

# Examining Demonstrated Emotional Intelligence and Perceptions of Inviting Schools

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## Abstract

During a quantitative study with a correlational design, a sample of 42 graduate and post baccalaureate students from a Mid-Atlantic region college accessed a digital survey that combined the *Genos 360 EI Assessment-Concise Rater* with the *Inviting School Survey-Revised*. Subsequent simple linear regression procedures found Emotional Self-Control [ $\beta = 0.486$ ,  $t(74) = 2.016$ ,  $p = 0.052$ ] and Emotional Management of Others [ $\beta = 0.494$ ,  $t(74) = 2.310$ ,  $p = 0.027$ ] predict a strong relationship in the positive direction between four of the five *Inviting School Survey-Revised* (ISS-R) domains of school climate. By contrast, analysis of the Emotional Self-Awareness [ $\beta = -0.172$ ,  $t(74) = -0.816$ ,  $p = 0.420$ ] results identified a strong relationship in the negative direction between all five ISS-R dimensions of school climate. Results affirmed previous research that indicated the leader's overall emotional intelligence, rather than the leader's self-awareness alone, influences the followers' perception of an inviting work place. Implications suggest educational leaders seeking to improve school climate should develop their typically demonstrated emotional intelligence skills.

*Keywords:* Leaders' emotional intelligence behaviors, teachers' perceptions of school climate, Invitational Education theory

## Introduction

How individuals perceive their school climate will set the foundation for their attitudes, behaviors and group norms (Loukas, 2007). The school leader establishes the school's climate (Goleman, 2006b). To be dependably inviting, effective school leaders need to check for receipt and seek acknowledgement of their invitations for personal and professional development (Purkey & Siegel, 2013).

A positive school climate results from relationships that flourish (Weymes, 2003). When perceived as functional, newcomers must then be taught the expected culture (Schein, 2009). Identifying the competencies that increase the conveyance and receipt of personal and professional development opportunities could optimize school climate for all stakeholders because people can only accept invitations that have been received (Purkey & Novak, 2016).

The quantitative study with a correlational design examined if and to what degree a certified teacher's rating of his or her school leader's demonstrated emotional intelligence behaviors correlated with the teacher's perceptions of that school's climate. The *Genos 360 EI Assessment-Concise Rater* (Palmer et al., 2009) was used to rate the school leader's demonstrated emotional intelligence behaviors. The *Inviting School Survey-Revised* (Smith, 2015) was used to

measure the teacher's perceptions of school climate. Analysis of results explored the complexity of relationships between the seven demonstrated emotional intelligence sub-scales and the five domains of Invitational Education theory.

### **Significance of the Study**

The school's leader establishes the school's climate (Goleman, 2006b). One way the school leader contributes to a positive school climate is to nourish trusting and caring relationships and practicing empathetic social interactions. These are the behaviors exhibited by leaders with high emotional intelligence (Goleman, 2006a; McWilliam & Hatcher, 2007). School leaders need to comprehend and understand the school's climate, requiring knowledge of how things are done and how students and teachers perceive these things (Marzano & Waters, 2009). A logical conclusion is to research how the leader's demonstrated emotional intelligence may directly influence teacher perceptions of school climate. This study adds information to the field of research examining the relationship between the leader's demonstrated emotional intelligence behaviors and the created school climate.

For optimizing school climate, Invitational Education (IE) differs from other theories reviewed through the professional literature by providing an overarching theoretical framework effective for a variety of educational approaches (Asbill & Gonzalez, 2000). IE theory advances five basic elements: intentionality, care, optimism, respect, and trust [I-CORT] (Purkey & Novak, 2016) that optimize personally and professionally inviting behaviors.

### **Problem Statement**

It was not known if and to what degree there is a relationship between a teacher's rating of the school leader's demonstrated emotional intelligence behaviors and the teacher's perceptions of school climate. The foundational constructs of emotional intelligence and school climate, based on assumptions explicated by Invitational Education (IE) theory, include influential factors for sending and receiving personally and professionally inviting behaviors. These factors were discussed in previous studies that examined the results of a less hierarchical, more collaborative school culture (Maulding et al., 2010; Sanders, 2010) as well as the impact upon school climate (Abdulkarim, 2013; Asbill & Gonzalez, 2000; Collie, Shapka, & Perry, 2012; Juma, 2013; Ross, 2000). This empirical research on the relationship between the teachers' ratings of their diverse school leaders' demonstrated emotional intelligence behaviors and perception of school climate based on the five domains of Invitational Education theory would build upon research by Abdulkarim (2013); Bear et al. (2014); Collie et al. (2012); Juma (2013); and Thapa et al. (2013).

### **Review of the Literature**

The effectiveness of school leadership remains contingent upon teacher acceptance (Matthews & Brown, 1976). Teachers' attitudes and perceptions influence positive or negative responses to initiatives (Rokeach, 1968). Teachers' perception of respect and trust exhibited by the principal correlates with both teachers' and students' morale, commitment, and achievement (Ellis, 1988). When a school leader effectively communicates a vision for success, models positive expectations, exhibits optimism, and utilizes inviting leadership practices, the teachers' behaviors become positively influenced (Asbill, 1994; Asbill & Gonzalez, 2000; Burns & Martin, 2010).

## **Leadership Traits That Influence School Climate**

Leaders demonstrating emotional intelligence and those promoting the tenets of Invitational Education (IE) theory exhibit common competencies. Emotional intelligence requires competency regarding one's own emotions and the emotional needs of others to effectively address the complex social challenges arising within one's environment (Mumford, Zaccaro, Connelly, & Marks, 2000). Educators trained to develop emotional intelligence as part of their leadership development can proactively utilize both their cognitive and metacognitive skills (Brackett & Katulak, 2007). These educators can then evoke their emotional intelligence competencies and positively influence followers' well-being as well as performance by modifying approaches to align with the given situation (Pashiardis, 2009).

People with high emotional intelligence are more likely to exhibit attributes perceived by others as positive (Bradberry & Greaves, 2009). A leader with high emotional intelligence optimizes the installation of trust (Bradberry & Greaves, 2009). Trustworthiness positively influences other areas, thereby increasing organizational success (Caldwell & Hayes, 2007).

Results of a study by Momeni (2009) found a positive association between managers with high emotional intelligence and organizational climate (OC). Further analysis of the relationship between dimensions of emotional intelligence and OC identified a positive correlation between all dimensions of both constructs. The emotional intelligence dimensions for self-awareness and self-management were most influential upon climate. Credibility, a synonym for trustworthiness, exhibited the most influence upon emotional intelligence (EI). By highlighting the importance of emotions and management styles in the creation of organizational climate, Momeni's (2009) study reinforced the need to investigate the relationship between a leader's demonstrated EI and teachers' perceptions of school climate as outlined by this study.

At the turn of the new millennium, research on the effects of IE theory in relation to educational administration and school climate remained comparatively new (Egley, 2003). As a comprehensive school climate approach, IE includes many elements needed for success within educational organizations (Purkey & Siegel, 2013). Research by Burns and Martin (2010) identified a statistically significant relationship between school climates that utilized Invitational Education practices and schools identified as effective.

A meta-analysis of relevant research identified twenty-one school leadership practices that positively influence student achievement (Marzano, Waters, & McNulty, 2005). These behaviors were also present in studies that investigated Invitational Education (IE) Theory and school climate (Asbill, 1994; Smith, 2015; Schmidt, 2007). While previous literature identified the dynamics involving emotional intelligence skills (Goleman, 1998; Bradberry & Greaves, 2009; Sanders, 2010) and behaviors attributed to perceptions of positive school climate, a potential link between demonstrated emotional intelligence skills to school climate needed further research (Curry, 2009).

Leadership advancing Invitational Education (IE) theory encourages people to tap into their unlimited potential (Purkey & Siegel, 2013; Burns & Martin, 2010). Explicit invitations for personal and professional development need to be delivered and recognized as an opportunity (Purkey & Novak, 2016). Therefore, to be dependably inviting, school leaders need to have the skills to effectively convey and then check for receipt. Only then does acceptance become a possibility.

Effective leaders seek to produce a collective, energized, collaborative commitment to the organization's clear mission, shared vision, and non-negotiable values (Marzano & Waters, 2009). Effective leaders seek to find a balance between motivating their learners and minimizing negative emotions. While self-destructive schools gravitate toward fear and stress, schools making a

difference consistently exhibit love, courage, and hope (Reason, 2010). Therefore, the leader developing an effective school climate exhibits an ability to understand and address the range of emotions exhibited by stakeholders.

The relationship between leadership behaviors and stakeholder perceptions of trustworthiness is important to researchers and managers interested in how leadership behaviors influence other areas of the organization (Caldwell & Hayes, 2007). Key characteristics associated with most leadership theories include the ability to quickly assess situations, move accordingly for the benefit of the group, and to engender trust from followers (Burke, Sims, Lazzara, & Salas, 2007). Quickly assessing situations and moving accordingly for the benefit of the group is what Roach et al. (1999) called “wisdom in spontaneity” (p. 17). Emotional intelligence theorists call such abilities social awareness and relationship management (Bradberry & Greaves, 2009).

### **Constructs for Measuring Emotional Intelligence**

Emotional intelligence provides a framework for this study. Definitions and theories seeking to describe emotional intelligence continue to evolve. Thorndike (1920) described social intelligence. Describing multiple intelligences, Gardner (1983) identified interpersonal and intrapersonal intelligences. Both interpersonal and intrapersonal intelligences include elements related to, yet distinct from, social intelligence (Mayer & Salovey, 1997).

Emotional intelligence entails the accurate appraisal, expression, and regulation of emotions in oneself and others in a way that enhances living (Mayer & Salovey, 1997). Cooper and Sawaf (1997) believed the following sub-skills comprise emotional intelligence: 1) emotional literacy, 2) emotional fitness, 3) emotional depth, and 4) emotional alchemy. As a general construct, emotional intelligence encompasses emotional, personal, and social abilities influential upon one’s overall capability to effectively deal with environmental demands and pressures (McCallum & Piper, 2000). Schutte et al. (1998, 2001) further defined emotional intelligence as the ability to adaptively recognize, express, regulate, and harness emotions. Diverse cognitive or emotional intelligence skills vary by age, gender, and developmental level (Gardner, 1995); which impact one’s level of competency or FLOW (Csikszentmihaly, 2013).

Emotional intelligence skeptics believe there is little evidence to the existence of emotional intelligence because it cannot be reliably measured or predict important outcomes (Mayer et al., 1997). Other researchers (Zeidner, Matthews, Roberts, & MacCann, 2003) identified a variety of ambiguities within both ability and mixed models of emotional intelligence. Zeidner et al. (2003) believed “a valid test for EI needs to predict real-world competence and adaptation” (p. 71).

A related perspective views emotional intelligence as an aggregate of abilities and capabilities enabling a person to correctly understand one’s own and others’ emotions in real time to intelligently produce transactional outcomes that are personally and socially desirable (Kunnanatt, 2004). Traditionally, a mixed model of emotional intelligence explicitly merges a combination of emotional intelligence dimensions and non-emotional intelligence dimensions such as personality dimensions. This is evident in the Bar-On EQ-I survey, which includes a dimension rating one’s ability to evaluate what is experienced compared to what objectively exists (Bar-On, 2000). However, this dimension more closely aligns with psychoticism, a psychopathological condition, rather than emotional intelligence. Another example of a mixed-model measure of emotional intelligence is found in the Emotional Competence Inventory (ECI), which includes a ‘conscientiousness’ dimensions, defined as, “Taking responsibility for personal performance” (Sala, 2013, p.2). However, McCrae (2004) considers conscientiousness a dimension of personality.

Within the context of emotional intelligence, at least two perspectives are possible: maximal emotional intelligence performance and typical emotional intelligence performance (Gignac, 2010). Typical performance is a more reliable indicator of actual behavior (Sackett et al., 1988). Gignac (2010) and Palmer et al. (2009) suggest emotional intelligence is purely relevant to the demonstration of emotional intelligence skills. The typical emotional intelligence performance perspective grounds the Genos Emotional Intelligence inventories (Palmer et al., 2009).

The Genos Emotional Intelligence inventories are not a mixed-model measure of emotional intelligence. In developing the Genos Emotional Intelligence inventories, the authors advanced the belief that a model of emotional intelligence should only include psychological attributes with direct relevance to the identification, utilization, and management of emotions (Gignac, 2010). Therefore, development of the Genos Emotional Intelligence inventories were based on an emotional intelligence model seeking to demonstrate emotional intelligence sub-skills across the following seven individual differences dimensions: Emotional Self-Awareness, Emotional Expression, Emotional Awareness of Others, Emotional Reasoning, Emotional Self-Management, Emotional Management of Others, and Emotional Self-Control. Thus, this study considered the evolving explication of emotional intelligence as the ability to perceive emotions for effective living, working, and relating to others in an increasingly social world and workplace.

The evaluation of emotional intelligence with a self-report measure exacerbates possible problems resulting from socially desirable responding (SDR), which is known as faking good (Downey et al., 2006). While self-report approaches are appropriate as measures of self-perceived EI, they often do not actually measure emotional intelligence ability (Mayer et al., 2004a). To mitigate problems caused by the utilization of an approach that may produce SDR, this study will use the Genos 360 EI Assessment-Concise Rater version. This instrument assesses typical emotional intelligence performance and requires study participants to complete a concise, third-person version of the Genos Emotional Intelligence Assessment (Palmer et al., 2009) to identify the leader's demonstrated emotional intelligence behaviors in the workplace.

### **Invitational Education Theory as a Framework for Measuring School Climate.**

School climate based on Invitational Education theory (Purkey & Novak, 1994, 2008) provides the second framework for this study. School climate contributes to student achievement, success, and psychological well-being (Cohen, McCabe, Michelli, & Pickeral, 2009; Fan, Williams, & Corkin, 2011; Steyn, 2007; Zullig, Koopman, Patton, & Ubbes, 2010). School climate also influences positive youth development, effective risk prevention, and increased retention rates for teachers and students (Cohen et al., 2009; Huebner & Diener, 2008). Although commonly used in research, school climate is a term without a common definition. Various studies might call school climate "school environment or school-level learning environment" (Johnson & Stevens, 2006, p. 111).

When trying to learn about organizational environments, Moos (1974) suggested evaluating and analyzing three dimensions of psychosocial environments. These three relationship-based dimensions should describe interpersonal interactions, personal development, and system maintenance/change. These dimensions exhibit similarities to Mayer and Salovey's (1997) emotional intelligence theory, whereby the ability to understand the relationships of people, understanding emotions, reacting to emotions, and tempering one's own emotion are all vital to the organization's overall health.

Reviewing the literature involving school climate revealed two levels. One is classroom level environments, which focus upon the relationships between students and teachers. The second is school level environments, which entails the relationships of teachers to other teachers as well as teachers to administration (Stewart, 1979). Previous studies on school level environments were associated with school leadership (Anderson, 1982; Fisher & Fraser, 1990) and identified the importance of studying school environments in relation to the school's functioning, levels of satisfaction, productivity exhibited within the school, and relationships with other teachers and school leaders.

School climate plays an important role in how stakeholders perceive the school (Curry, 2009). Evaluation of school climate reflects stakeholder perceptions of the social, emotional, and academic experiences of school life. Stakeholders need to include students, administrators, teachers, parents, and support staff (Smith 2012). The literature suggested leaders high in emotional intelligence may be more competent to influence, inspire, intellectually stimulate, and develop their staff to promote a culture of sustained educational success (George, 2000; Marzano, Waters and McNulty, 2005; Moore, 2009; Ross, 2000; Salovey and Mayer, 1990; Sanders, 2010; Wolff, Pescosolido, & Druskat, 2002). Inviting behaviors exhibited by the leader optimizes the school climate (Asbill, 1994; Purkey & Siegel, 2008; Schmidt, 2007; Smith, 2015).

### **Methodology**

The scope of inquiry for this quantitative research method addressed specific questions and hypotheses. Data was described numerically while analysis employed descriptive and inferential statistics, including correlation analysis, regression analysis, mean, mode, and median (VanderStroep & Johnson, 2010). This quantitative study investigated the relationships between variables. This study's methodology analyzed the magnitude of relationships found within the collected data to test stated hypotheses (Hopkins, 2008).

Since a more objective look at data allows objective conclusions to be drawn, utilization of quantitative methodology for this study minimized the subjectivity of judgment (Kealey, Protheroe, MacDonald, & Vulpe, 2003). Quantitative research involves counting and measuring, thereby allowing statistical analysis of numerical data (Smith, 1988). For the purposes of this study, quantitative methodology provided the best approach for identifying the relationship between the variables: a leader's demonstrated emotional intelligence and a teacher's perception of school climate.

Given the school climate reflects a personal evaluation of the school (Cohen, 2006; Freiberg, 1999), school leaders desirous of collecting and analyzing perceptions from the school community need reliable and valid instruments to measure school climate. The *Inviting School Survey-Revised (ISS-R)*, (Smith, 2015), which is grounded in Invitational Education theory (Purkey & Novak, 2016) meets this need. Invitational Education (IE) theory "States that everyone and everything in and around the school contributes to the creation of the environment" (Asbill, 1994, p. 46). For this study, perceived school climate was rated based on the five domains explicated by Schmidt (2007) and Smith (2012, 2015). Because this study evaluated the rated emotional intelligence demonstrated by school leaders in relation to school climate as perceived by teachers, the ISS-R provided an ideal quantitative instrument.

The criterion (dependent) variable exhibited a potential ordinal range of responses based on the responding teacher's interval-level perceptions of school climate as identified through the *Inviting School Survey-Revised* (Smith, 2015). Development of the ISS-R utilized assumptions and practices of Invitational Education (IE) theory (Amos, Smith, & Purkey, 2004; Novak, 1992;

Purkey & Novak, 2008; Purkey & Schmidt, 1987; Purkey & Stanley, 1991). IE theory provides a template for successful educational leadership and increased accountability during educational change (Purkey & Novak, 1996, Novak, 2009; Purkey & Siegel, 2003; Schmidt, 2007). IE theory contributes to the growth of trust and social capital by the way in which leaders promote a climate of caring and support for the efforts of others (Purkey & Siegel, 2013).

Third party rating of leaders' emotional intelligence and self-rating of perceptions of school climate based on Invitational Education theory and practice provided relatively new concepts for study. Leadership from a social perspective is more established. The study's predictor (independent) variable investigated the certified teacher's rating of his or her school leader's demonstrated emotional intelligence behaviors in the workplace. Using the Genos 360 EI Assessment-Concise Rater (Palmer et al., 2009), the predictor (independent) variable would exhibit a potential ordinal range of responses based on the certified teachers' ratings of his or her individual school leader's typically demonstrated emotional intelligence behaviors.

A *Pearson* correlation tested the null hypothesis of the first research question. Given a relationship was found with the predictor variable, additional simple linear regression procedures then explored in-depth the responses specific to the seven subscales of the Genos 360 EI Assessment-Concise Rater (Palmer et al., 2009) and the five domains of the ISS-R (Smith 2012). The five domains of the ISS-R are known as the 5-*Ps*: People, Places, Policies, Programs, and Processes (Schmidt, 2007; Smith, 2015). The additional simple linear regression analyses of results demonstrated the degree to which dimensions of the predictor variable (leader's EI behaviors) positively or negatively predict the teacher's perceptions based on five domains of school's climate.

## **Assumptions**

One assumption of this study was that certified teachers could accurately describe emotional intelligence behaviors based on their experience with their principal or school leadership. Pertaining to this assumption, reliability was optimized by the target population completing a valid third-person version of the Genos EI Assessment (Palmer et al., 2009). This approach provided an assessment of the frequency of emotionally intelligent behaviors demonstrated by the respondent's school leader, which was then analyzed in relation to the respondent's perception of his or her school's climate.

The Genos EI Assessment was specifically designed for implementation within workplace settings (Palmer et al., 2009). The increased 'face validity' of the inventory resulted from specifying a context for respondents to complete the inventory. In contrast, to other emotional intelligence measures that may incorporate dimensions of personality or common competencies, only seven dimensions obviously associated with emotional intelligence in the workplace have been included within the Genos model of emotional intelligence.

Typical emotional intelligence performance, distinct from maximal emotional intelligence performance, describes the theoretical perspective of the Genos EI Assessment (Gignac, 2010). This makes the Genos EI Assessment unique. It is the only emotional intelligence inventory explicitly formulated within the context of typical emotional intelligence performance. Typical performance is a more reliable indicator of actual behavior (Sackett, Zedeck, & Fogli, 1988). As such, the Genos EI Assessment is better aligned with the needs of the workplace and thereby purely relevant to the demonstration of emotional intelligence behaviors across the following seven individual dimensions (subscales): Emotional Self-Awareness, Emotional Expression, Emotional

Awareness of Others, Emotional Reasoning, Emotional Self-Management, Emotional Management of Others, and Emotional Self-Control.

Criticism exists whenever emotional intelligence is exclusively measured using a self-report instrument so this research utilized an observer rating scale. While some self-report approaches are appropriate as measures of self-perceived emotional intelligence, they often do not actually measure emotional intelligence ability (Mayer, Salovey, & Caruso, 2004). To quell criticisms of emotional intelligence as a construct, utilization of an observer rating scale rather than self-assessing emotional intelligence, mitigates possible problems resulting from socially desirable responding (SDR), known as faking good (Downey, Godfrey, Hansen, & Stough, 2006).

### **Limitations**

Self-perceptions created limitations to the study. Validated instruments such as the Genos 360 EI Assessment (Concise) (Palmer et al., 2009) and ISS-R (Smith, 2015) allowed for third-party rater and reporting of perceptions. This approach allowed subsequent analysis of the relationship between the identified independent variable and dependent variable. Analysis of the certified teacher's ratings of the school leader's demonstrated emotional intelligence behaviors, correlated with the teacher's perceptions of school climate. This addressed the need identified by Curry (2009) to use quantitative instruments to explore the relationship of these variables. Analysis of demonstrated emotional intelligence behaviors based on the seven subscales of the Genos 360 EI Assessment-Concise Rater (Palmer et al., 2009) provided a succinct investigation of the relationship between the demonstrated emotional intelligence subscales and the five dimensions of school climate based on IE theory.

The quantitative correlational study created four primary limitations:

- The researcher's availability to access a single university within a specific geographical area, created a small sample size and low statistical power.
- The time of year for the data collection also presented a limitation in relation to the rate of response.
- The correlational research design only allowed reporting of the relationships based on the given context. For instance, there may be greater optimism at the beginning of a school year compared to the end.
- The Genos EI Assessment-Concise Rater version (Palmer et al., 2009) is a valid and reliable survey instrument. However, unfamiliarity with emotional intelligence, test anxiety, time of year when the survey was completed, time devoted to the survey completion, and fidelity in responding to the survey all created additional limitations.

Limitations could influence individual ratings and perceptions. Therefore, the overall analysis is potentially impacted. Individually and collectively, these limitations influence the ability to generalize results.

### **Delimitations**

Delimitations define the parameters of an investigation. Frequently, delimitations in educational research involve the population, sample, time, setting, and utilized instruments. To be most reliable, school climate needs to be time tested (Johnson et al., 2007). This researcher understood that time of year, internal school events, external community events, attrition of staff, and media exposure based on high-stakes testing, influenced teacher perceptions of school climate. Since perceptions of school climate for a particular school may change daily, school climate needs

to be time tested (Johnson et al., 2007). Therefore, these school climate results were delimited by the point-in-time evaluation and, as a result, should not be generalized.

### **Research Questions and Hypotheses**

The following research questions and null hypotheses guided this study:

R<sub>1</sub>: Do the certified teachers' rating of their individual school leader's demonstrated emotional intelligence behaviors correlate with perceptions of school climate based on Invitational Education theory?

H<sub>01</sub>: The certified teachers' rating of their individual school leader's demonstrated emotional intelligence behaviors do not correlate with perceptions of school climate based on Invitational Education theory.

R<sub>2</sub>: Based on teacher ratings, how does each of the seven dimensions of a school leader's typically demonstrated emotional intelligence behaviors positively or negatively change the teacher's perceptions of the school's climate based on Invitational Education theory?

H<sub>02</sub>: Based on teacher ratings, there are no dimensions of a school leader's typically demonstrated emotional intelligence behaviors that positively or negatively change the teacher's perceptions of the school's climate based on Invitational Education theory.

R<sub>3</sub>: Based on teacher ratings, how does each of the seven dimensions of a school leader's typically demonstrated emotional intelligence behaviors positively or negatively change the teacher's perceptions of the five domains of the school's climate based on Invitational Education theory?

H<sub>03</sub>: Based on teacher ratings, there are no dimensions of a school leader's typically demonstrated emotional intelligence behaviors that positively or negatively change the teacher's perceptions of the five domains of school climate based on Invitational Education theory.

The research questions guided the investigation of relationships between variables identified in the problem statement. The first research question investigated the relationship between variables. The second and third research questions investigated whether the predictor (independent) variable: the seven observed emotional intelligence subscales of the Genos 360 EI Assessment (Concise) (Palmer et al., 2009) predicts the criterion (dependent) variable: the teacher's perception of school climate based on the five ISS-R Domains of Invitational Education theory known as: People, Places, Policies, Programs, and Processes (Smith, 2012).

### **Population and Sample Selection**

The target population comprised 219 certified teachers participating as students within the Mid-Atlantic region college's Education Division graduate programs or its post-baccalaureate special education certification program. Potential participants were currently teaching or held a teaching position within the last year. An a priori power analysis is typically done when designing a study. Given the utilization of quantitative digital, Likert-Scale survey distributed through Qualtrics and three follow-up requests to participate, an exceptional 25% rate of response would result in 54 participants from the target population. Given the additional responsibilities during the beginning of the school year, a more realistic expectation was for a 20% rate of response to the survey, thereby comprising a sample of 44 students from the target. While the a priori power calculations indicated a larger sample as the ideal, the post hoc power analysis indicated the 42

participant cases that comprised the sample achieved significant statistical results based on the *Pearson* correlation procedure.

### **Data Collection Procedures**

At least 40 volunteers needed to participate from the target population. The study required completion of a single, three-part, digital survey accessed through the Qualtrics system. The Genos 360 EI Assessment (Concise) (Palmer et al., 2009), the ISS-R (Smith, 2015) and a demographic profile comprised the three parts. Both instruments were rating scales, which are useful when evaluating behaviors on a continuum (Leedy & Ormrod, 2005). Utilization of a Likert scale provided interval data related to the level of agreement with behaviors described on the survey.

The first part of the single digital survey comprised the Genos 360 EI Assessment-Concise Rater (Palmer, et al., 2009). The Genos 360 EI Assessment-Concise Rater is a 31-item instrument designed to rate individual school leader's demonstrated emotional intelligence behaviors specific to the work environment. Participants were able to complete this version in fewer than 15 minutes.

The second part of the single digital survey comprised the 50-item *Inviting School Survey-Revised* (Smith, 2005). The instrument measured the participant's perception of school climate based on Invitational Education theory and practice. Therefore, this part of the digital survey provided data responsive to the criterion (dependent) variable. Participants were able to complete this part in fewer than 20 minutes.

The third part of the survey identified demographic elements. The demographic data collection identified the respondent's age range, teaching experience, gender, and rated leader's gender and experience. This demographic data primarily ensured the respondent was a certified teacher and the rated leader was at the school for at least two years. Participants were able to complete this part in fewer than 5 minutes.

To protect the target population's confidentiality, the Mid-Atlantic region college's Registrar's office distributed the single, three-part digital survey through its Qualtrics system. This researcher developed an inviting email to participants anonymously identified by the Registrar as members within the target student population. The email included an introduction from this researcher, guaranteed confidentiality, and detailed the informed consent agreement. The email provided a link to the digital survey. Therefore, confidentiality and anonymity of each voluntary participant within the target population was fully protected. Only a data file of responses was provided to the researcher. While informed consent was detailed in the email that provided the link to the survey, implied informed consent to participate in the study was based on voluntary completion of the digital survey accessed through the Qualtrics system.

The data collection of digital survey responses lasted six weeks during the fourth quarter of 2014. The Qualtrics system generated three follow-up e-mail reminders to potential unresponsive participants to initial requests for survey completion. This approach sought to optimize the rate of response (Dillman, 2007).

When participants completed the survey through the digital survey accessed through Qualtrics, data became available for analysis. The system anonymously tracked participation. This prevented redundancy of participation requests and allowed the potential for real-time monitoring of data collection.

## Data Analysis Procedures

At the end of the data collection period, the Institutional Research Coordinator accessed the data collected from the digital survey and initially saved it as an excel spreadsheet. This researcher then uploaded the data to the Statistic Program for the Social Sciences (SPSS) software (Norusis, 2011). Since the two instruments were combined into one digital survey, each respondent represented a single case, responding to both instruments designed to test the null hypotheses of the research questions.

Data analysis began with preparation of the data. Preparation followed a logical order for cleaning and processing the data. Analytical procedures included descriptive analysis, testing of assumptions, tests for normalcy, *Pearson r* analysis, and simple linear regression analyses.

Descriptive analysis determined means, medians, and modes for the predictor and criterion variables. Tests for assumption of normal distribution were conducted to ensure the efficacy for using a *Pearson r* procedure. Assumptions of normality, linearity, and homogeneity of variance were evaluated to detect the presence of any violation of parametric assumptions. It is only appropriate to use a *Pearson r* procedure if the data satisfies four assumptions that would produce a valid result.

Given satisfaction of all four test of assumptions, a *Pearson* correlation was conducted to determine the relationship between the variables. Again, all correlational data was acquired through the Genos 360 EI Assessment-Concise Rater (Palmer et al., 2009) instrument and the Inviting School Survey-Revised (Smith, 2015) instrument that comprised this study's digital survey. Given a relationship between the predictor variable and the criterion variable rejected the null hypothesis for the first research question, simple linear regression analyses then tested the degree to which dimensions of the predictor (independent) variable positively or negatively change the teacher's perception of the overall school's climate. This procedure rejected the null hypothesis of the second question. Further simple linear regression analyses then tested the degree to which dimensions of the predictor variable positively or negatively change the teacher's perceptions based on the five domains of school climate. Thus, the third research question required estimating thirty-five simple linear regression analyses.

## Results

Descriptive data described the sample's characteristics and the demographics of participants in the study. Demographically, the sample ranged in age from 22-56 years. Respondents averaged 36.4 years of age, have been certified teachers for 5.3 years, and employed at their current school for 5.3 years. On average, the rated principal provided 5.1 years of service to the rated school. Eleven of the respondents were beginning their second year of certified service to the rated school while seven principals were beginning their second year of leadership at the rated school. The sample (N= 42) represented seven males (16.7%) and 35 females (83.3%). While this distribution exhibits a lack of equity compared with the general population, it aligns with the distribution found within the teaching profession, whereby some 76 percent of public school teachers identified as female (U.S. Department of Education, National Center for Education Statistics, 2015).

For parametric testing such as the *Pearson r* correlation, both variables needed to be normally distributed. Tests of assumptions reviewed linearity and homoscedasticity. While linearity assumes a straight-line relationship between each of the variables in the analysis, homoscedasticity assumes normal distribution of the data around the regression line.

Given satisfaction of the tests of assumptions, *Pearson r* analysis was apropos for testing the null hypothesis of research question one, which examined the relationship between two variables. The *Pearson r* analysis revealed a moderately strong relationship in a positive direction (.564) between the leaders' demonstrated emotional intelligence behaviors and their perception of school climate. *Pearson r* analysis results rejected the null hypothesis of the first research question.

Having found a positive linear relationship between the variables, the data were submitted to simple linear regression analysis. Simple linear regression procedures then investigated the leaders' demonstrated emotional intelligence behaviors (predictor/independent) variable based on the seven subscales of the Genos 360 EI Assessment-Concise Rater. As a reminder, the seven subscales include: Emotional Self-Awareness (ESA), Emotional Expression (EE), Emotional Awareness of Others (EAO), Emotional Reasoning (ER), Emotional Self-Management (ESM), Emotional Management of Others (EMO), and Emotional Self-Control (ESC) (Palmer et al., 2009). To test the null hypothesis of the second research question, seven simple linear regression procedures were utilized to analyze the results of the teacher's perception of the school climate based on the overall ISS-R scale. Results of the initial seven simple linear regression procedures rejected the null hypothesis of the second research question, thereby accepting the alternate.

Thirty-five additional simple linear regression procedures then identified the degree to which the seven dimensions of the leader's typically demonstrated emotional intelligence behaviors predicted the teachers' perceptions of the five measures of school climate. The additional simple linear regression analyses provided further information about the predictability of the relationship by analyzing the relationship between the leader's typically demonstrated emotional intelligence behaviors represented by the seven dimensions of the Genos 360 EI Assessment-Concise Rater instrument and the five domains of school climate represented by the Inviting School Survey-Revised instrument.

As noted below in Table 1, the *Pearson r* is .564. This demonstrates the strength and direction of the relationship as moderately strong in a positive direction. The strength and direction of the relationship suggest that as the teachers' rating of the leader's demonstrated emotional intelligence behaviors increase, so do their positive perceptions of school climate. Likewise, as their rating of the leader's demonstrated emotional intelligence behaviors decrease, so would the teachers' positive perceptions of school climate. The *Sig.* value in this analysis is 0.00 (See Table 1). Since the value is less than .05 there is arguably a statistically significant correlation between the two variables.

Table 1  
*Correlation Statistics for Dependent and Predictor Variables: Perceptions of School Climate and Leaders' Demonstrated Emotional Intelligence*

		Mean_GenosEI_Overall_ recode	Mean ISSR_Overall
Mean_GenosEI_Overall_ recode	Pearson Correlation	1	.564**
	Sig. (2-tailed)		.000
	N	42	42
Mean_ISSR_Overall	Pearson Correlation	.564**	1
	Sig. (2-tailed)	.000	
	N	42	42

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Regression analysis procedures measured how well the overall model fits. Specifically, how well the predictor: the leader’s demonstrated EI behaviors based on the Genos instrument scores, predict the teacher’s perception of school climate based on the ISS-R scores. As noted in Table 1 above, a *Pearson r* of .564 indicates the strength and direction of the relationship as being moderately strong in a positive direction. Table 2 below, identifies the *R* as .693<sup>a</sup> and the *R square* as .480, which shows a strong positive relationship between the group of predictors and the outcome variable (*R*). The results of the analysis suggests that as a collective, leaders’ demonstrated EI can predict about 48% of the variance in teachers’ perception of school climate.

Table 2  
*Model Summary for Dependent Variable: Perceptions of School Climate and Predictors Dimensions of Leaders’ Demonstrated Emotional Intelligence*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.693 <sup>a</sup>	.480	.372	.465

a. Predictors: (Constant), Mean\_ESC, Mean\_ESA, Mean\_ER, Mean\_EE, Mean\_EMO, Mean\_ESM, Mean\_EAO

Table 3 below details the results of the linear regression procedures designed to test the null hypothesis for research question two. In relation to overall ISS-R responses, the *Coefficients*<sup>a</sup> for four of the seven Genos EI subscales indicated a relationship in the positive direction. As a result of linear regression analysis procedures, for four of the seven EI subscales it can be concluded that an increase within the five point scale of the leader’s exhibited dimension of EI, results in an increase within the mean of the teacher’s perception of overall school climate. Most significantly, as noted in Table 3, a point increase within the five point scale of the leader’s exhibited Emotional Management of Others (EMO) results in an increase of .329 within the mean of the teacher’s perception of overall school climate. A point increase within the five point scale of the leader’s exhibited Emotional Self-Control (ESC) results in an increase of .317 within the mean of the teacher’s perception of overall school climate.

Table 3  
*Regression Analysis for Dependent and Predictor Variables Testing Null Hypothesis 2*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.377	.274		5.019	.000
Mean_ESA	-.128	.156	-.172	-.816	.420
Mean_EE	.130	.143	.189	.909	.370
Mean_EAO	-.063	.162	-.105	-.388	.700
Mean_ER	.071	.117	.122	.608	.547
Mean_ESM	-.221	.155	-.333	-1.421	.165
Mean_EMO	.329	.143	.494	2.310	.027
Mean_ESC	.317	.157	.486	2.016	.052

According to the coefficients in Table 3 above, by absolute value, regardless of the positive or negative sign of the beta value, EMO (.494) and ESC (.486) appears to be the most important predictors for school climate. By contrast, EAO (-.105) and ER (.122) appears to be the weakest predictors for school climate. Of the seven potential predictors, based on the *Sig.* value shown in Table 3, EMO and ESC were found to be significant predictors for school climate. Thus, the null hypothesis for the second research question was rejected; thereby accepting the alternate that dimensions of a school leader's typically demonstrated emotional intelligence behaviors either positively or negatively change the teacher's perceptions of overall school climate.

Additional linear regression procedures examined whether dimensions of a school leader's typically demonstrated emotional intelligence behaviors can predict the teacher's perceptions of the five domains of school climate: People, Program, Process, Policy, and Place. The following Tables 4-8, detail the results of these additional linear regression procedures. Based on the results of the additional linear regression procedures, the null hypothesis for the third research question was rejected; thereby accepting the alternate that dimensions of a school leader's typically demonstrated emotional intelligence behaviors either positively or negatively change the teacher's perceptions of a specific domains of the school's climate.

Table 4  
*Regression Analysis: Coefficients<sup>a</sup> for the Seven Emotional Intelligence Dimensions in Relation to the **People** Subscale of School Climate Testing Null Hypothesis 3*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.199	.310		3.864	.000
Mean_ESA	-.086	.177	-.107	-.486	.630
Mean_EE	.192	.162	.257	1.187	.243
Mean_EAO	.055	.183	.085	.300	.766
Mean_ER	.017	.133	.026	.125	.901
Mean_ESM	-.172	.176	-.239	-.978	.335
Mean_EMO	.442	.161	.612	2.743	.010
Mean_ESC	.033	.178	.047	.186	.854

a. Dependent Variable: Mean\_People\_ISSR

Table 5

*Regression Analysis: Coefficients<sup>a</sup> for the Seven Emotional Intelligence Dimensions in Relation to the **Program** Subscale of School Climate Testing Null Hypothesis 3*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.390	.302		4.609	.000
Mean_ESA	-.005	.172	-.006	-.028	.978
Mean_EE	.037	.157	.048	.236	.815
Mean_EAO	.147	.178	.218	.825	.415
Mean_ER	.044	.129	.067	.339	.737
Mean_ESM	-.230	.171	-.308	-1.346	.187
Mean_EMO	.235	.157	.312	1.498	.143
Mean_ESC	.297	.173	.403	1.716	.095

a. Dependent Variable: Mean\_Program\_ISSR

Table 6

*Regression Analysis: Coefficients<sup>a</sup> for the Seven Emotional Intelligence Dimensions in Relation to the **Process** Subscale of School Climate Testing Null Hypothesis 3*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.638	.404		4.050	.000
Mean_ESA	-.319	.231	-.338	-1.383	.176
Mean_EE	.217	.211	.248	1.028	.311
Mean_EAO	-.147	.238	-.195	-.618	.541
Mean_ER	.224	.173	.304	1.298	.203
Mean_ESM	-.220	.229	-.262	-.961	.343
Mean_EMO	.196	.210	.232	.932	.358
Mean_ESC	.354	.232	.428	1.527	.136

a. Dependent Variable: Mean\_Process\_ISSR

Table 7

*Regression Analysis: Coefficients<sup>a</sup> for the Seven Emotional Intelligence Dimensions in Relation to the **Policy** Subscale of School Climate Testing Null Hypothesis 3*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.412	.324		4.360	.000
Mean_ESA	-.134	.185	-.166	-.725	.473
Mean_EE	.081	.169	.108	.478	.636
Mean_EAO	-.088	.191	-.136	-.459	.649
Mean_ER	.020	.139	.031	.143	.887
Mean_ESM	-.241	.183	-.337	-1.316	.197
Mean_EMO	.320	.168	.443	1.898	.066
Mean_ESC	.423	.186	.598	2.276	.029

a. Dependent Variable: Mean\_Policy\_ISSR

Table 8

*Regression Analysis: Coefficients<sup>a</sup> for the Seven Emotional Intelligence Dimensions in Relation to the **Place** Subscale of School Climate Testing Null Hypothesis 3*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.412	.338		4.180	.000
Mean_ESA	-.123	.193	-.138	-.641	.526
Mean_EE	.073	.176	.088	.412	.683
Mean_EAO	-.271	.199	-.377	-1.360	.183
Mean_ER	.088	.144	.126	.611	.545
Mean_ESM	-.269	.191	-.338	-1.407	.169
Mean_EMO	.329	.176	.410	1.872	.070
Mean_ESC	.622	.194	.791	3.209	.003

a. Dependent Variable: Mean\_Place\_ISSR

Analysis of the Emotional Self-Control (ESC) results predicts a strong relationship in the positive direction between the Places, Policies, Programs, and Processes, domains of the ISS-R. Analysis of the Emotional Management of Others (EMO) results predicts a strong relationship in the positive between the People, Places, Policies, and Programs, domains of the ISS-R. By

contrast, analysis of the Emotional Self-Awareness (ESA) results predicts a strong relationship in the negative direction between the People, Places, Policies, Programs, and Processes, domains of the ISS-R. Analysis of the Emotional Awareness of Others (EAO) results predicts a mild to strong relationship in the negative direction between the Places, Policies, and Processes, domains of the ISS-R.

A point increase within the five-point scale of the leader's exhibited ESC predicts an increase of .622 within the mean of the Place domain of ISS-R responses. A point increase within the five-point scale of the leader's exhibited EMO, predicts an increase of .329 within the mean of the Policy domain of ISS-R responses. Linear regression procedures comparing ESC and the mean of the Place domain of ISS-R responses exhibit a very strong relationship in the positive direction ( $Beta=.791$ ) and Significance ( $p-value=.003$ ).

### **Conclusions**

Previous literature (George, 2000; Marzano, Waters and McNulty, 2005; Moore, 2009; Ross, 2000; Salovey and Mayer, 1990; Sanders, 2010; Wolff, Pescosolido, & Druskat, 2002) suggested that leaders high in emotional intelligence may be more competent to influence, inspire, intellectually stimulate, and develop their staff to promote a culture of sustained educational success. This investigation reinforced those previous studies and support the conclusions that the EI dimensions: Emotional Self-Control and Emotional Management of Others, predict positive teacher perceptions of the place domain within a school's climate. This investigation certainly can influence teacher preparation programs, the development of educational leaders, staff professional development, and promotion of a school climate dedicated to optimizing the learning for all mission.

### **Recommendations for future research.**

As noted above, this quantitative correlational study had three primary limitations that future research can mitigate. One limitation was the researcher's ability access only a single university within a specific geographical area. In the future, it would be important to conduct a similar study with a larger sample size to boost the statistical power to detect a stronger correlation. Replicating the study by accessing a target population of working certified teachers participating in graduate or baccalaureate teacher programs through a nationwide consortium of universities or multi-state public university systems can increase the sample and provide more generalizable results.

The time of year for the data collection also presented a limitation and adversely impacted the rate of response. To be most reliable, school climate needs to be time tested (Johnson et al., 2007). While perceptions of school climate for a particular school may change daily, assessing perception of school climate in May or June, whereby a full year can be considered and the pressures of the annual test period have concluded, may produce more reliable responses.

The correlational research design only allowed reporting of the relationships based on the given context. For instance, there may be greater optimism at the beginning of a school year compared to the end. Designing a future study of the variables can elicit responses at the beginning of the school year and end of the school year. Analysis of results can then identify the point in time that

will be optimal for future assessment of leaders' demonstrated EI behaviors in relation to school climate based on the dimensions of IE theory.

### **Recommendations for future practice.**

Leaders promoting personally and professionally inviting opportunities for development provide an optimal model for success within today's schools (Burns & Martin, 2010; Purkey & Siegel, 2013). Intentionally advancing the competencies that increase the conveyance and receipt of personal and professional development opportunities could optimize school climate for all stakeholders (Purkey & Novak, 2016). Invitations for personal and professional development need to be explicitly intentional and recognized by the recipient as an opportunity (Purkey & Novak, 2016). Explicit course work in both emotional intelligence behaviors within the workplace and development of school climate based on Invitational Education theory would benefit teacher preparation as well as educational leadership programs.

A previous study by Rojas (2012) asserted three needs for optimal emotional intelligence development among prospective teachers:

1. Development of emotional intelligence begins with a commitment to change.
2. Application of emotional intelligence learning within environments favorable to emotional intelligence development.
3. Pursuit of an ideal allows interdependent application of all other emotional intelligence competencies.

Invitational Education theory seeks to promote trust, collaboration, and purposeful inclusion (Purkey & Novak, 2016; Purkey & Siegel, 2013). However, if "People cannot accept invitations they have never received" (Purkey & Novak, 1996, p.75), how does a teacher's level of emotional intelligence influence her ability to perceive an intentional invitation as an opportunity? Using Invitational Education theory to curriculum map teacher preparation and educational leadership programs could help institutionalize the linear change process entailing: awareness, acceptance, and action (AAA). When the people within an institution collectively demonstrate Emotional Self-Control and Emotional Management of Others they exhibit a greater willingness to create a better place. Related to reform efforts, it is not enough to want to change or need to change. Effective leaders recognize and help others to become aware of the need for change. Only through a linear process: AAA for change (Anderson, 2016), can acceptance of the need to change be reached. Without clear vision, awareness, and acceptance, the actions necessary for change seldom occur.

### **Summary**

The evolving literature regarding leadership, leader's emotional intelligence, school success, and school climate, exhibited a need for further research. This study contributed additional knowledge to the field of education. This study's findings support the previous conclusions offered by Abdulkarim (2013); Juma (2013); Ross (2000); and Sanders (2010), which identified a relationship with the self-reported emotional intelligence in school leaders and the leaders' ability to promote cultural and organizational change within the school.

Emotional Self-Control measures the relative frequency whereby an individual controls her strong emotions appropriately in the workplace. It addresses demonstrated maintenance of focus or

concentration upon the task-at-hand, despite emotional adversity. Emotional Self-Control is more reactive compared to Emotional Self-Management, which is more proactive.

Emotional Management of Others (EMO) measures the relative frequency whereby an individual successfully manages the emotions of others at work, motivates colleagues or followers. EMO also models the modification of the emotions of others for their own personal betterment at work. These behaviors create a positive working environment for others as well as helping individuals resolve distressful issues.

Related to climate, perceptions of a place contribute to school success or failure. Burns and Martin (2010) concluded that observers almost immediately notice the personality of a place, differentiating between a sterile, empty, and lifeless environment compared to a place seen as warm, exciting, and personable based on those inhabiting the space. Purkey and Novak (2016) concluded the place element was the most visible factor within a school's climate. As the physical environment of an organization, places are the easiest element of the framework to change because of its visibility (Hobday-North & Smith, 2014). Given this, the leaders' demonstrated emotional self-control and emotional management of others are extremely influential upon a school's climate. Therefore, let us intentionally invite every educator to lead effectively with optimal emotional self-control and emotional management of others.

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