership X School Achievement Level	0.249	0.09	2.682	0.008*

Put differently, as principal invitational leadership increased, we found increased amounts of teacher reported satisfaction. This is illustrated in Figure 1 for participants from both low and high-performing schools as the lines representing both groups on teacher satisfaction increase from left to right (i.e., increasing amounts of Invitational Leadership on the x-axis). We did not find a significant difference between school academic performance levels in teacher reported satisfaction (see Table 1). However, this result is difficult to interpret given the significant interaction between invitational leadership and school academic performance level (see Table 1). This significant interaction, illustrated by the intersection of the lines in Figure 1, indicates that the teacher satisfaction-principal invitational relationship is dependent on school academic performance level. More specifically, the teacher satisfaction-principal invitational leadership relationship is stronger in high-performing schools (see the steeper slope of the dotted regression line in Figure 1).

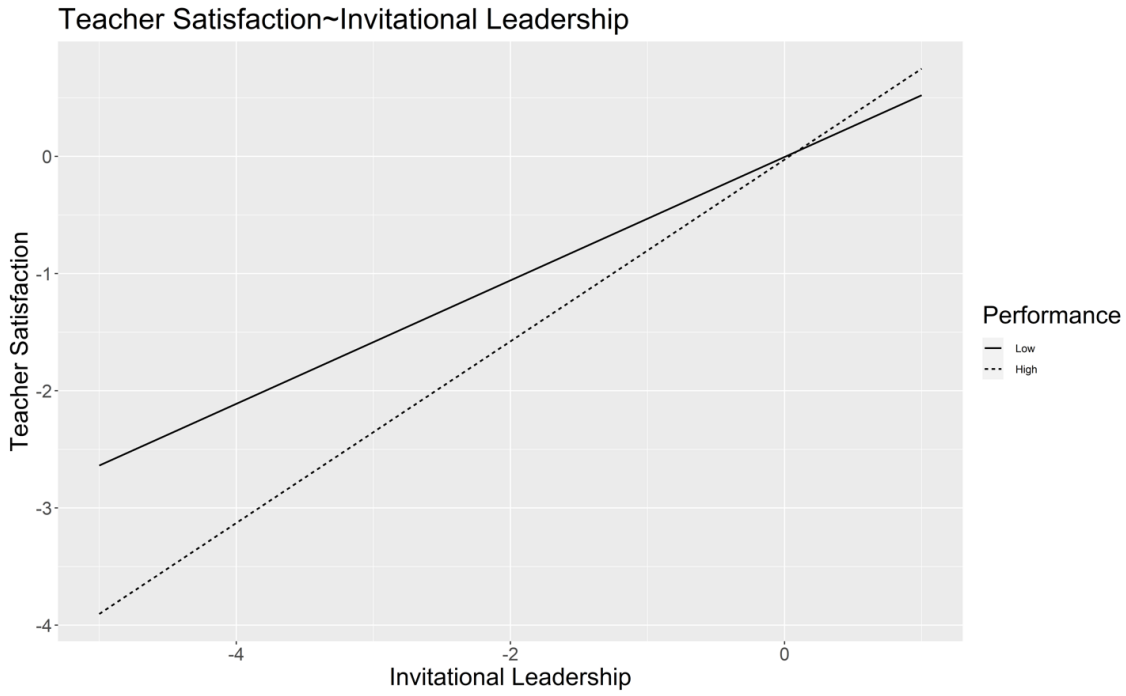

Figure 1. Teacher satisfaction ~ Invitational leadership

Returning to differences in teacher satisfaction between school performance levels, we can see that when principals scored low on invitational leadership (far left on x-axis) teachers from low performing schools (solid line) reported greater satisfaction than teachers from high performing schools (gap between solid and dotted lines). The inverse difference is visible when principals had high invitational leadership scores. In Figure 1, this is illustrated in the upper right-hand corner, where teachers in high-performing schools reported higher levels of satisfaction than teachers in low-performing schools (gap between dotted and solid lines).

Principal Effectiveness

To address research questions two and three, we conducted a multiple regression analysis with perceived principal effectiveness as the outcome and principal invitational leadership, school achievement level, and their interaction as the predictors. In this analysis, we capture the relationship between invitational leadership and principal effectiveness addressing research question one and if the principal effectiveness-invitational leadership relationship was consistent across school academic performance level addressing research question three. Assumption checks again identified an outlier with a studentized residual of -5.23 so the individual was removed from the analysis to improve overall model performance.

After removing the outlier, the model explained nearly 78% of the variance in perceived principal effectiveness based on the adjusted R^2 value. We found invitational leadership had a significant positive relationship with principal effectiveness (see Table 2).

TABLE 2

Perceived principal effectiveness regression

Variable	*B*	*SE*	*t*	*p*
Intercept	-0.169	0.056	-3.038	0.003
Invitational Leadership	0.892	0.056	16.034	<0.001*
School Achievement Level	0.262	0.067	3.936	<0.001*
Invitational Leadership X School Achievement Level	-0.089	0.067	-1.333	0.184

The sloped lines in Figure 2 illustrate that as principal invitational leadership increases, perceived principal effectiveness increases. This was true for participants from both low and high-performing schools. We also found a significant difference in perceived principal effectiveness between school academic performance levels (see Table 2) with principal effectiveness scored higher in schools deemed to have high academic performance. This result is illustrated in Figure 2 by the consistent gap between the dotted (high performing schools) and dashed lines (low performing schools). The consistency of this gap reflects the lack of a significant interaction effect between invitational leadership and school academic performance level (see Table 2). Put differently, the principal effectiveness-invitational leadership relationship does not depend on school academic performance level. More specifically, no matter the level of principal invitational leadership, principal effectiveness is greater in schools with high academic performance.

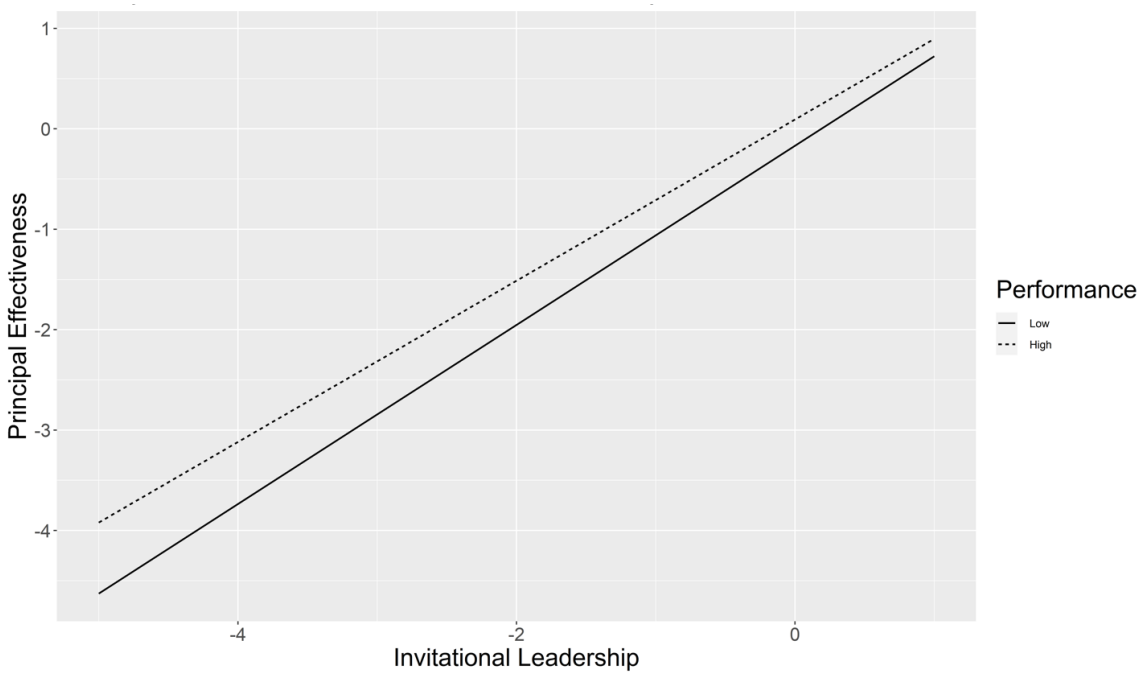

Figure 2. Principal effectiveness.

DISCUSSION

With increased focus on caring school leadership, this study used the lens of Invitational Leadership to gain a deeper understanding of principal behaviors and their relationship to teacher job satisfaction and teacher perception of principal effectiveness in rural schools and then to determine if these relationships differ between low-performing and high-performing schools.

Similar to previous research (Asbill & Gonzalez, 2000; Burns & Martin, 2010; Egley, 2003; Nivens, 2006), we found a significant positive relationship between a principal's Invitational Leadership and teacher satisfaction and a significant positive relationship between a principal's Invitational Leadership and principal effectiveness as perceived by teachers in rural school settings. Furthermore, this study reveals new findings indicating the teacher-satisfaction-principal Invitational Leadership relationship can be dependent on school academic performance level.

Invitational Leadership and Teacher Job Satisfaction at High and Low Performing Schools

The significant positive relationship between teachers' job satisfaction and the Invitational Leadership of their principals suggests that when the principals were creating a more welcoming and inviting school environment, teachers were generally happier with their jobs. This supports the concept that creating a more welcoming environment makes teachers feel valued and helps them find satisfaction in their work (Purkey & Novak, 2008; Purkey & Siegel, 2003). Berry and Fuller's (2007) study suggests a correlation between the support and empowerment that administrators provide and a teacher's decision to return or leave the school, suggesting that a more satisfied staff can lead to improved teacher retention, including in Title I, rural schools.

However, when the data were analyzed by comparing teachers' satisfaction across high and low-performing schools while controlling for Invitational Leadership, no significant differences were found. Our findings add interesting nuance to the interaction between Invitational Leadership and teacher satisfaction in high- and low-performing schools. Specifically, in low-performing schools with low principal Invitational Leadership, teacher satisfaction was greater than in high-performing schools with low principal Invitational Leadership. This difference seems to disappear and possibly reverse for principals with higher Invitational Leadership. For schools with these principals, teacher satisfaction was reported to be greater in high-performing schools than in low-performing schools.

While we know teacher satisfaction and principal Invitational Leadership already have a significant relationship across all school types, these findings provide greater depth and more nuance, revealing the relationship between teacher satisfaction and principal Invitational Leadership to be stronger in high-performing schools.

Invitational Leadership and Principal Effectiveness

The findings also indicated a positive relationship between the principals' Invitational Leadership and how teachers viewed their principals' effectiveness, highlighting the idea that the greater the principal's inviting qualities, the more effective they are perceived by teachers in the school. This is unsurprising, as one of the hallmarks of IET is to create conditions in schools and classrooms that support a productive work and learning environment (Asbill & Gonzalez, 2000; Brandt, 2003; Purkey & Stanley, 1991). As Purkey (1978) explained, schools that are collaborative, where everybody is valued and seen as responsible and as having the ability to be successful, are typically schools with more productive employees.

The study also revealed a significant difference between teacher reported principal effectiveness across school performance type (teachers in higher performing schools rated principal effectiveness higher than teachers in lower performing schools). The researchers hypothesize that ratings could be influenced by state assigned report card grades issued to schools. Teachers at the high-performing schools, perhaps, rated their principals higher because of some internalization of the school letter grade and that teachers at the lower performing school rated their principals' effectiveness lower because they, too, internalized their lower grade achievement. However, we found no significant interaction with the principal effectiveness and Invitational Leadership relationship across school performance types. In other words, school performance type does not influence the principal effectiveness/Invitational Leadership relationship.

CONSIDERATIONS AND IMPLICATIONS

The results and structure of this study suggest certain considerations and implications. First, larger and more representative studies investigating leadership in rural schools are needed. Specifically, this study might be replicated in rural schools – including secondary schools – across a wider region, yielding a much larger and nationally representative sample. Additional studies might also include an examination of how the principal's Invitational Leadership is correlated with teacher turnover. Also, qualitative studies exploring how teachers define principal effectiveness deserves further study given differences found in high- and low- performing schools.

Past research around principal leadership has largely centered on academic pressure, and less on support (Louis et al., 2016), and has focused more on urban schools. The findings of this study of rural elementary schools show a relationship between employing Invitational Leadership behaviors and teacher job satisfaction. We know teachers' feelings about school administration (Boyd et al., 2011) and job satisfaction (Ingersoll & Merrill, 2010) have the greatest impact on teachers' decisions to return to their schools. We also know that schools with high teacher turnover rates are more likely to have lower student achievement results (Darling-Hammond, 2003; Ingersoll, 2001). With teacher staffing shortages and with high-poverty schools facing more challenges retaining teachers (Guarino et al., 2011), the findings herein strongly reinforce the need for additional training and support for rural school leaders in the area of Invitational Leadership specifically, or caring school leadership more broadly.

Findings also provide implications for principals' professional development and practice. Given the relationship between perceived principal effectiveness and principal Invitational Leadership in rural elementary schools, increased focus on invitational behaviors in leadership could impact teachers' perspectives of principal effectiveness. This is especially important given the stronger relationship between Invitational Leadership and perceived effectiveness in rural schools.

SUMMARY, LIMITATIONS, AND CONCLUSIONS

This study provides additional information to the growing body of knowledge in the field of education in general, and in the field of rural school leadership more specifically. Significant relationships were identified between teacher job satisfaction and the principals' Invitational Leadership as well as the teachers' perceptions of their principals' effectiveness and the principals' Invitational Leadership. Additionally, findings show that the relationship between Invitational Leadership and teacher satisfaction is greater at high-performing schools. Thus, while the application of invitational behaviors in rural school leadership could influence teacher satisfaction, the influence would be more pronounced in high-performing schools.

This study is limited by its relatively small sample, low response rate, and inability to consider the nested structure of schooling. First, the anonymized data used for analyses did not include school or principal indicators for each participant. Without these indicators, we could not consider the nested structure of responses (e.g., teachers nested within schools). If participant outcomes (i.e., teacher responses) are significantly correlated within schools or with the same principals, our coefficient estimates and their standard errors may be over- or underestimated (Moerbeek, 2004). Our inability to consider nesting does not indicate our estimates and their standard errors are wrong but it is possible and we are unable to check with these data. We highly recommend future studies include these considerations and employ multilevel models to examine leadership in rural schools.

The sampling issues are persistent in educational research involving rural schools and raise concerns regarding response bias. For example, our sample of teacher participants could differ in systematic ways comparted to the population of teachers that did not respond. Our sample could be more or less satisfied or particularly interested in providing feedback about their principal. If these systematic differences are substantial the relationships documented here may only be applicable to the type of teacher that responded to the survey. We caution against over generalizing these results but do believe that the study provides unique and informative insight into rural school

leadership. While generalization must be narrow, the findings from this research add to the limited body of literature on rural school leadership, supporting the need for inviting behaviors to positively impact teacher satisfaction and perceived principal effectiveness, and calling for additional studies of rural school leadership.

REFERENCES

Aldridge, J. (2003). Among the periodicals: Rethinking the no child left behind act of 2001. *Childhood Education, 80*(1), 45-57. Retrieved from http://www.questia.com/PM.qst?a=o&d=5002563042

Amos, L., Purkey, W., & Tobias, N. (1985). *The development of the invitational teaching survey*. Paper presented at the American Research Association Convention, Chicago, IL.

Arjoon, S. (2000). Virtue theory as a dynamic theory of business. Journal of Business Ethics, 28(2), 159-178.

Arnold, M. L., Newman, J. H., Gaddy, B. B., & Dean, C. B. (2005). A look at the condition of rural education research: Setting a direction for future research. *Journal of research in Rural Education*, *20*(6), 1-25.

Asbill, K., & Gonzalez, M. L. (2000). Invitational leadership: Teacher perceptions of inviting principal practices. *Journal of Invitational Theory and Practice, 7*(1), 14- 27.

Autio, E., & Deussen, T. (2017). Recruiting rural schools for education research: Challenges and strategies. In Nugent, G. C., Kunz, G. M., Sheridan, S. M., Glover, T. A., & Knoche, L. L. *Rural education research in the United States* (77-93). Springer.

Barton, P. E. (2004). Why does the gap persist? *Educational Leadership, 62*(3), 8-13.

Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology, 88*(2), 207-218.

Berry, B., & Fuller, E. (2007). Teaching and learning conditions in Ohio: Implications for supply and demand. Final report, fall 2007. *Center for Teaching Quality*. Retrieved from http://files.eric.ed.gov/fulltext/ED514989.pdf

Boyd, D., Grossman, P., Ing, M., Lankford, H., Loeb, S., & Wyckoff, J. (2011). The influence of school administrators on teacher retention decisions. *American Educational Research Journal*, *48*(2), 303-333.

Brandt, R. (2003). Is this school a learning organization? 10 ways to tell. *Journal of staff development*, *24*(1), 10.

Branscum, J. D. (1983). Competencies of rural Oklahoma school principals. *High School Journal, 66*(2), 141-148.

Burns, G., & Martin, B. N. (2010). Examination of the effectiveness of male and female educational leaders who made use of the invitational leadership style of leadership. *Journal of Invitational Theory and Practice*, *16*, 30-56.

Burns, J. M. (1978). *Leadership* (1st ed.). Harper & Row.

Byun-Kitayama, C. (2012). *Use of accountability indicators to evaluate elementary school principal performance*. University of Southern California.

Camera, L. (2014). NCLB Accountability; "The Impact of No Child Left Behind's Accountability Sanctions on School Performance: Regression Discontinuity Evidence From North Carolina." *Education Week*, *34*(6), 5–5.

Chenoweth, K. (2009). It can be done, it's being done, and here's how. *Phi Delta Kappan, 91*(1), 8-43.

Chenoweth, K. (2010). Leaving nothing to chance. *Educational Leadership, 68*(3), 16-21.

Coladarci, T. (2007). Improving the yield of rural education research: An editor's swan song. *Journal of Research in Rural Education*, *22*(3), 22-3.

Cox, K., & Kelcey, B. (2021). Croon's bias corrected estimation of latent interactions. *Structural Equation Modeling: A Multidisciplinary Journal*, 28, 863-874.

Crosnoe, R. (2011). *Fitting in, standing out: Navigating the social challenges of high school to get an education*. Cambridge University Press.

D'Amico, J. J., & Nelson, V. (2000). How on earth did you hear about us? A study of exemplary rural school practices in the upper Midwest. *Journal of Research in Rural Education, 16*(3), 182-192.

Darling-Hammond, L. (2003). Keeping good teachers: Why it matters, what leaders can do. *Educational Leadership*, *60*(8), 6-13.

DiStefano, C., Zhu, M., & Mindrila, D. (2009). Understanding and using factor scores: Considerations for the applied researcher. *Practical Assessment, Research & Evaluation*, *14*(20), 1–11.

Egley, R. (2003). Invitational leadership: Does it make a difference? *Journal of Invitational Theory and Practice, 9,* 57-70.

Evans, M. (2019). Transforming a Rural Elementary School through Invitational Education Practices. *Journal of Invitational Theory and Practice*, *25*, 25-36.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, *4*(3), 272-299.

Gardner, D. P. (1983). A nation at risk. The National Commission on Excellence in Education, U.S. Department of Education. Retrieved from http://files.eric.ed.gov/fulltext/ED226006.pdf

Gates, S. M., Ringel, J. S., Santibanez, L., Chung, C. H., & Ross, K. (2003). *Who is leading our schools?: An overview of school administrators and their careers* (No. 1679). Rand Corporation.

Greenleaf, R. K. (2002). *Servant leadership*. *A journey into the nature of legitimate power and greatness*. Paulist Press.

Guarino, C. M., Brown, A. B., & Wyse, A. E. (2011). Can districts keep good teachers in the schools that need them most? *Economics of Education Review*, *30*(5), 962- 979.

Hardré, P. L., & Sullivan, D. (2008). Classroom environments and student differences: How they contribute to student motivation in rural high schools. *Learning and Individual Differences, 18*, 471-485.

Hardré, P. L., Sullivan, D. W., & Crowson, H. M. (2009). Student characteristics and motivation in rural high schools. *Journal of Research in Rural Education (Online)*, *24*(16), 1.

Hill, P. T. (2014). Breaking New Ground in Rural Education. *ROCI, November*. Retrieved from http://www.rociidaho.org/wp-content/uploads/2014/11/ROCI_NewGround_Final.pdf

Hoy, W. K. & Miskel, C. G. (2008). *Educational administration: Theory, research, and practice* (8th ed.). McGraw-Hill.

Ingersoll, R. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, *38*(3), 499-534.

Ingersoll, R., & Merrill, L. (2010). Who's teaching our children? *Educational Leadership, 67*(8), 14-20.

Johnson, J., Showalter, D., Klein, R., & Lester, C. (2014). Why Rural Matters 2013- 2014: The Condition of Rural Education in the 50 States. *Rural School and Community Trust*. Retrieved from http://www.ruraledu.org/user_uploads/file/2013-14-Why-Rural-Matters.pdf

Kouzes, J. M., & Posner, B. Z. (1995). *The leadership challenge*. Jossey-Bass Inc. Retrieved from https://www.researchgate.net/profile/Barry_Posner2/publication/242601322_An_Instructor's_Guide_to_The_Leadership_Challenge/links/02e7e53b2e29405de7000000.pdf

Lashway, L. (2003). *Finding leaders for hard-to-staff schools*. ERIC Digest 173. Clearinghouse on Educational Policy and Management. Retrieved from https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/3234/digest173.pdf?sequence=3

Leithwood, K., Patten, S., & Jantzi, D. (2010). Testing a conception of how school leadership influences student learning. *Educational Administration Quarterly*, 46(5), 671-706. https://doi.org/10.1177/0013161X10377347

Louis, K. S., Murphy, J., & Smylie, M. (2016). Caring leadership in schools: Findings from exploratory analyses. *Educational Administration Quarterly*, 52(2), 310-348. https://doi.org/10.1177/0013161X15627678

Lüdecke, D. (2018). sjPlot: Data visualization for statistics in social science. R package version, 2(1).

Mackay, F. (2001). *Love and politics: Women politicians and the ethics of care*. Bloomsbury.

Masumoto, M., & Brown-Welty, S. (2009). Case study of leadership practices and school-community interrelationships in high-performing, high-poverty, rural California high schools. *Journal of Research in Rural Education (Online)*, *24*(1), 1.

McKnight, C. P. (2013*). Creating an effective educational environment for adult learners: A qualitative, multi-case study of off-campus center administrator's use of invitational leadership* (Doctoral dissertation). Retrieved from ProQuest LLC. (3576092).

Moerbeek, M. (2004) The consequence of ignoring a level of nesting in multilevel analysis, *Multivariate Behavioral Research*, *39*, 129-149. https://doi.org/10.1207/ s15327906mbr3901_5.

Murphy, J., & Louis, K. S. (2018). *Positive school leadership: Building capacity and strengthening relationships*. Teachers College Press.

Neal, K. W. (1999). Developing and sustaining teacher communities: Caring as central in teachers' negotiation of reading instruction and curriculum implementation. https://files.eric.ed.gov/fulltext/ED436527.pdf

Nivens, A. H. (2006). *Teacher assessment of invitational leadership behaviors in high poverty elementary schools in North Carolina* (Unpublished doctoral dissertation). Gardner-Webb University. School of Education.

North Carolina Department of Public Instruction. (2014). *Achievement level information.* Retrieved from http://www.ncpublicschools.org/accountability/testing/shared/achievelevel/

North Carolina Department of Public Instruction. (2016a). *2015-2016 State of the teaching profession in North Carolina*. Retrieved from http://www.ncpublicschools.org/docs/educatoreffectiveness/surveys/leaving/2015-16turnoverreport.pdf

North Carolina Department of Public Instruction. (2016b). *Student achievement*. Retrieved from http://www.ncpublicschools.org/src/guide/performance/

North Carolina Department of Public Instruction. (2016c). *Teachers leaving the profession data: Annual report of teachers leaving the profession.* Retrieved from http://www.ncpublicschools.org/educatoreffectiveness/surveys/leaving/

North Carolina Teacher Working Conditions. (2015). *North Carolina teacher working conditions survey: Teaching, empowering, leading and learning.* Retrieved from https://ncteachingconditions.org/

Novak, J. M. (2002). *Inviting educational leadership*. Pearson Education.

Organization for Economic Cooperation and Development (OECD). (2011). *Strong performers and successful reformers in education: Lessons from PISA for the United States*. Retrieved from www.oecd.org/dataoecd/32/50/46623978.pdf

Partee, G. L., & Sammon, G. M. (2001). A strategic approach to staff development. *Principal Leadership (High School Ed.)*, *1*(6).

Pate, R. S. (2012). *Perspectives and practices of successful teachers in diverse rural South Texas high-performing high-needs elementary schools* (Doctoral dissertation). Retrieved from https://tamucc-ir.tdl.org/tamucc-ir/bitstream/handle/1969.6/288/Pate_dissertation.pdf?sequence=1

Purkey, W. W. (1978). *Inviting school success: A self-concept approach to teaching and learning*. Wadesworth.

Purkey, W. W. (1992). An introduction to invitational theory. *Journal of Invitational Theory and Practice, 1*(1), 5-15.

Purkey, W. W., & Novak, J. M. (1984). *Inviting school success: A self-concept approach to teaching and learning* (2nd ed.). Wadsworth.

Purkey, W. W. & Novak, J. M. (2008). *Fundamentals of invitational education*. The International Alliance for Invitational Education.

Purkey, W. W. & Novak, J. M. (2015). *An introduction to invitational theory*. Retrieved from https://www.invitationaleducation.net/docs/samples/art_intro_to_invitational_theory.pdf

Purkey, W. W., & Stanley, P. H. (1991). *Invitational teaching, learning, and* living. *Analysis and action series*. National Education Association Library.

Purkey, W. W. & Siegel, B. L. (2003). *Becoming an invitational leader: A new approach to professional and personal success.* Humantics.

Purkey, W. W. & Siegel, B. L. (2013). *Becoming an invitational leader: A new approach to professional and personal success.* (2nd ed.). Humantics.

R Core Team (2014). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. Retrieved from http://www.R-project.org/

Roza, M., Celio, M. B., Harvey, J., & Wishon, S. (2003*). A matter of definition: Is there truly a shortage of school principals?* Center on Reinventing Public Education, University of Washington. Retrieved from http://files.eric.ed.gov/fulltext/ED477647.pdf

Shore, R. (1995). *Creating a positive school climate.* Monograph for the Plan for Social Excellence, New York, NY.

Smylie, M. A., Murphy, J. F., & Louis, K. S. (2020). *Caring School Leadership*. Corwin.

Starks, Q. S. (2013). *A Comparison of Student and Teacher Perceptions Related to Teaching and Learning Conditions in High-Performing and Low-Performing Title I High Schools in Alabama*. ProQuest LLC. (3583115)

Stecher, B. M., Kirby, S. N., Barney, H., Pearson, M. L., & Chow, M. (2004). *Organizational improvement and accountability: Lessons for education from other sectors*. Rand Corporation. Retrieved from http://www.questia.com/PM.qst?a=o&d=103028724

Strange, M., Johnson, J., Showalter, D., & Klein, R. (2012). Why rural matters: The condition of rural education in the 50 states. *Washington, DC: Rural School and Community Trust.* Retrieved from http://files.eric.ed.gov/fulltext/ED528634.pdf

Strom, P., Strom, R., & Beckert, T. (2011). Examining stakeholder expectations for guiding school reform: including students. *American Secondary Education, 39*(3), 5- 16.

Tieken, M. C. (2014). *Why rural schools matter*. UNC Press Books.

U.S. Census Bureau. (2010). *Urban and rural areas*. Retrieved from https://www.census.gov/geo/reference/ua/urban-rural-2010.html

Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications*. American Psychological Association.

Thurstone, L. L. (1935). *The vectors of mind*. University of Chicago Press. (pp. 226-231).

Walls, J., & Kudlats, J. (2022). Caring school leadership: From catchphrase to conceptual depth. In F. W. English (Ed.), *The Palgrave handbook of educational leadership and management discourse* (pp. 1891-1906). Palgrave Macmillan, Cham. https://doi.org/https://doi.org/10.1007/978-3-030-99097-8_109

Warren, L., & Peel, H. (2005). Collaborative model for school reform through a rural school/university. *Education, 126*(2), 346-352.

Welburn, B. (2009). Executive summary. *The Journal of the National Association of State Boards of Education, 10*(1), 3.

Woolfolk-Hoy, A. (2004). *Educational psychology* (9th ed). Allyn and Bacon.

APPENDIX A

Table A3

Factor Loadings, Variance Explained, and Overall Reliability of Each Subscale

Leadership Survey Item	*Factor Loadings*	*Variance Explained*	*Number of Items*	*Cronbach Alpha*
Subscale 1: Invitational Leadership		0.53	37	0.97
26. Models values, attitudes, and beliefs that encourage others to improve their skills and abilities.	0.88			
21. Listens to co-workers.	0.88			
31. Makes an intentional effort to treat others with trust and respect.	0.86			
11. Creates a climate for improvement through collaboration and shared decision-making.	0.85			
37. Treats each co-worker as a unique individual.	0.85			
2. Creates a climate of trust	0.84			
36. Expresses appreciation for a job well done.	0.83			
18. Offers constructive feedback for improvement in a respectful manner.	0.83			
19. Cares about co-workers.	0.82			
24. Views mistakes as learning experiences.	0.81			
16. Expresses appreciation for faculty and staff's presence in school.	0.80			
6. Facilitates policies and procedures which benefit staff, students, and teachers.	0.79			
34. Has a sense of mission he/she shares with others.	0.78			
13. Encourages cooperation rather than competition.	0.78			
12. Keeps informed about important issues.	0.76			
27. Believes that people are more important than things or results.	0.75			
35. Delegates responsibilities to provide learning opportunities.	0.75			

Leadership Survey Item	*Factor Loadings*	*Variance Explained*	*Number of Items*	*Cronbach Alpha*
1. Demonstrates a belief that faculty and staff members are responsible and capable.	0.73			
30. Appears to view the principalship as a position of service to others.	0.73			
7. Demonstrates optimism.	0.73			
17. Provides opportunities for professional growth through meaningful in-service.	0.73			
29. Fails to follow through.	0.71			
32. Delegates authority and responsibility when appropriate.	0.69			
10. Makes an intentional effort to provide necessary instructional materials.	0.68			
23. Encourages staff members to tap their unrealized potential.	0.67			
5. Often causes others to feel stressed.	0.66			
22. Communicates expectations for high academic performance from students.	0.64			
3. Makes a special effort to learn names.	0.64			
20. Takes time to talk with faculty and staff about their out-of-school activities.	0.63			
33. Is impolite to others.	0.60			
8. Expects high levels of performance from co-workers.	0.55			
4. Uses sarcasm, name-calling and negative over-statements.	0.55			
25. Shows insensitivity to the feelings of faculty and staff.	0.52			
9. Is resistant to change.	0.50			
15. Treats faculty and staff as though they are irresponsible.	0.47			

Leadership Survey Item	*Factor Loadings*	*Variance Explained*	*Number of Items*	*Cronbach Alpha*
Subscale 2: Perceived Effectiveness		0.71	4	0.90
40. How do you rate your principal's effectiveness in meeting the job-related needs of the faculty and staff?	0.93			
41. How effective has your principal been in positively transforming your school?	0.86			
38. How do you classify the overall work effectiveness of your school?	0.80			
39. How do you rate this school's effectiveness compared to all other schools you have known?	0.78			
Subscale 3: Teacher Satisfaction		0.55	3	0.78
44. In all, how satisfied would you say the other staff members in your building are with their jobs?	0.78			
43. Overall, how do you rate your satisfaction with your job?	0.77			
42. Overall, how do you rate your satisfaction with your principal?	0.67			