TEACHERS’ PERCEPTIONS OF SCHOOL CLIMATE IN HIGH PERFORMING SCHOOLS
AND LOW PERFORMING SCHOOLS

by

Briget Quinn Ethier

Liberty University

A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

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ABSTRACT

The purpose of this quantitative, causal comparative research study was to determine if there was a significant difference in teachers’ perceptions of school climate between high performing schools and low performing schools. The study investigated teachers’ perceptions of overall school climate, collaboration, decision-making, instructional innovation, student relations, and school resources. Data was collected from 75 teachers in three high performing schools and 75 teachers in three low performing schools from one school district. The Revised School Level Environment Questionnaire (Revised SLEQ) was the instrument utilized in the study to measure teachers’ perceptions of overall school climate in addition to the five aforementioned subscales. The results obtained from the 150 surveys were analyzed using a multiple independent samples \( t \) tests to identify if there was a statistical difference between group means on the Revised SLEQ. This study is significant because it provide individuals in the field of education with evidence that their perceptions might be impacted by the academic achievement in their schools. The study was also intended to provide evidence that perceptions play a very important role in the overall effectiveness of an educational institution. The study revealed that there was a significant difference between the two populations with regards to overall school climate, student relations, school resources, instructional innovation while there was not a significant difference with regards to decision making and collaboration. Future research is recommended to investigate teachers’ perceptions of school climate with the incorporation of a larger population and the incorporation of more recent data.

Keywords: Academic achievement, environment, impact, perceptions, school climate
Dedication

I was led down this path for a reason that is bigger than anyone will ever know. This dissertation was a positive distraction from a negative event that occurred in my life. God paved the path that led me to Liberty University. I am truly blessed and extremely grateful to have accomplished this significant milestone. It is to Him that I acknowledge for all of my blessings in life.

This dissertation is dedicated to my children, Jordan (18) and Savannah (9), for all of their loving support and encouragement. Jordan, I am so proud of you for doing well in school and establishing life goals for your future. It is obvious that all of my hard work and education have inspired you to make big accomplishments in life. I love you to the moon and back.

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Revised School Level Environment Questionnaire (Revised SLEQ)

Statistical Package for the Social Sciences (SPSS)

Tennessee Comprehensive Assessment Program (TCAP)
CHAPTER ONE: INTRODUCTION

Overview

This chapter provides an overview of background information pertaining to school climate and the importance of further research studies pertaining to school climate. This chapter also provides a historical overview of school climate, which provides details about school climate on a timeline expanding over the past several decades. Information is also provided about how several factors related to school climate have an impact on society-at-large. The chapter concludes with an explanation of the significance of this particular study, which is to provide educators with the knowledge that perceptions play a very important role in the overall effectiveness of an educational institution.

Background

The learning environment at the school-wide level; commonly referred to as school climate, and the relationship that it has to important educational results have been of great interest to educators, researchers, and educational policy makers since the turn of the twentieth century (Bear, Yang, Gaskins, Blank, & Chen, 2014). As a result of the expanding number of research studies correlating school climate to important teacher and student outcomes, there has been an escalating interest on behalf of the aforementioned individuals with regards to measures of school climate that are of practical utility and are psychometrically sound. Unfortunately, it was reported that very few schools utilize efficient, if any measures of school climate (Cohen & Geier, 2010). This study will measure teachers’ perceptions of school climate with the Revised School-Level Environment Questionnaire (Revised SLEQ) for the purpose of exploring whether
the academic status of a school has an impact on teachers’ perceptions of school climate or on the contrary, if the academic status of a school does not have an influence on teachers’ perceptions of the school climate. Several studies have been conducted which have provided evidence that teachers’ perceptions of school climate have an impact on student suspension and expulsion rates (Bear, Gaskins, Blank, & Chen, 2011), increased positive behavior (Yazdanfar, 2014), and increased enthusiasm for learning and absenteeism rates (Thapa, Cohen, Guffey, & Higgins-D’Alessandro, 2013). Additionally, recent research has conveyed that teachers’ perceptions of school climate are correlated with student academic achievement (Bear, Yang, Pell, & Gaskins, 2014; Karadag, Kilicoglu, & Yilmaz, 2014; Bear, Yang, & Pasipanodya, 2015). This study will be conducted to examine the adverse and insufficiently researched viewpoint, which is to determine if there is a correlation between the student academic achievement and teachers’ perceptions of their school’s climate.

**Historical overview**

The concept of school climate could be traced back over 100 years (Thapa, Cohen, Guffey, & Higgins-D’Alessandro, 2013), however, studies were not conducted to investigate and evaluate the importance of the organizational climate until the 1950s (Zullig, Kooman, Patton, & Ubbes, 2010). March and Simon (1958) demonstrated that the purpose of the studies in the 1950s were to analyze businesses and organizations in an attempt to identify correlations between the influences of an organizational environment on outcomes such as employee turnover rates, morale and productivity. In the 1960’s researchers began to examine race differences for the purpose of explaining achievement with mixed success (Coleman, Campbell, Hobson, Mcpartland, Mood, & Weinfield, 1966). During the following decade, researchers began to
study the perceptions of school climate on behalf of stakeholders and the mean outcomes between schools with the purpose of identifying the possible impacts that perceptions have upon various factors in the educational setting (Brookover, Schweitzer, Schneider, Beady, Flood, & Wisenbaker. 1978). In the 1990’s research studies redirected their primary focus on the examination of individual teachers or classrooms, which was caused by the belief that students were most influenced by the environment in which they spent most of their time (Stockard & Mayberry, 1992). Toward the end of the decade and until the present day, researchers have examined and evaluated the phenomenon of school climate and how it impacts several other factors in the school setting (Zullig et al., 2010). In 2009, school climate was defined as the character and quality of school life (Cohen, McCabe, Michelli, & Pickeral, 2009). More recently, Thapa and colleagues (2013) segmented school climate into five specific dimensions for the purpose of studying specific aspects of the phenomenon: the school improvement process, teaching and learning, relationships, safety, and the institutional environment.

In general, there has been an increased concentration on the K-12 school climate over the past three decades by researchers and educators as they have progressively recognized the importance of school climate as a phenomenon. Currently there is still an evolving interest on both the national and international levels regarding school climate reform. This interest specifically pertains to a reform that is embedded in a valid, data-driven school improvement strategy, which subsequently promotes safer, more civil, and more supportive K-12 schools (Thapa et al., 2013).
Society-at-large

Research has produced evidence that school climate is correlated with several factors in the school setting; these factors include student academic achievement and suspensions (Bear, Yang, & Gaskins, 2014), teacher commitment (Collie, Shapka, & Perry, 2011), teaching efficacy and job satisfaction (Collie, Shapka, & Perry, 2012), academic optimism (Kilinc, 2013), teacher leadership (Kilinc, 2014), school satisfaction (Zullig, Huebner, & Patton, 2011), and overall school effectiveness (Rapti, 2013). All of these factors are capable of having an impact on society-at-large, the education system, and the education community.

Evidence to support the claim that school climate has an impact on society-at-large, the education system, and the education community could be observed in a longitudinal study by Alivernini (2011). This particular study revealed that the role of students’ self-determined motivation had a strong connection with the intention to drop out of high school over time. Furthermore, the results of the study also revealed that the level of self-determined motivation of students was directly correlated to teachers’ perceptions of student autonomy and that teacher support was the strongest predictor of students’ intentions to drop out of school. High school dropout rates could have a significant impact on society-at-large due to the fact that dropout students have a higher risk of developing behavioral, social, physical, and mental health problems (Maynard, Salas-Wright & Vaughn, 2015). Additionally, these individuals also have a greater chance of involvement in criminal activity in comparison to their graduate counterparts. Furthermore; high school dropouts also have an effect on the economy due to the fact that they are very costly to society. Each high school dropout accumulates an estimated lifetime cost of approximately $240,000 as a consequence of a higher reliance on public assistance, higher
incidence of illegal activity, and lower tax contributions (Chapman, Laird, Kewal, & Ramani, 2011). These costs are subsidized by and burdened upon average taxpayers in society.

Another consequence that may have an impact on society-at-large and more specifically, the education community is that there could be a lack of a sufficient amount of school teachers obtained by school districts nationwide due to the fact that almost half of American novice teachers abandon the educational field. This departure rate has been correlated with the ideal that school climate plays a large role in teachers’ job satisfaction and job commitment (Meristo & Eisenschmidt, 2014). Furthermore, an effective learning environment and the improvement of student learning relies heavily on teachers’ beliefs about their students’ focus on academic tasks and beliefs in their students’ academic achievement (Kilinc, 2013). These beliefs have been found to be strongly correlated to teacher academic optimism, which is a construct that has been considered as one of the most significant characteristics that influences student learning and achievement as well as the overall school environment (Beard, Hoy, & Woolfolk, 2010).

Additionally, findings from Kilinc’s research (2013) revealed that teachers employed in schools with directive, supportive, and intimate climates were more academically optimistic, which ensued more teacher trust in students and parents, increased sense of teacher efficacy, and an increased amount of teacher academic orientation towards student achievement. More professional development is necessary to establish settings that are supportive for teachers and equally important to inform teachers about the importance of their perceptions and the impact that their perceptions have on a school’s climate. These trainings should include activities that allow school members to spend more time and effort focusing on improving the quality of personal relationships, which could result in the creation of a healthy school environment, which
has been proven in research to be crucial for constructing an academically oriented school (Kilinc, 2013). The increase in the number of schools that establish and maintain professionally trained educators and positive school environments would positively contribute to society-at-large by producing an increased amount of students that are academically proficient (Yazdanfar, 2014).

Lastly, the education system as a whole could also be effected by issues related to school climate via changes in policies, procedures, and practices at the local, state, and national levels. More specifically, an increase in the awareness and the importance of school climate on behalf of educators and researchers may provoke necessary changes in practices, guidelines, policies, or mandates specifically for school climate, which are all controlled by the state departments of education (Cohen, et al. 2009).

**Theoretical framework**

Mezirow’s Transformational Learning Theory provided an understanding of how adult learning, growth, and development could be transformed and consequently assisted with the shaping of this study (Mezirow, 1981). Mezirow’s theory included the concept that adult learning transforms problematic frames of reference, which are fixed expectations and assumptions (mindsets, meaning, habits of mind, and perspectives). These transformations that are prompted by adult learning provoke individuals to be more discriminating, open, reflective, inclusive, and emotionally able to change (Mezirow, 1991). The Transformational Learning Theory developed by Mezirow (1981) is essential to the field of education because research has provided a substantial amount of evidence that transformative learning has an impact on the development of professional attributes, self-efficacy, and action theories (Jones, 2009).
Transformative learning entails more than learning, it is a tangible opportunity to develop social competencies. The socio-emotional development for students is a key factor for students to succeed in life; therefore, it is necessary to establish a school climate, which embraces the transformative learning culture that is open to change and human diversity (Voinea, 2015).

**Conceptual framework**

The conceptual framework that assisted with the shaping of this study was Pestalozzi’s theory of educating through the heart and senses. Pestalozzi established the foundation for further studies on school environment and is typically viewed as the founder of modern social work and the founder of the modern school system (Godenzi & Grube, 2009). Pestalozzi’s life’s work demonstrated that there is a profound correlation between a positive learning environment and the positive impact that it had on student learning (Gutek, 2011). McKenna (2010) asserted that schools of modern day would be very different if educators examined the core tenets of Pestalozzi’s work and applied them to their classrooms and their students.

In the eighteenth century, Pestalozzi connected the dots between a positive learning environment and the positive impact that it had on student learning (Gutek, 2011). Simultaneously, the eighteenth century was also the launch of a phenomenon referred to as “educationalisation,” which referred to social issues being resolved educationally. Ultimately, it was this phenomenon that opened a door for diverse reform efforts such as that of Pestalozzi (Horlacher, 2011). Although Pestalozzi’s teaching methods were swift and simplistic, it was believed that these specific methods strengthened the self-esteem of his students (Trohler, 2013). Pestalozzi discovered that the initial teaching method that should be implemented was to teach to the heart by creating a safe, caring atmosphere that was based upon a mutual trust between the
teachers and students. After this ideal atmosphere was created, it was then that the teacher could implement the second phase of instruction, which was to teach through the senses. Pestalozzi believed that through the senses (feeling, tasting, hearing, seeing, and smelling) data or sensory information is conveyed to the mind and then the information is summarized into ideas or concepts that refer to a class of related objects (Gutek, 2011). For example, Pestalozzi had students study objects through a series of form number, and name because every object has a form, structure, or design that could be studied by touching and observing it. Pestalozzi emphasized that the development of one’s nature was obtained through attention in equal parts to music, art, arithmetic, and languages, but always in relation to the senses (Pestalozzi, 1801). Furthermore, it was also conveyed by Gutek (2011) that Pestalozzi discovered that a student’s environment had a direct impact on their perceptions of safety and security.

In support of Pestalozzi’s theory, Yazdanfar (2014) reported in a study that a positive learning environment has fundamental effects on the education process and student academic achievement. McKenna (2010) maintained that if Pestalozzi’s concepts were understood and implemented in the modern day classroom then positive changes would be evident in the school environment and students’ academic achievement.

Although Pestalozzi’s research and writings are dated back to the early 1800s, school climate as a phenomenon has only been studied and researched for over a century (Zullig et al., 2010). As an abundance of research has evolved over the last few decades regarding school climate, the significance of this valuable component in the school system has gained an increasing amount of attention by stakeholders and policy makers (Thapa et al., 2013). The plethora of research on school climate has been linked to the variety of the aforementioned
factors in the school setting, which are all influential upon student academic achievement. Positive school climates have been linked to increased student academic achievement, while negative school climates have been linked to lower student academic achievement. More specifically, the research on perceptions of school climate that was initiated in the 1970’s have also indicated that there is a strong correlation between the perceptions of stakeholders and several factors that have a direct impact on student academic achievement (Bear et al., 2014; Karadag et al., 2014; & Bear et al., 2015). These factors include teachers’ commitments to the profession (Collie, Shapka, & Perry, 2011), enhanced development (Drego-Severson, 2012), and teacher academic optimism (Kilinc, 2013). Although the aforementioned research has provided evidence that teachers’ perceptions of school climate have an impact on student academic achievement, there is a gap in the research to provide evidence to support the adverse viewpoint: a discovery of whether or not the student academic achievement status of a school has a direct impact upon teachers’ perceptions of overall school climate. Mitchell, Bradshaw and Leaf (2010) discovered that although teachers shared the same experiences, their perceptions of these experiences varied and therefore the researchers advised that further research needed to be conducted to assess teachers’ on school climate. Furthermore, it was recommended by Bosworth, Ford, and Hernandez (2011) for further research to be conducted on the perceptions of teachers with the purpose of providing insights for policy makers, educational leaders and program planners. More specifically, research studies need to be conducted to determine discriminant validity (an examination to determine if school climate scores on behalf of teachers discriminate between low and high performing schools) (Bear, et al., 2015).
Pestalozzi’s life’s work demonstrated that there is a profound correlation between a positive learning environment and the positive impact that it had on student learning (Gutek, 2011). This contribution to the field of education is directly related to this particular study because the goal of the study is to glean a more in-depth understanding of the phenomenon of school climate, the perceptions of teachers of school climate, and if student achievement has an impact on these stipulated perceptions.

**Problem Statement**

School climate is a predictor of school safety issues and disorder (Bradshaw, Waasdorp, Debnam, & Johnson, 2014) and furthermore, negative school climates have been linked to multiple behavioral, health, social-emotional, and academic outcomes (Bradshaw, Waasdorp, Debnam, & Johnson, 2014). On the contrary, positive and effective school climates have a positive impact on teachers’ commitments to the profession (Collie, Shapka, & Perry, 2011), enhanced development (teacher learning) (Drego-Severson, 2012), and academic optimism (Kilinc, 2013). Consequently, all of the aforementioned factors are directly related to student academic achievement placing the phenomenon of school climate at the forefront of the overall success of an educational institution.

There have also been findings in recent research that has provided evidence that teachers’ perceptions of school climate have an impact on a variety of school factors in the school setting. Research has connected teachers’ perceptions of school climate and the impact on the commitment to the profession (Collie, Shapka, & Perry (2011), knowledge sharing and work engagement (Song, Kim, Chai, & Bae 2014), teacher self-efficacy, enthusiasm for teaching, and academic optimism (Meristo & Eisenschmidt, 2014). Academic optimism is an important aspect
because it is a reflection of teachers’ beliefs and also the extent of their efforts for improving student academic achievement. The improvement of an effective learning environment and increased student learning are highly dependent upon teachers’ beliefs about student achievement (Kilinc, 2013).

While the literature has addressed how teachers’ perceptions of school climate have had an impact on a variety of positive and negative factors in the school setting, there is not enough literature to determine which factors have an impact on teachers’ perceptions of school climate such as the overall academic performance of a school (Bear et al., 2015). A means to improving a school’s climate relies on a thorough investigation of the perceptions of this phenomenon. The problem is that there is a lack of research to determine if there is a difference between teachers’ perceptions of school climate in high performing schools versus low performing schools. The performance status of a school is determined by the results of the state’s standardized assessment. The Tennessee Comprehensive Assessment Program (TCAP) is the standardized test that is administered at the end of each school year for students in grades three through eight to measure achievement in the areas of English language arts, math, science, and social studies (Brimi, H., 2012). The TCAP is utilized to determine if students in these particular grade levels are proficient or not in the aforementioned subject areas. The state of Tennessee also utilizes the TCAP scores to determine students’ academic progress. Furthermore, each school district determines which schools are the highest and lowest performing schools in their district by utilizing a specific formula: the number of proficient and advanced schools are divided by the number of valid tests collected for math, reading, language arts, and science (Tennessee Department of Education, 2016). The researchers proposed that it is necessary to conduct further
studies, which examine if school climate scores discriminate between low and high performing schools (discriminant validity). The problem is that previous research has addressed how the perceptions of teachers have an impact on multiple facets in the school setting, however, previously conducted researched has not addressed which factors have an impact on elementary school teachers’ perceptions, more specifically the academic achievement status of a school.

**Purpose Statement**

The purpose of this quantitative, causal-comparative study is to determine if there is a significant difference in teachers’ perceptions of school climate for teachers who are employed in high performing schools versus teachers who are employed in low performing schools as measured by the Revised School Level Environment Questionnaire (Revised SLEQ). The performance levels for the schools utilized in this study will be determined by analyzing the results from the overall scores on the Tennessee Comprehensive Assessment Program (TCAP) from the 2014-2015 school year. The state defined how school classification is determined in their publication of *School Accountability Methodology* (2015). The first and lowest classification is labeled Priority schools. Priority schools are the five percent of schools in the state with the lowest success rate (utilizing up to three years of data). The second classification of schools is Focus schools. Focus schools are the ten percent of schools in the state and are identified through one of three pathways. The pathways for Focus school identification are as follows:

**Graduation Rate Pathway:** High schools with an average graduation rate of less than 60 percent (utilizing up to three years of data).
1. **Subgroup Pathway:** Any subgroup with a Success Rate of less than ten percent (utilizing up to three years of data).

2. **Gap Pathway:** schools with the largest gaps between selected groups.

The last classification is for Reward schools. These schools are identified through one of two pathways:

1. **Reward Performance:** Five percent of schools with the highest success rate in the state (utilizing one year of the most recent data).

2. **Reward Progress:** Five percent of schools with the highest progress in the State (utilizing one-year TVAAS index values).

Results from the 2014-2015 school year are the most current results available because the Tennessee Department of Education suspended state testing for the 2015-2016 school year for grades three through eight due to the inability of their testing vendor to deliver a reliable testing platform (Tennessee Department of Education, 2016). The independent variable in the study is the academic achievement status of each of the six schools based upon the overall achievement scores on the TCAP (Tennessee Comprehensive Assessment Program) from the 2014-2015 school year. The dependent variable was the perceptions of teachers’ overall school climate, collaboration, decision making, instructional innovation, student relations, and school resources as measured on the Revised School Level Environment Questionnaire (Johnson et al., 2007). The Revised SLEQ was developed by Johnson et al. (2007), the purpose of the instrument is to measure teachers’ overall perceptions of school climate in addition to five factors that are specific to school climate: collaboration student relationships, school resources, decision making, and instructional innovation. The population in the study included 150 schoolteachers
in grades pre-kindergarten through fifth grade in one school district. The participants were 75 volunteers from the three highest achieving schools in the district and 75 volunteers from the three lowest schools in the district.

**Significance of the Study**

Many teachers are not aware that their perceptions are affected by social forces and more importantly, that their perceptions of their school’s climate have an impact on their self-efficacy and commitment to the profession (Meristo & Eisenschmidt, 2014). This study could provide individuals in the field of education with evidence that their perceptions might be impacted by the academic achievement in their schools. Therefore, if teachers are aware of the significance that their perceptions may have on the effectiveness of the school then perhaps they will develop a desire to increase the positivity of their perceptions of their school’s climate (Rapti, 2013). This study could provide evidence to individuals in the educational field that perceptions play a very important role in the overall effectiveness of an educational institution.

School climate as a phenomenon has been a focus of research since the 1960’s, however, there has been a growing interest in the topic due to researchers’ findings that it has been correlated with so many other factors, including students’ academic and social-emotional development (Bear, Yang, & Pasipando, 2015). While research has indicated that the perceptions of teachers are related to students’ academic achievement (Bear, Yang, Chunyan, Pell, & Gaskins, 2014; Karadag, Kilicoglu, & Yilmaz, 2014; and Shoupe & Pate, 2010), there is a lack of research that permits researchers and educators from viewing the scenario from the adverse perspective, a perspective that identifies which factors have an impact on teachers’ perceptions (Bear et. al, 2015).
This study will contribute to educational research by determining whether the student academic achievement status of a school impacts teachers’ perceptions of overall school climate or if it does not have an impact on their perceptions of overall school climate. More specifically, this study will examine five separate subscales to identify whether the student academic achievement status of a school has an impact on teachers’ perceptions of all or some of the following factors: collaboration, student relationships, school resources, decision making, and instructional innovation. The collaboration subscale is intended to measure the perceptions that teachers have regarding the communication among teachers, opportunities to work with teachers, and opportunities to coordinate instruction and instructional programs with one another. The student relationships subscale is intended to measure the perceptions that teachers have regarding the behavior on behalf of students and their motivation to learn. The school resources subscale measures the perceptions of teachers pertaining to the availability and accessibility of resources such as instructional, digital, and library resources. The decision-making subscale measures the perceptions of teachers concerning opportunities to make decisions in the school. Lastly, the instructional innovation subscale measures teachers’ perceptions relating to the willingness to implement new ideas, teaching approaches, and curriculum materials. While, it has already been proven that teachers’ perceptions of school climate have an impact on student academic achievement (Bear et al. 2014), this study will provide individuals in the educational field with research that depicts whether or not there is a reversal of such exchanges between the student academic status of a school and the perceptions of school climate on behalf of educators.
Research Questions

**RQ1:** Is there a difference in perception of school climate between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ2:** Is there a difference in perception of collaboration between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ3:** Is there a difference in perception of decision making between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ4:** Is there a difference in perception of instructional innovation between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ5:** Is there a difference in perception of student relations between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ6:** Is there a difference in perception of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?
Definitions

1. **Academic Achievement** – Academic Achievement is the extent to which an institution, teacher, or student has achieved educational goals (York, 2015).

2. **Academic Optimism** - Academic optimism refers to the beliefs that teachers have about their students’ focus on academic tasks and beliefs about their students’ academic achievement (Kilinc, 2013).

3. **Collaboration** – Collaboration is a social phenomenon, which includes several individuals when the action of only one cannot achieve the desired outcome (Boughzala, & Vreede, 2015).

4. **Instructional Innovation** – Instructional innovation refers to learning about the interactive relationship between the learning environment and the learners and then adopting teaching strategies, which incorporate strategic skills with the purpose of generating enhanced teaching efficacy (Kantar, 2013).

5. **Perceptions** – Perceptions are a means to understanding or interpreting an ideal or concept, it is a mental impression (Morton, Storch, & Thompson, 2015).

6. **Revised SLEQ** – The revised School Level Environment Questionnaire is an instrument that has been utilized in educational research to measure the perceptions of school climate on behalf of teachers (Johnson, Stevens, & Zvoch, 2007).

7. **School Climate** – School Climate is the character and quality of school life, which is based upon patterns of people’s experience of school life and is a reflection of organizational structures, teaching and learning practices, interpersonal relationships, values, goals, and norms (Cohen, et al., 2009).
8. *Self-Efficacy* – Self Efficacy is a subjective and personal belief about one’s ability to acquire desired goals (Meristo et al., 2014).
CHAPTER TWO: LITERATURE REVIEW

Overview

Chapter two provides background information about the foundations, predictors, and dimensions of school climate. The theoretical framework presented in the chapter is Jack Mezirow’s transformative learning theory. This theory pertains to the belief that individuals’ values, assumptions, and personal beliefs construct a lens through which personal experiences were made sense of and arbitrated (Merriam, 2004). The conceptual framework presented in this chapter is Johann Pestalozzi’s philosophy of educating through the heart and senses. Pestalozzi emphasized the learning environment was the key to the assurance of students’ perceptions of safety and security. Lastly, the chapter provides and extensive amount of research related to school climate, its importance, the impacts it has upon several factors in the educational field in addition to research on assessing and improving school climate.

Background

The purpose of education, and more specifically schools, is to develop behavior, knowledge, and skills that are essential for young people to obtain in order to become a positive and functional part of society. Education is the foundation for the preparation for individuals to improve their social, cultural, and economic situations (Rapti, 2013). Moreover, education promotes the development of human capital that is essential for economic growth. Ultimately, schools are organizations where students obtain an understanding of the contributions that are expected of them on behalf of society. These contributions are dependent upon each individual’s advancement and development (Rapti, 2013). Furthermore, Arslantas (2016) stated that the responsibility of education has gained more importance for forming the basis of perceptions
about humanity and society. This responsibility is crucial during our current time period of materialism in conjunction with the spiritual nature of humanity. Essentially, education maintains its place in society as the process in which individuals contribute to their improvement by modifying their behavior by means, which are consistent with social norms (Simsek, 2009).

The foundation of a school’s climate is initiated in the faith, values, and expectations of the school. Moreover the development of a school’s climate is dependent upon the leader of the school, relationships with staff, and the behavior on behalf of students and teachers (Rapti, 2015, p. 110). School climate was defined by Cohen, McCabe, Michelli, and Pickeral (2009) as the character and quality of school life, which has an impact on a school’s success among other facets of the educational environment. These other facets include students’ academic success, effective violence prevention, the healthy development of students, and the retention of teachers. Additionally, the National School Climate Council (2007) recommended that school climate be defined as the quality and character of school life and how it is connected to norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures.

According to Thapa, Cohen, Guffey, and Higgins-D’Alessandro (2013), there are five essential dimensions of school climate:

- School Improvement Process – The successful implementation of school reform programs is an important factor of school climate. In addition to teaching students how to read, write, and think in words and numbers, teachers are expected to positively influence students by assisting them to develop their social and moral character, sensitivities, and sense of citizenship via character education programs (Cohen, 2012). The implementation of character education programs
has been proven to be more effective when incorporated into the school curriculum. Furthermore, teachers’ perceptions of school climate impact their competency to implement school-based development and character programs (Beets, Flay, Vuchinich, Acock, Li, & Alred, 2008). The development of imaginative, critical, and rational thinking in students depends greatly on a positive school climate (Higgins-D’Alessandro, 2011).

- Teaching and Learning – one of the most important dimensions of school climate is teaching and learning. It has been supported by research that a positive school climate is positively correlated with cooperative learning, respect, mutual trust, group cohesion, student classroom participation, and ultimately students’ ability to learn (Cohen et al., 2013) which all enhance overall academic achievement (Thapa et al., 2013).

- Safety – feeling safe (physically, intellectually, emotionally, and socially) is a fundamental human need (Maslow, 1943) and powerfully promotes healthy development and student learning (Devine & Cohen, 2007). Schools that lack contextual variables that define a school’s climate (supportive norms, relationships, and structures) are more likely to have students that experience violence and bullying, punitive disciplinary actions, and peer victimization, which are typically accompanied by reduced levels of academic achievement and higher levels of absenteeism (Astor, Guerra, & Van Acker, 2010).

- Relationships – the trends of norms, values, goals, and interactions that shape relationships in schools provide a crucial area of school climate. How people feel
connected to one another in a school is one of the most important aspects of relationships in addition to relations with our own selves (how we take care of and feel about ourselves (Cohen et al., 2013). Research has provided evidence that in schools where students perceive more positive student-teacher relationships, the frequency and probability of behavior problems is lower (Wang, Selman, Dishion, & Stormshak, 2010). The perceptions of these relationships on behalf of students were also positively correlated with self-esteem and grade point average and were negatively correlated with depressive symptoms (Jia, Way, Ling, Yoshikawa, Chen, Hughes, & Lu, 2009).

- Institutional Environment – the institutional environment is composed of two aspects: (a) the physical layout and surroundings of the school in addition to supplies and resources and (b) school connectedness/engagement (Cohen et al., 2013). School connectedness was defined by The Centers for Disease Control and Prevention (2009) as the belief by students that adults and peers in the school care about their learning as well as about them as individuals. There is an expanding body of research that demonstrates that school connectedness is a strong predictor of adolescent health, academic outcomes, violence prevention, and student satisfaction (Cohen et al., 2013). Furthermore, school connectedness has been shown to be a predictive factor against risky sexual violence and drug use behaviors in school climate research (Center for Disease Control and Prevention, 2009). While Thapa et al. (2013) utilized these five dimensions of
school climate in their research; school climate has been segmented in a variety of ways in other research.

Another example of a diverse method for segmenting school climate was evident in the review of school climate research by Wang and Degol (2015). The researchers presented an organized illustration of school climate, which contained four domains of school climate that were accompanied by 13 dimensions: academic (professional development, teaching and learning, and leadership); community (quality of relationships, partnerships, connectedness, and respect for diversity); safety (physical safety, social and emotional safety, and discipline and order); and institutional Environment (structural organization, availability of resources, and environmental adequacy). While there are a variety of methods for deconstructing the concept of school climate, it is apparent that researchers must utilize the structure that is most efficient for a particular study.

Thapa et al. (2013) provided several positive correlations between positive school climates and students’ mental, emotional, and physical health. London, Stokes-Guinan, and McLaughlin (2015) added that a positive school climate promotes positive developmental outcomes for youth, which not only includes positive health promotion and risk reduction efforts, but also enhances students’ self-esteem and social adjustment. Drost (2012) stressed the imperativeness of instilling school satisfaction and life satisfaction among elementary school children by laying the groundwork for a positive school climate. Research has prevailed evidence that a positive school climate has been strongly correlated to school satisfaction (Zullig et al., 2011); therefore it was stressed that if school satisfaction and life satisfaction are not instilled at the elementary level before students reach high school then they might make choices
that result serious consequences such as failure or dropping out of school. Baker and Maupin (2009) referred to school satisfaction as the subjective cognitive appraisal on behalf of students’ pertaining to the quality of his or her school life, while Suldo, Huebner, Friedrich, and Gilman (2009) described life satisfaction as the cognitive appraisal process in which individuals subjectively evaluate the quality of life based upon their own unique set of criteria.

Ultimately, a positive school climate enables youth development and learning that is necessary for a contributive, productive, and satisfying life in a democratic society (National School Climate Research, 2007). In a positive school climate atmosphere: all stakeholders work together to develop and contribute to a school vision; educators model and nurture an attitude, which accentuates satisfaction from and the benefits of learning; and each stakeholder contributes to the operations of the school in addition to the care of the physical environment (p.4). On the contrary, negative school climates, which lack supportive norms, relationships, and structures have students that are more likely to experience peer victimization, violence and punitive disciplinary actions, often accompanied with higher rates of absenteeism and reduced academic achievement (Astor, Guerra, & Van Acker, 2010). Negative school climates have also been associated with negative outcomes such as a loss of enthusiasm for learning, a higher rate of absenteeism (for teachers and students), a higher teacher turnover rate, a lack of student morale, and poor student behavior (Yazdanfar, 2014). A recent research study (Kilinc, 2014) revealed that the traditional (restrictive school climate) of designating the school principals as the sole individual for improving and running a school produces a negative school climate. On the contrary, it was discovered that schools that have more teacher-led displayed higher levels of institutional improvement, professional improvement, and collaboration among colleagues. It
was also concluded that teachers that are in directive school climates are more enthusiastic about contributing to the institutional improvement of their schools.

Generally, school characteristics and school climate (i.e., school discipline/conduct, students’ respect, teachers’ attitudes, teachers’ support, and rule clarity/enforcement) can be a predictor of school disorder and provoke a variety of safety issues such as bullying victimization (Jeong, Kwak, Moon, San Miguel, 2013). Unfortunately, there is a gap between the aforementioned research findings and teacher education practice, guidelines, school climate policy, and state departments of education (Cohen, et al. 2009). Furthermore, the investigation of the perceptions of school climate could be a contribution to development of more effective policies, which would support successful schools and improve unsuccessful schools (Thapa et al., 2013). Lastly, it is imperative to assess school climate with a valuable and reliable instrument (Zullig, Kooman, Patton, & Ubbes, 2010) and then use the results to determine effective strategies for improving school climate via school-based interventions (Rhodes, Camic, Milburn, and Lowe, 2009; Voight, 2014; Drego-Severson, 2012).

While the phenomenon of school climate is very broad, this review of literature will focus on the impact of school climate and more specifically, the impact of teachers’ perceptions of school climate. The theoretical component of literature in this chapter will focus on Mezirow’s transformational learning theory, which focused on adult learning, growth, and development of values, assumptions, and beliefs (Mezirow, 1981). This study is also grounded in Pestalozzi’s theory of educating through the heart and senses. In the eighteenth century Pestalozzi discovered that there was a correlation between a positive learning environment and the positive impact that it had on student learning (Gutek, 2011). An overview of these theories
will be provided in addition to how they relate to school climate in addition to the perceptions of school climate. Lastly, a review of literature related to school climate and teachers’ perceptions of school climate will be synthesized and conveyed.

**Theoretical Framework**

**Mezirow’s transformative learning theory**

Jack Mezirow’s transformative learning theory was grounded in the belief that individuals’ values, assumptions, and personal beliefs construct a lens through which personal experiences were made sense of and arbitrated (Merriam, 2004). These transformations are only capable of occurring if individuals reflect critically on the underlying premises of their understandings (Fleischer, 2006). Mezirow theorized that these attitudes and beliefs were shaped early in an individual’s life and then become the basis for action and integration of learning in adulthood. Consequently, the early shaping of attitudes and beliefs typically constrains conceptualizations and integration of new information. Mezirow concluded that the only way to transform perspectives into more complex and discriminating schemata required critical reflection on one’s experiences (Mezirow, 2000). Subsequently, Mezirow developed an approach to promote critical reflection on previously held perspectives and beliefs with regards to a precise event or issue. This approach allows individuals to deconstruct layers of thoughts, beliefs, and actions, which then allows them to articulate reasons, processes, and outcomes. Additionally, evidence to support actions and develop new ways of working is derived by utilizing the transformative learning method (Morris & Faulk, 2007). The aforementioned approach to promoting critical reflection encompassed the following seven levels or emphases:

- reflectivity – an awareness and description of behavior, meanings, or thinking;
- affective reflectivity – an awareness of how one feels about themselves and the meanings of what is happening or behaviors of others;
- discriminant reflectivity – awareness of the effectiveness of our perceptions and the decision making process;
- judgmental reflectivity – awareness of one’s own assumptions made in practice and value of judgments;
- conceptual reflectivity – awareness of the concepts implicated with decision making and how the concepts are utilized to make judgments;
- psychic reflectivity – an awareness that anticipations and interests influence how one thinks and acts based upon limited information; and
- theoretical reflectivity – an awareness of how practice may influence theory and how the fact that cultural or psychological assumptions affect and influence thoughts, values, and actions is taken for granted (Mezirow, 1981). These seven levels or emphases were developed by Mezirow to provide an in-depth understanding of the complexity that is entailed in promoting critical reflection on previously held perspectives and beliefs (Mezirow, 2000).

The theory of transformative learning was inspired and influenced by several important thinkers. Classical contributions such as Kuhn’s philosophical conception of paradigm, Freire’s conception of ‘conscientisation’, and Haberma's domains of learning and the utilization of language as communicative action were all building blocks for the foundation for Mezirow’s robust theory of transformative learning (Calleja, 2014). The three aforementioned early
thinkers were the most important influences on the basic facets related to the transformative learning theory.

A primary source for Mezirow’s theory derived from the Thomas Samuel Kuhn whom utilized a paradigm to refer to a collection of perspectives, methods of inquiry, ideas, beliefs, values, and attitudes that influence the conduct of scientific inquiry (Calleja, 2014). The paradigm or otherwise termed as a conceptual framework would include a shared common worldview, a differentiated perusal of interests, and a shared set of problems and solutions (Kitchenham, 2008). For Mezirow, the paradigm became the frame of reference that compromises meaning perspectives and habits of the mind, which results in a perspective transformation, which in turn enables individuals to reformulate a limiting frame of reference. Perspective transformation adjusts frames of reference that adults have attained over a lifetime through contextual and cultural experiences (Taylor, 1997).

Another resource for Mezirow’s ideals was derived from Paolo Freire’s ideas whom developed the term conscientisation, which refers to learning to perceive political, social, and economic contradictions for the purpose of developing a critical awareness in order to take action against oppressive elements of reality (Calleja, 2014). Freire proposed that the highest level of consciousness growth is critical transitivity. This particular idea influenced Mezirow in his notion of disorienting dilemma. Critical transitivity is characterized by critical reflection, critical self-reflection on assumptions, and critical discourse (Mezirow, 1985). According to Freire, critical transitivity is accomplished when individuals think critically and globally about a problem and then are capable of taking action to produce critical change with the purpose affecting change in their lives and to identify the catalyst for that change (Kitchenham, 2008).
Lastly, Mezirow utilized the ideas of Jurgen Habermas who theorized that humanization is found in the use of language and linguistic action is the ultimate model of action (Calleja, 2014). The sociolinguistic context of Mezirow’s learning theory was rooted from Habermas’ seminal work, *The Theory of Communicative Action* (1984, 1987). Mezirow discovered that this particular work provided a new foundation for understanding adult learning in addition to understanding the function and goals of adult education (Mezirow, 1991). In the sociolinguistic context, Habermas used the term “grounding” to refer to the applications of validity. “Grounding” descriptive statements denoted that when both the speaker and listener understand the meaning of a sentence in addition to knowing under what conditions it is true (Mezirow, 1984). After validity has been established, true communicative action can occur and language takes a humanization process (Calleja, 2014).

The transformative learning theory evolved from a research study conducted by Mezirow on women returning to community college after being absent from the formal educational setting for an extended amount of time in 1978. The research was concluded with findings that as the women became critically aware of their personal, cultural, and historical contexts, their frames of references and assumptions changed, resulting in what Mezirow phrased as perspective transformations. These evolved transformations on behalf of the participants in the study empowered them to respond to their circumstances with a broader range of possible actions (Fleischer, 2006). Through transformational learning an individual’s perspectives could be exchanged with new perspectives when their meaning system is discovered to be inadequate in accommodating some life experience (Merriam, 2004). This deep structural shift in basic premises of thoughts, feelings, and actions consists of a process, which is initiated in a moment
of disorientation and concludes with a transformative self-reflection, which results in the transformation of the individual’s perspective (Calleja, 2014). Some perspectives can become so ingrained that it takes a powerful human catalyst or what Mezirow referred to as a disorienting dilemma to alter these deeply rooted perspectives (Christie, Carey, Robertson, & Grainger, 2015). The disorienting dilemmas are prompted by either a life crisis or a major transition and determine how we know ourselves and the world around us (Taylor & Elias, 2012). The disorienting dilemma provokes a cumulative process that is spread over a period of time and is known as the personal transformation (perspective transformation) (Imel, 1998). The perspective transformation is a process which entails becoming critically conscious of how and why one’s own presuppositions have come to limit the way one understands, perceives, and feels about the world; of expressing these assumptions to allow a more discriminating, inclusive, permeable, and integrative perspective; and lastly for making decisions or otherwise acting upon these newly formed understandings (Mezirow & Associates, 1990). There are four types of learning (or transformation) that evolves from critical self-reflection: learning new frames of reference; learning through expanding existing frames of reference; learning through transforming perspectives and transforming habits of the mind (Calleja, 2014).

In the educational field, transformative learning has an impact on the development of professional attributes, self-efficacy, and action theories (Jones, 2009). It is essential for educators to comprehend and articulate, not only why they work or act in a certain way but to demonstrate the capability to analyze how they have developed or modified their practice (Phair, 2009). Teachers within the profession could only experience transformation when and if they become aware of the influences, knowledge, and hidden theories that have accrued over the years
(Calleja, 2014). Equally important, it is essential for educators to comprehend that their perceptions have a major impact on student academic achievement (Bear et al., 2014). To accomplish this task Christie et al. (2015) recommended for teachers to attend courses and workshops that are more constructivist in nature with the purpose of engaging with participants to help them reconsider their own world view and to critique the assumptions which lie beneath that view. Further research in this area could enhance how educators could assist students to develop more functional perspectives (Brooks, 2004).

Furthermore, an abundance of research studies have been conducted, which utilize Mezirow’s transformative learning theory as their foundation for understanding adult learning in several fields including physical sciences, health care, religious studies, archeology, natural resource management, environmental studies, and substantially in the field of education (Moyer, Sinclair, & John, 2016). For instance, Ossa Para and colleagues (2014) conducted a study to examine how to design a critically reflective process among university professors that was aimed at transformative teaching and learning. The second portion of the study was conducted to determine what professors learn about their own practices and their students’ learning when they collaboratively utilize reflective teaching. The researchers produced evidence in this study that transformative learning and the reflective teaching method are both valuable means for professors to increase their awareness of the effects of their frames of reference in their teaching practices and to also broaden their understanding of the power relations and contexts in which instruction is embedded. Another example of a study that utilized the transformative learning theory as the dominant approach was conducted to study the learning in an entry-level, competency-based management course (Hodge, 2011). This particular research evaluated the
deeper changes produced by the learning experiences and discovered that some learners experienced discontent as they realized that the management practices they understood as representing the norm fell short of the model presented in the training.

More specifically, there have been studies conducted in various classroom settings, which implemented the transformative learning theory as the lens to further understand adult learning. Keen and Woods (2016) employed the transformative learning theory in their research study to evaluate adult learning in prison classrooms. The teachers evaluated in this study presented activating events that they perceived as supporting resistant learners in modifying their meaning schemes and altering their frames of reference. This particular study produced findings of how inmate students viewed transformative learning that were facilitated by activating events and disorienting dilemmas. Positive learning outcomes prevailed for students in prison classrooms and thus resulted in the learners making new meaning and transformation. The transformative learning theory was utilized as the central focus in another learning atmosphere by Izmirli and Yurdakul (2014) to evaluate prospective Information and Communication Technology (ICT) teachers’ integration transformations. The results produced evidence that a majority of the teachers in the study were likely to experience transformative learning within the scope of the teaching practice course. Lastly, Langley-Weber (2012) utilized Mezirow’s transformative learning theory as the central focus of a study to evaluate the influences of teachers’ experiences on their perceptions of educating English Language Learners (ELLs). The results of this research study provided evidence self-awareness nurtured through an adult learning process has the potential to change an inequitable and unjust situation.
In conclusion, Mezirow’s transformational learning theory was developed in 1978 and still continues to be an effective implemented theory in the workplace due to the fact that certain meaning perspectives continue to be applicable to the tasks present in today’s world. Mezirow theorized that every individual has a specific view of the world or outlook on life. This particular worldview may not be expressed efficiently, however, it is typically based upon a set of paradigmatic assumptions that are developed in the individual’s upbringing, culture, education, or life experience (Christie et al., 2015). Individual transformations are influenced by and are equivalent to the collective transformation (Calleja, 2014). Mezirow (1991) expressed belief that there was no need that was more fundamentally human than the need to understand the meaning of our experiences. An individual can change their point of view by trying on another’s point of view, however it is not possible for an individual to try on someone else’s beliefs (or habit of mind) (Mezirow & Associates, 2000). Transformative learning enhances other types of organized learning by motivating individuals to frequently re-assess the validity of their learning, which enables them to apply what was learned to unexpected situations, because of this aspect, it has a place in all forms of the educational field (Christie et al., 2015).

More specifically, Mezirow’s transformative learning theory is specifically relevant to this particular study because the purpose of this study is to evaluate teachers’ perceptions of school climate and to determine if a specific phenomenon (school climate) is a determining factor for these identified perceptions. These perceptions on behalf of teachers deserve more attention in research due to the fact that previous research has indicated that teachers’ perceptions are strongly correlated with teachers’ commitment to the profession (Collie, Shapka, & Perry, 2011), enhanced development (Drego-Severson, 2012), knowledge creation activities
and knowledge sharing (Song, Kim, Chai, & Bae, 2014), academic optimism (Kilinc, 2013), and
their job satisfaction and self-efficacy (Collie, Shapka, & Perry, 2012).

**Pestalozzi: Proponent of educating the heart and senses**

Johann Heinrich Pestalozzi (1746 – 1827) an educator and social reformer was born in Zurich, Switzerland and is typically seen as the founder of modern social work and the founder of the modern school system (Godenzi & Grube, 2009). Until about 1800, Pestalozzi was one of the most important worldwide figures in the transformation of education theory and practice. During his time, popular enlightenment evolved to be one of the primary topics in German-speaking regions. Simultaneously, the eighteenth century was also the launch of a phenomenon referred to as “educationalisation,” which referred to social issues being resolved educationally. Ultimately, it was this phenomenon that opened a door for diverse reform efforts such as that of Pestalozzi (Horlacher, 2011). The ideals developed in Europe’s Enlightenment also created the ideal environment for Pestalozzi’s advanced beliefs and thoughts on parenting and education. The publications and scholars of this time period placed a special emphasis on “human progress,” supporting the connection of politics and economics, glorifying personal autonomy, and spotlighting the value of reason (Soetard, 1994). Therefore, the audience of the late eighteenth century was very receptive of Pestalozzi’s work on parenting and childhood as sacred components of humanity and therefore allowed the most basic principles of his philosophy to take hold. Furthermore, attention was brought to Pestalozzi’s predicament of the underprivileged and individuals in servitude as another result of the Enlightenment (McKenna, 2010). The underprivileged benefitted the most from Pestalozzi’s learning facilities because unlike traditional schools, Pestalozzi provided a vocational education that included agriculture and craft
activities. The provision of these applicable life skills were integrated in the general education program with the hopes that these future citizens of society would not leave the school and join the ranks of the unemployed (Gutek, 2011).

Pestalozzi’s quick and easy pedagogy was a true innovation of his time because it was believed that it strengthened the self-esteem of students (Trohler, 2013). Pestalozzi’s goals included: making the world a better place for children and treating children with compassion and dignity. These commendable goals were eloquently conveyed in his writing for the purpose of being discovered and utilized by future generations, which are indeed worth reconsidering today (McKenna, 2010). Pestalozzi emphasized that the senses were the true way to educate understanding, which would in turn lead to knowledge. He also stressed that the development of man’s nature was achieved through attention in equal parts to music, art, arithmetic and languages, but always in relation to the senses (Pestalozzi, 1801). Over 150 years ago, Pestalozzi recognized that relationships were paramount to any teaching circumstance and that students essentially needed love, attentiveness, appreciation, and attention to foster their intellect (McKenna, 2010). The understanding and implementation of these attributes could contribute to positive changes in the pedagogy of modern day educators and also produce a more positive learning environment.

Some of the most important pieces of Pestalozzi’s educational philosophy were depicted in his novel How Gertrude Teaches Her Children (1801), a text intended for mothers, however, modern day educators would benefit from examining these core pieces of child centered teaching philosophies. The text illustrates some of Pestalozzi’s most important pieces of educational philosophy, which included the following: children have a sacred personality; children are
inherently good and should not be considered as miniature adults; children follow a natural course of development that should be willingly followed and embraced by mothers (insert educators); and children require language filled, active, and spontaneous activities in order to grow (Kilpatrick, 1951). Pestalozzi made an important transition in the book in which he moved the spirit and method of reform from the single household to the larger community. The intent was for natural education to not only regenerate individuals, but to reform the whole society. Through the pages of the novel, Pestalozzi intended to express and publicize his philosophy of education (Gutek, 2011).

McKenna (2010) asserted that schools of modern day would be very different if educators examined the core tenets of Pestalozzi’s work and applied them to their classrooms and their students. These aforementioned tenets include first the unquestionable dedication to teaching children and adults alike because dedication and continuous improvement are imperative for the successful education of students. Second, the philosophical pillars of Pestalozzi’s work: family, child development, affective education, active, and child-centered educational pedagogy provide sturdy grounding for contemporary educators to take a step back and reevaluate their individual understanding of the purpose and most efficient methods for teaching children, families, and communities that they work with on a daily basis. Last, practicing and even pre-service teachers who are familiar with Pestalozzi’s work have access to a more in-depth understanding of the foundations of American education that enhances their understanding of current events in education. Furthermore, it was also proclaimed by McKenna (2010) that teacher preparation programs and professional development realms would also differ and would benefit if these ideas were set as an explicit value system of the programs. The ideas
that children should be allowed to grow intellectually at an appropriate pace, responsibility toward others, and freedom to play are all methods, which flourished at Yverdon for Pestalozzi. The implementation of these methods could also benefit current teachers if they recreated the positive educational climate that Pestalozzi labored to develop.

There are four principles that were grounded into Pestalozzi’s educational philosophy and are especially relevant to today’s educational climate: the development of the child, family as a prime resource as an influence on learning, an equivalent focus on cognitive and affective aspects of education, and active child centered teaching practices. The core principles of child development, best practice teaching, social order and life of Godliness were a core focus in his writing (McKenna, 2010). Pestalozzi discovered that the learning environment was the key to the assurance of students’ perceptions of safety and security. Furthermore, he concluded that students could concentrate on their intellectual education only after a caring environment built on mutual trust and an educational climate of emotional security was established (Gutek, 2011). According to Yazdanfar (2014) a positive learning environment equipped with suitable materials and facilities has fundamental effects on more productive mental conditions of students which in turn has a direct impact on the education process and students’ academic achievement.

In conclusion, Pestalozzi’s developed method was a promise of a means of education that could be easily managed by mothers at home for early childhood. However, the intent was to not only reform home education, but also impact the subsequent education in schools. For that specific purpose, Pestalozzi established his educational institutes and promoted the publication of teaching manuals (Horlacher, 2011). Modern day educators could glean two very critical lessons from Pestalozzi’s life’s work, principles, and educational philosophy: 1) working with
disadvantaged populations cannot only be transformative for the disadvantaged, but also for those working beside them and 2) working with anyone requires a deep commitment to educating the whole person, especially children who are in need or suffering (McKenna, 2010). McKenna (p. 125) claimed that it is time once again to bring Pestalozzi’s core tenets to the forefront of educational philosophy in order to further modern day educational practice. Pestalozzi’s philosophy has not yet lost its vitality. His methods of teaching intended for the comprehensive development of human capacities deserve reestablishment and a renewed emphasis in the present day theory of education (Laubach, 2011). Pestalozzi’s life’s work demonstrated that there is a profound correlation between a positive learning environment and the positive impact that it had on student learning (Gutek, 2011). This contribution to the field of education is directly related to this particular study because the goal of the study is to glean a more in-depth understanding of the phenomenon of school climate, the perceptions of teachers of school climate, and if student achievement has an impact on these stipulated perceptions.

**Related Literature**

The literature revealed that a high-quality school climate in addition to positive perceptions of school climate on behalf of educators in a school could have a benefitting effect on teachers’ commitment to the profession (Collie, Shapka, & Perry, 2011), enhanced development (Drego-Severson, 2012), and their job satisfaction and self-efficacy (Collie, Shapka, & Perry, 2012). The literature also provided evidence that teacher perceptions of school climate are also significantly related to teacher optimism (the efforts and beliefs of improving student achievement) (Kilinc, 2013), knowledge creation activities, and knowledge sharing (Song et al., 2014). Data from the research also suggests that the environment of a
school plays a crucial role in the personal and professional attitudes of teachers and also lowers stress levels in students, which results in better school results (Sangsue & Vorpe, 2004). The aforementioned studies have enhanced knowledge regarding schoolteachers’ perceptions of school climate. However, a related issue that has been ignored is the awareness of these perceptions and their impact.

A study by Meristo and Eisenschmidt (2014) disclosed that a majority of teachers are not aware that their perceptions are affected by social forces and that their perceptions of their school’s climate has an impact on their self-efficacy and commitment to the profession. Results from this particular study can provide school authorities with ideas to organize a supportive school climate, which is essential for the development of engaged and effective teachers. The study *Novice Teachers’ perceptions of School Climate and Self-Efficacy* (Meristo et al., 2014) illustrated that positive perceptions of school climate on behalf of teachers is directly correlated with their self-efficacy beliefs and efforts for improving student academic achievement. Furthermore, an effective learning environment and the improvement of student learning rely heavily on teachers’ beliefs (Kilinc, 2013). Additionally, these self-efficacy beliefs have been proven to be correlated with the problematic dropout rate of novice teachers. A dropout rate of almost half of American novice teachers within the first five years is correlated with the idea that school climate plays a large role in teachers’ job satisfaction and job commitment (Meristo et al., 2014, p.5). Therefore, providing teachers with knowledge about positive perceptions of school climate could not only benefit their overall well being, but could also possibly prevent an increasing dropout rate of novice teachers.
Teacher commitment is directly related to the teaching and learning facet of school climate and is a predictor of teacher turnover, absenteeism, attrition, teaching performance, and burnout. Furthermore, it was revealed in the literature (Collie et al., 2011) that teachers’ perceptions of school climate were significantly correlated with three different forms of commitment: greater general professional commitment – the degree of psychological attachment toward the teaching profession in general on behalf of teachers; organizational commitment – the level of involvement and identification that an individual has within a particular organization; and future professional commitment – an individual’s motivation to exert effort to support the organization and remain a member of the organization. It was concluded in the research that heightened teacher commitment solicits greater student engagement because it motivates teachers to pursue more efficient teaching methods (Collie et al., 2011).

Triggering and promoting teachers’ positive perceptions of school climate is an essential concept for school officials to comprehend in order to sustain a positive atmosphere and continuous student academic growth and achievement. A study by Knafo (2012) revealed that schools with a higher turnover rate in leadership personnel had lower rates of academic performance, resourcefulness, and management. Recommendations after the conclusion of this particular research study were to enhance the stability of leadership positions by planning changes in leadership very carefully and also by empowering administrators in schools to overcome economic and educational changes instead of seeking a “knight on a white horse” (Knafo, 2012). Research by Zullig and colleagues (2011) revealed which school climate domains were most important to students, which were academic supports, school connectedness, order and discipline, academic satisfaction, and student-teacher relationships. The evidence in
these studies provided results about key factors, which are imperative to develop and maintain a positive school climate, which in turn produces positive outcomes in students and teachers alike.

Conner (2014), however, singled out relationship building among teachers to students and teachers to teachers as a primary element to consider in improving school climate. Relationship building is the key to preparing students of the 21st Century for college and career goals because positive relationships have been correlated with student academic achievement and positive behavior (Conner, 2014). When students have positive relationships with their teachers then they have a sense of belonging and feel more connected to the school environment. In addition to developing and maintaining relationships with students, research has also provided evidence that when teachers build cooperative relationships with their colleagues, a team is developed then trust and support are established. Once trust and support are established amongst colleagues the process of authentic collaboration is initiated for the purpose of improving student achievement (Conner, 2014).

While the aforementioned study by Conner (2014) reported that caring relationships between teachers and students have been proven to be associated with academic success, Bilmes (2012) proclaimed that colleagues building relationships with one another are equally important. Conner (2014) concluded that camaraderie is crucial for establishing trust and supportive relationships and that relationships are the key to a successful school climate. Furthermore, a positive and trusting climate provides a more encouraging, engaging, and optimistic opportunities for all individuals involved (p. 123). A sense of camaraderie is a vehicle to pedagogical collaboration and more affective problem solving, all of which are consequently related to the improvement of a positive school climate (Bilmes, 2012).
The focus of this current study is parallel with Maslow’s Hierarchy of Needs theory (1943), which maintained that there was a classification of basic needs into five categories. Understanding the hierarchy of needs assists with comprehending that individuals require specific needs before they can feel safe, which is an essential need for individuals in the school setting since a positive and trusting climate provides a more encouraging, engaging, and optimistic opportunities for all individuals involved (Conner, 2014). Furthermore, it was hypothesized that specific needs must be met before individuals can build relationships with one another. The ability to build relationships in the educational field has been shown to be correlated with several positive outcomes (Zullig et al., 2011; Conner, 2014; Benson, 2012; & Bilmes, 2012). Furthermore, Maslow proclaimed that specific needs must be met before an individual can experience a positive self-esteem. A positive self-esteem produces enhanced academic performance among students (Khaola, 2014) and teachers who possess a high self-esteem maintain a more positive outlook, which can influence how their students perceive themselves (Bissessar, 2014). Therefore, a more in-depth understanding of Maslow’s hierarchy of needs could provide educators with the knowledge that students require specific needs that must be met before they can experience success at school and that educators themselves must also have these needs met before they can also be successful.

Maslow described the primary essential need as the physiological need, which is an individual’s most fundamental need for survival (air, food, clothing and shelter). An individual cannot progress on the continuum to achieve higher levels of development and growth unless these needs are met first (Freitas & Leonard, 2011). The second need is the safety need, which are mostly psychological; the sensation of safety greatly affects the happiness and well being of
an individual (Lyubomirsky & Boehm, 2010). People in society rely law and order to feel safe within and outside of their homes, schools, workplace, and so on. If the safety need is not met, fear can be prevail and become a blockage in the path to the next level (Gobin, Teeroovengadum, Becceea, & Teeroovengadum, 2012). The third need on the continuum is the social need (belongingness, affiliation, and acceptance). This particular need relates to an individual’s interactions in society (Maslow, 1943). The social need can be illustrated by the desire of people to group, form clubs, join religious groups, work groups, live with family, and so on. The social need is result of the need to feel accepted and loved by others, for example, relationships, affection in family, a sense of belonging among loved ones and friends (Gobin et al., 2012). The fourth need is the esteem need, self-esteem can be either internal or external; it results when competence is achieved or an individual completes a task efficiently. Individuals have a need to be admired by others and live in such a way that they attain self-satisfaction (Gobin et al., 2012). Once the aforementioned needs have been fulfilled, individuals desire to fulfill their higher level of needs (Maslow, 1943). The last basic need on Maslow’s hierarchy is self-actualization, which pertains to the concern for one’s own legacy, the needs of humankind, and how to make the world a better place for its occupants. This need cannot be met unless the underlying needs have been met first, permitting the individual to look outward from oneself to humankind (Freitas et al., 2011).

Maslow hypothesized that these needs were presented in sequential order as an individual moved up the phylogenetic scale and as the individual developed from birth to childhood (Lester, 2013). For instance, Maslow claimed that if an individual’s safety and psychological needs have been met then the next essential requirement with Maslow’s Hierarchy of Needs is the
desire for relationships and the connections with people (Maslow, 1943). More specifically, individuals desire a sense of belonging or finding their place within a group. For teachers to fulfill this particular need on behalf of their students Benson (2012) offered several strategies for teachers to build relationships with their students: preserve relationships by not making students’ struggles a personal issue, in other words, let them know that you are willing to support them through their struggles and that they have not failed you; the teacher should be genuine to their emotions by integrating their concerns with their expectations; teachers should assist students in accurately understanding consequences; teachers should highlight every bit of student growth or attempts at success; and teachers should allow students to feel and experience their feelings; and teachers should listen to students and ask thought provoking questions to help them think more deeply about their personal efforts.

The construct of school climate has received a growing amount of attention as a means to enhance student achievement as well as reducing problematic behaviors (Wang, et al., 2015). Over the past three decades educators and researchers have increasingly recognized and expressed the importance of K-12 school climate in the abundance of recent research (Cohen, et al., 2013). The research on school climate has been conducted with a variety of instruments, in many diverse locations, and for a variety of purposes. For instance, Jain and colleagues (2015) used the California School Climate Survey and administrative data to determine if teachers’ perceptions of school climate (the social and physical conditions of a school) had an impact on student academic achievement. After conducting several statistical analyses, the researchers discovered that teachers’ perceptions of school climate were lower in schools in large cities, secondary schools, schools that serve low-income populations, Hispanic and black-majority
schools, and low-performing schools (Jain, Cohen, Huang, Hanson, & Austin, 2015). While the California School Climate survey was utilized for this particular study, there are a variety of instruments available to measure teachers’ perceptions of school climate.

An example of a different instrument used to measure school climate is evident in another study conducted by Bear et al. (2014). The researchers in this particular study utilized the Delaware School Climate Survey-Teacher/Staff (DSCS-T/S) to evaluate if there was a correlation between teachers’ perceptions of school climate and student achievement and suspensions. After conducting a multi-group confirmatory factor analysis on a population sample of 5,781 teachers, administrators, and support staff from 132 schools, it was concluded that the scores were negatively correlated with suspension/expulsion rates and positively correlated with academic achievement. A separate study by Meristo and Eisenschmidt (2014) provided The Teachers’ Sense of Efficacy Scale (TSES) and The Charles F. Kettering Ltd. (CFK) School Climate Profile's part A (General Climate Factors) to a teacher sample population of 112 to determine novice teachers’ perceptions was correlated with their self-efficacy. After conducting a two-way ANOVA, the researchers discovered that novice teachers in elementary schools with less than 250 students had the most positive perception of school climate and the highest level of self-efficacy beliefs, while novice teachers in comprehensive schools with over 500 students had lower self-efficacy beliefs. Their findings provided evidence that school climate has a positive influence on novice teachers’ beliefs pertaining to self-efficacy. Lastly, Espelage, Polanin, and Low (2014) conducted a study to examine how teacher and staff perceptions of the school environment are predictors of student aggression, victimization, and willingness to intervene in bullying situations. The researchers derived data from a population of
3,616 6th grade students across Kansas and Illinois whom completed survey measures of student aggression, victimization, and willingness to intervene in bullying situations and from 1,447 teachers whom completed the School Environment Survey. After conducting statistical analyses, the researchers concluded that as teachers and staff perceive aggression as a problem, students reported greater peer victimization, fighting, bullying, and less willingness to intervene. On the contrary, as teachers and staff reported greater commitment to preventing bullying and observed positive teacher and student relationships, there was less peer victimization, fighting, bullying, and more willingness to intervene.

Assessing and Improving School Climate

Several studies related to school climate have attempted to assess the phenomenon of school climate in order to provide effective strategies for improving climates in schools (Cohen et al., 2009; Drego-Severson, 2012; Rapti, 2013; Voight, 2014). However, a more comprehensive understanding of the perceptions of teachers with regards to school climate is absent. Cohen et al. (2009) maintained that it is feasible to assess school climate with a variety of methods such as focus groups, interviews, town hall discussions, study circles, and surveys. The most efficient method for evaluation of school climate comes in the form of survey that has been confirmed to be scientifically sound and comprehensive in (1) measuring all of the dimensions of school climate and (2) recognizing personal voice (Bear, Yang, & Pasipanodya, 2015). According to Freiberg, Templeton, and Helton, (2013), an observation of the changes of a school’s climate over a period of multiple years could demonstrate both the conflicts created and potential solutions to these conflicts. Assessing a school’s climate is essentially beneficial to all stakeholders because the clarification of “What Is” versus “What Should Be” holds great
value in understanding the teaching and learning climate, predicting teachers’ and students’ attitudes and behaviors, and to design pre-service and in-service trainings (Johnson, Johnson, & Zimmerman, 1996).

Improving a learning environment, student learning, and student achievement is essentially dependent upon teachers’ beliefs (Kilinc, 2013). School climate relies heavily on the individuals’ perceptions of school life and it also reflects group trends, which take on a life of their own. Due to the fact that school climate encompasses a wide span of facets, such as values, norms, goals, interpersonal relationships, organizational structures, teaching, learning, and leadership practices, it could be challenging to transform a negative school climate (Cohen, 2009). Literature and research revealed that effective strategies for improving school climate were:

- Collaborative school-based interventions, which modify relationships between teachers and administrators (Rhodes et al., 2009);
- The employment of a school leader that fosters adult learning and shaping growth-enhancing climates (Drego-Severson, 2012); and
- The solicitation and contribution of student opinions about school climate in order to identify obstacles for learning, the causes of these obstacles, and to promote solutions for the obstacles (Voight, 2014). The implementation of these particular strategies has been correlated with improving the overall climate of a school, which consequently improves student academic achievement (Bear et al. 2014).

According to Freiberg et al., (2013), the improvement of a school’s climate begins in each individual classroom with the implementation of a school wide behavior program.
Moreover, London et al. (2015) claimed that school climate research has neglected to focus recess as a critical context that influences climate and that the improvement of the overall school climate begins on the playground with the implementation of high-functioning recess (safe, healthy, inclusive play, and physical activity which includes a set of rules conflict resolution tools, and the encouragement of positive language). Freiberg et al. (2013) maintained that the manner in which classrooms are formed sets the foundation for emotional and intellectual wellbeing and ultimately the overall climate of the school. More specifically, a person-centered learning environment balances the needs of learners and teachers alike since a shared responsibility is utilized in addition to cooperative leadership and caring. London et al. (2015) maintained that students enter the classroom ready to learn after engaging in meaningful play, which includes student engagement, skill development, conflict resolution, and physical and emotional safety since these experiences have powerful implications for how students experience their school’s climate. More specifically, a positive “recess climate” parallels overall school climate by borrowing three of the school climate components: physical and emotional safety, positive relationships with adults, and student engagement (London et al., 2015).

Improving the overall quality of a school’s climate and maintaining a positive school climate has also been correlated with several positive impacts on students and their well-being such as students’ mental, emotional health, and physical health (Thapa et al., 2013). These forms of health are directly related to each of the five components of school climate (Wang & Degol, 2015): the school improvement process, teaching and learning, safety, relationships, and the institutional environment. When attempting to improve a school’s overall school climate,
one must evaluate each of these five components in order to determine which specific areas are in need of attention with the purpose of improving the overall climate.

The focus of this study is to determine whether or not the academic student achievement status of schools is correlated with teachers’ perceptions of school climate, therefore, an examination of literature is provided below to outline the main characteristics of high performing schools and low performing schools. According to Boyd and colleagues (2008), low-achieving and chronically failing schools typically have disproportionately large numbers of poor minority students; ineffective or inexperienced teachers; inconsistent school leadership; extreme behavior problems; high student transient rate; insufficient funds for instructional materials to support student needs; and insufficient funds to hire support staff to manage student issues. While staff stability is imperative for the overall effectiveness of turning around low performing schools, it has been reported that failing schools have the most difficulty attracting experienced teachers and administrators who are capable of working effectively with the socioeconomic challenges that are typically present in low performing schools (Kutash, Nico, Gorin, Tallant, & Rahmatullah, 2010).

Research studies that have assessed school climate have produced evidence that high performing schools share a common theme: they are schools that are capacity rich, meaning that they do not typically lack key capacity of human, cultural, or fiscal factors, which could result in the lack of a quality teaching staff, high staff turnover, lack of professional community, lack of resources, lack of understanding the cultural background of students, outdated or inadequate school facilities (JoHyun, & Kemp-Graham, 2013). Suber (2012) added that successful student learning is correlated with to the following school characteristics: focused professional
development, alignment of instruction and assessment, reduction of teacher attrition, effective monitoring of instruction, and a positive school culture. The underlying factor that contributes positively to these essential characteristics is a school principal that physically and psychologically involved in the school and individual classrooms. Essentially, effective schools are led by effective principals. (Suber, 2012). The school principal is responsible for the organization of the school, which includes supervision of teachers and achievement, professional development, and most importantly instructional leadership (Witziers, Bosker, and Kruger, 2003). “The principal’s routine behaviors create links between characteristics of organization and instructional climate, which in turn affect student achievement” (Witziers et al., 2003, p. 401).

Research that has assessed school climate has also produced evidence that one of the most significant characteristics of high performing schools is that they typically have a positive school climate (referring to both the physical and social aspects of the teaching and learning environment) (Jain et al., 2015). High performing schools typically maintain a positive school climate, which encompasses safe, caring, participatory, and supportive or responsive environments that provide students with adequate and appropriate structure, supports, and opportunities for learning (Thapa & Cohen, 2013). Jain et al. (2015) focused on four dimensions of school climate in their study, *Inequalities in School Climate in California:* staff/student relationships, student learning-facilitative behaviors, norms and standards, and perceived safety. The researchers expressed belief that these four dimensions were interrelated and have a strong impact on a variety of student and school-level outcomes. The results of the study produced evidence that a characteristic of high performing schools is that teachers have more positive
perceptions of school climate as opposed to teachers employed in low performing schools across all four of the aforementioned dimensions of school climate.

**Summary**

In conclusion, a review of literature was developed to locate and analyze current studies related to school climate and teachers’ perceptions and their impact in the school setting with the purpose to (1) provide a synthesis of research, (2) convey correlations between school climate and the general well-being of teachers and students, and (3) to identify and communicate gaps in literature that currently exist with regards to school climate. The literature provided evidence that several factors related to school climate could provoke either positive or negative consequences in schools. Consequently all of these factors are directly related to student academic achievement making school climate the forefront for the overall success of an educational institution (Johnson & Stevens, 2006). While the aforementioned studies in the literature review have provided evidence that teachers’ perceptions have an impact on student academic achievement, there is a gap in the literature to provide evidence to support the reverse viewpoint: a discovery of whether or not the student academic achievement status of a school has a direct impact upon teachers’ perceptions of overall school climate. This study is an attempt to fulfill the recommendation by Bear et al. (2015): to determine discriminant validity in schools (an examination to determine if school climate scores on behalf of educators discriminate between low and high performing schools). In the county in the state of Tennessee where this study will be conducted, the achievement status of a school is determined by the overall performance of students at one single point in time. The achievement is measured by a quality
assessment such as the end of grade Achievement, end-of-course tests, and the TCAP (Tennessee Comprehensive Assessment Program) (Tennessee Department of Education, 2016).
CHAPTER THREE: METHODS

Overview

This chapter outlines the rationale for the design and methodology of this particular study on the perceptions of school climate on behalf of teachers in low achieving and high achieving schools. This chapter also presents the six research questions and corresponding hypotheses that were evaluated in this study. The participants and setting of study are also presented in addition to the instrumentation, and procedures and for conducting the study. Lastly, a description and rationale of the data analysis for the study is described.

Design

This was a quantitative, causal-comparative research design. The independent variable in this study was the academic achievement status of the schools: schools that are designated as high performing schools and low performing schools as measured by the TCAP (Tennessee Comprehensive Assessment Program) scores for the 2014-2015 school year. The TCAP is a standardized test that is administered at the end of each school year for students in grades three through eight to measure achievement in the areas of English language arts, math, science, and social studies (Brimi, H., 2012). The TCAP is utilized to determine if students in these particular grade levels are proficient or not in the aforementioned subject areas. The state of Tennessee utilizes the TCAP scores to determine students’ academic progress. The Tennessee Value-Added Assessment (TVAAS) measures the impact that teachers and schools have on students’ academic progress. TVAAS is utilized to assist educators to identify best practices and implement programs that best meet the needs of students in addition to making informed decisions about where to implement resources to ensure growth opportunities for students.
(Tennessee Department of Education, 2016). Furthermore, the Tennessee Department of Education (2015) disclosed how school classification is determined in their publication of School Accountability Methodology. The first and lowest classification is labeled Priority schools. Priority schools are the five percent of schools in the state with the lowest success rate (utilizing up to three years of data). The second classification of schools is Focus schools. Focus schools are the ten percent of schools in the state and are identified through one of three pathways. The pathways for Focus school identification are as follows:

1. Graduation Rate Pathway: High schools with an average graduation rate of less than 60 percent (utilizing up to three years of data).
   1. Subgroup Pathway: Any subgroup with a Success Rate of less than ten percent (utilizing up to three years of data).
   2. Gap Pathway: schools with the largest gaps between selected groups.

The last classification is for Reward schools. These schools are identified through one of two pathways:

1. Reward Performance: Five percent of schools with the highest success rate in the state (utilizing one year of the most recent data).
2. Reward Progress: Five percent of schools with the highest progress in the State (utilizing one-year TVAAS index values).

As stated in Chapter One, results from the 2014-2015 school year were the most current results available because the Tennessee Department of Education suspended state testing for the 2015-2016 school year for grades three through eight due to the inability of the state’s testing vendor to deliver a reliable testing platform (Tennessee Department of Education, 2016). The
dependent variable will be the school climate scores as measured by the Revised School Level Environment Questionnaire. The revised School Level Environment Questionnaire is an instrument that has been utilized in educational research to measure the perceptions of school climate on behalf of teachers (Johnson, Stevens, & Zvoch, 2007). The Revised School Level Environment Questionnaire (Revised SLEQ) is an instrument that measures teachers’ perceptions of school climate. See Appendix B for instrument. The original SLEQ was developed in 1982 (Fraser & Rentoul), which contained eight categories and 56 items. Johnson et al. revised the instrument in 2007. See Appendix A for permission to utilize the Revised SLEQ in the study in addition to permission to include the instrument in this dissertation manuscript.

This study meets the criteria for a quantitative research study because the methodology will include collecting numerical data on observable behaviors of participants and then subjecting the data to statistical analysis (Gall, Gall, & Borg, 2007). The causal comparative design is the most appropriate design for this particular research study because the study entails identifying whether two groups differ on the dependent variable (p. 634). According to Gall et al., causal comparative research is a form of non-experimental inquiry in which researchers try to identify cause-and-effect relationships by creating groups of individuals in whom the independent variable is absent or present. The researcher then seeks to determine whether the groups differ on the dependent variable. The significant characteristic of causal-comparative research is that the independent variable is measured in the form of categories. A similar research study (Duff, 2013) also utilized the causal comparative design to examine how two groups (teachers and administrators) differed regarding perceptions of school climate in the
elementary school setting. This causal comparative study will evaluate data that is obtained from schools that are not randomly selected. The schools selected for the study will be based upon either being one of the three highest achieving schools or one of the three lowest achieving schools. The schools will be specifically and intentionally selected instead of being selected randomly.

**Research Question(s)**

**RQ1:** Is there a difference in perception of school climate between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ2:** Is there a difference in perception of collaboration between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ3:** Is there a difference in perception of decision making between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ4:** Is there a difference in perception of instructional innovation between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ5:** Is there a difference in perception of student relations between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**RQ6:** Is there a difference in perception of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?
Hypotheses

**H₀₁:** There is no significant difference in perceptions of overall school climate between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**H₀₂:** There is no significant difference in perceptions of collaboration between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**H₀₃:** There is no significant difference in perception of decision making between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**H₀₄:** There is no significant difference in perception of instructional innovation between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**H₀₅:** There is no significant difference in perception of student relations between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**H₀₆:** There is no significant difference in perception of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

Participants and Setting

The participants for this study were drawn from a convenience sample of six elementary schools located in one school district in a low-to-middle income suburb during the fall semester.
of the 2016-2017 school year. The schools were selected based upon achievement status (three low performing schools and three low performing schools) and then the participants at each school were recruited on a voluntary basis (25 teachers at each school site). The achievement status for each of the schools was determined by analyzing the data from the Tennessee Comprehensive Assessment Program (TCAP) from the last school year, which it was administered (2014-2015). The TCAP is an annual assessment, which measures the knowledge and skills in English Language Arts, math, science, and social studies for students in grades three through eight (Brimi, 2012).

For this study the number of participants sampled was 150, which exceeds the minimum amount required for a medium effect size. According to Gall et al. (2007) at least 126 participants are required to produce a medium effect size with statistical power of .7 at the .05 alpha level. Multiple t tests were performed to compare the perceptions of overall school climate on behalf of teachers in high performing schools and low performing schools in addition to measuring the perceptions of teachers in the study on the five subscales of the instrument: collaboration, decision making, instructional innovation, student relations, and school resources. The sample was obtained from six elementary schools in one school district. Teachers at each school site were contacted via mass email once the researcher obtained permission from each school’s principal. Participants were obtained on a volunteer basis. Within each school, 25 teachers volunteered to participate in the study. The participants completed the Revised SLEQ at a designated location during a specified timeframe at their own school site.

**Instrumentation**

The Revised School Level Environment Questionnaire (Revised SLEQ) is an instrument
that measures teachers’ perceptions of school climate. See Appendix B for instrument. The original SLEQ was developed in 1982 (Fraser & Rentoul), which contained eight categories and 56 items. The Revised SLEQ was developed by Johnson, Stevens, and Zvoch (2007) after conducting exploratory and confirmatory factor analyses with the items on the original SLEQ. The researchers revised the instrument by excluding three categories: Professional Interest, Staff Freedom, and Work Pressure, leaving 35 of the original 56 items. The authors further modified the instrument by excluding 14 items, which were considered to be redundant. The purpose of the instrument is to measure teachers’ overall perceptions of school climate in addition to five factors that are specific to school climate: collaboration (6 items) student relationships (4 items), school resources (4 items), decision making (3 items), and instructional innovation (4 items).

The 21 items on the instrument were rated by participants with a Likert scale, which ranged from Strongly Disagree to Strongly Agree. Positively worded items (#1, 2, 4, 5, 6, 7, 8, 11, 12, 13, 15, 17, 19) were scored as follows: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree. Negatively worded items (#3, 9, 10, 14, 16, 18, 20, 21) were scored as follows: 5 = Strongly Disagree, 4 = Disagree, 3 = Neither Agree nor Disagree, 2 = Agree, 1 = Strongly Agree. After scoring each item, the total will be added up and divided by 21 to get the mean total score. For each factor, the scores will be added for the items in those factors and then divided by the number of items in the factor to get mean factor scores.

This instrument is appropriate for this particular study because it specifically measures the perceptions of school climate on behalf of teachers and the goal of the study is to measure teachers’ perceptions of school climate in high achieving schools and low achieving schools and then to compare them to one another. The instrument was used in numerous studies (Wenton,
Reliability of the instrument was tested (Johnson et al., 2007) and a Cronbach’s alpha coefficient was obtained for Overall School Climate (.90), Collaboration (.82), Decision Making (.78), Instructional Innovation (.79), Student Relations (.86), and School Resources (.77). A value of .7 or larger is commonly accepted as efficient and implies that responses on the Revised SLEQ are not random.

The developers defined each of the following five factors as follows: (1) Collaboration – working and communicating with other teachers; (2) Decision Making – the opportunity for teachers to participate in making school wide decisions; (3) Instructional Innovation – the willingness to implement new teaching approaches, ideas, courses, and curriculum materials; (4) Student Relations – the perceptions of student behavior, cooperation, and motivation to learn; (5) School Resources – sufficient materials, resources, and technology are readily available for teachers (Johnson et al., 2007).

The Revised SLEQ was tested for construct validity by Johnson et al (2007) using a sample of 2,558 teachers in 119 schools from one large school district in the southwestern United States. First, an exploratory factor analysis was utilized with half of the population in the sample, which resulted in the emerging of five factors. Next, a confirmatory factor analysis was conducted with other half of the population in the sample. Lastly, goodness-of-fit indices indicated that the factor structure fit the data efficiently. “Results suggest that the Revised SLEQ provides a good tool for studying teachers perceptions of school climate” (Johnson et al., 2007).

The instrument should be administered in the paper version (an online version was currently not available). The instrument should be administered to teachers whom volunteer and
they should be allowed to complete the survey in private to retain anonymity. The survey requires approximately ten minutes to complete. Instructions for administering the instrument are located in Appendix D. Permission to use the instrument was obtained from Bruce Johnson on January 4, 2016 via email to the researcher. See Appendix A for permission to use the instrument.

**Procedures**

Initial steps in the study included submitting an internal review board (IRB) packet and acquiring approval from Liberty University IRB. Upon receiving IRB approval from Liberty University, the researcher obtained permission from the participating school system’s research committee (see Appendix E for IRB approval and Appendix F for school system approval). The school system’s data analyst was consulted to receive data (TCAP scores from the 2014-2015 school year) to confirm which schools in the system ranked as the three highest achieving schools and which schools ranked as the three lowest achieving schools in the system. After the schools for the study were determined, each principal at the six elementary schools were contacted via email to inform them that permission was granted from the school system’s research committee and also from Liberty University IRB to conduct the study. Secondly, the principals were asked for permission for the teachers in their schools to participate in the study (See Appendix G for principals’ elicited consent via email). After receiving permission from each of the principals, participating schools received a packet containing 25 surveys, instructions for administering the survey, and a timeframe for completing the survey (training for the administration of the instrument was not necessary for this study). Instructions for the procedures and protocols for administering the instrument are located in Appendix D.
Data for the study was gathered from the schools system’s central office by the researcher. Each principal was asked to assign a designated employee to distribute the surveys in a designated location at their school site during one specific time. The designated employee collected the surveys, placed them in a large envelope, sealed it with tape, signed the back seal of the envelope, and then placed it courier addressed to the school system’s data analyst at central office. Each envelope and survey had a number from one to six written on it, which corresponded to each school in the study. The researcher was the only individual with knowledge as to which number correlates with each school in the study. Data will be recorded and analyzed with SPSS (Statistical Package for the Social Sciences) Version 22.

**Data Analysis**

Six schools from one school system were chosen specifically for their academic achievement status according to data (TCAP scores from the 2014-2015 school year). Teachers at each school were provided with the opportunity to volunteer in the study via email from the principal at each school. The participating teachers were notified of the time and location of the administration of the survey. The Revised School Level Environment Questionnaires from the 25 teachers at each of the six schools were collected and utilized in the study. A total of 150 teachers participated in the study by completing the survey.

The independent variable in this quantitative, causal-comparative design was the academic status of each school in the study. The dependent variable was the teachers’ perceptions of school climate as measured by the Revised School Level Questionnaire. The Statistical Package for the Social Sciences (SPSS) Version 22 was utilized to analyze the data.
A t-test was conducted to compare the perceptions of overall school climate on behalf of teachers in high performing schools and low performing schools. Additional t-tests measured the perceptions of teachers in the study on the five subscales of the instrument: collaboration, decision-making, instructional innovation, student relations, and school resources. Multiple t-tests for each hypothesis was most suitable to analyze the data since it would compare the mean scores of two samples to verify if they were significantly different from one another (Gall et al., 2007). Since this study entailed the testing of multiple hypotheses, a Bonferroni correction was conducted as a follow up procedure to prevent a Type 1 error (Green & Salkind, 2014). EW is the experiment-wise \( \alpha \), \( k \) is the number of significant tests performed in the entire study and PC is the per comparison alpha. Therefore the formula for this particular study was \( PC = \frac{0.05}{6} = 0.008 \).

For a medium effect size, a statistical power of .7 was present and to test at the alpha level of .05, a sample of at least 126 participants is recommended for the study (Gall et al., 2007), however, a sample of 150 participants was included in the study. The alpha level on each t-test determined whether or not the null hypotheses should be rejected or failed to be rejected (alpha < .008 – reject the null hypothesis or alpha > .008 – fail to reject the null hypothesis). The descriptive statistics were utilized to report the mean and standard deviation for each t-test that was conducted in the study. The F ratio provided information about differences among group means.

Data screening consisted of conducting a box and whiskers plot to determine if there are any extreme outliers on each group’s dependent variable, which will be the scores on the Revised SLEQ (Warner, 2013). Assumptions for normality will be measured with a Kolmogorov-
Smirnov test due to the sample size containing a greater amount than 50 participants. A medium effect size may be produced by exceeding the minimum number of participants of 126 according to Gall et al., (2007) with a statistical power of .7 at the .05 alpha level. A significant p value (p< .05) on the test would provide evidence that the assumptions of normality were met (Gall et. al., 2007). Assumptions of equal variances were measured with a Levene’s Test for Equality of Equal Variances.

Descriptive statistics also provided information about the sample of observations in the study (Warner, 2013). For each of the null hypotheses in the study, the following was reported: the number (N), degrees of freedom (df within / df between), significance level (p), and the effect size and power.
CHAPTER FOUR: FINDINGS

Overview

This chapter provides the results for each research question and corresponding null hypothesis for the 150 participants surveyed in one school system in Middle Tennessee. Data analysis included six independent samples t-tests and multiple Mann-Whitney U tests. The independent samples t-tests determined whether the mean value of test variables (teachers’ perceptions) for one group (teachers in low performing schools) differed significantly from the mean value of the test variables for the second group (teachers in high performing schools). The assumption of normality was tested using a Kolmogorov-Smirnov test ($p < .05$). The Kolmogorov-Smirnov test was not the only test to determine normality and was used in the conjunction with the examination of boxplots, kurtosis, and skewness. The tests of normality indicated that the scores were not normally distributed in five out of six of the t tests (the results for overall school climate were equally distributed), therefore a non-parametric test (the Mann-Whitney U test) was conducted to determine whether there was an observed difference between the distribution of scores for both groups measured on the same variable (teachers’ perceptions) to identify if there was any statistical significance. In addition, explanations for the descriptive statistics, a Levene’s test for equality of variance, and a follow-up Bonferroni correction are also provided in this chapter.

Research Question(s)

**RQ1:** Is there a difference in perception of school climate between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?
RQ2: Is there a difference in perception of collaboration between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

RQ3: Is there a difference in perception of decision making between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

RQ4: Is there a difference in perception of instructional innovation between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

RQ5: Is there a difference in perception of student relations between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

RQ6: Is there a difference in perception of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

Hypotheses

H₀₁: There is no significant difference in perceptions of overall school climate between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

H₀₂: There is no significant difference in perceptions of collaboration between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

H₀₃: There is no significant difference in perception of decision making between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?
**Hₐ₄:** There is no significant difference in perception of instructional innovation between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**Hₐ₅:** There is no significant difference in perception of student relations between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**Hₐ₆:** There is no significant difference in perception of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ?

**Descriptive Statistics**

With regards to teachers’ perceptions of overall school climate, the mean score for Revised SLEQ score in high achieving schools ($M = 84.97, SD = 1.05, Median = 84.00$) and in low performing schools ($M = 75.45, SD = 9.58, Median = 75.00$). Descriptive statistics representing teachers’ perceptions of collaboration revealed that the mean for teachers in high performing schools ($M = 25.18, SD = 3.57, Median = 25.00$) was higher than that of teachers in low performing schools ($M = 23.58, SD = 4.12, Median = 24.00$). Descriptive statistics pertaining to teachers’ perceptions of decision making revealed that the mean of scores for teachers in high performing schools ($M = 8.64, SD = 2.67, Median = 9.00$) was only slightly higher than teachers in low performing schools ($M = 8.56, SD = 2.08, Median = 9.00$). The mean scores on the Revised SLEQ for teachers’ perceptions of instructional innovation for teachers in high performing schools ($M = 17.24, SD = 2.25, Median = 18.00$) were higher than teachers in low performing schools ($M = 15.29, SD = 2.39, Median = 16.00$). The descriptive
statistics for teachers’ perceptions of student relations revealed that the mean of scores for teachers in high performing schools ($M = 17.13, SD = 1.91, Median = 17.00$) were higher than the mean scores on the Revised SLEQ for teachers in low performing schools ($M = 12.92, SD = 2.96, Median = 14.00$). Lastly, the descriptive statistics indicated that the mean scores for teachers’ perceptions of school resources were higher on behalf of teachers in high performing schools ($M = 16.77, SD = 2.51, Median = 17.00$) than teachers in low performing schools ($M = 15.09, SD = 2.26, Median = 16.00$).

Table 1
Descriptive Statistics for Teachers’ Perceptions
Results

Null Hypothesis One

Null hypothesis one examined the difference in perceptions of overall school climate between teachers in high performing schools and low performing schools. An exploratory data analysis was conducted to determine if the Revised SLEQ score distribution was normally distributed. Results for the Kolmogorov-Smirnov test for normality (Green & Salkind, 2014) indicated that the Revised SLEQ distribution for high achieving schools did not deviate significantly from a normal distribution (D = .055, p = .200) or low achieving schools (D = .082, p = .200) (Table 2). In conjunction with the Kolmogorov-Smirnov test, boxplots are also provided and additionally, kurtosis for high achieving schools and low achieving schools were -0.364 and 1.319 respectively and skewness for the two groups was .005 and -0.595 respectively (See Appendix H for the table of detailed descriptive statistics). A box and whiskers plot was set up to examine the distribution of the Revised SLEQ scores for high and low achieving schools; this plot appears in Figure 4.1. Examination of the box and whiskers plot indicated that there was only one outlier in one of the groups (low achieving schools) on the low end of the frequency distribution. Outliers were included in the data set because there was a lack of good rationale for the removal of outliers and the elimination of outliers would reduce the sample size in the study (Warner, 2013). Analysis was conducted a second time to determine if the inclusion or exclusion of outliers had an effect on the outcome of the analysis (Warner, 2013). The second analysis with the extraction of outliers produced evidence on the Kolmogorov-Smirnov test for normality that the distribution of scores for the Revised SLEQ did not deviate significantly from a normal distribution (p = .200). The t-test results on the second analysis were
also significant ($p = .000$).

Table 2

Assumptions of Normality

<table>
<thead>
<tr>
<th>Group</th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>Collaborate</td>
<td>Low Achieving Schools</td>
<td>.137</td>
</tr>
<tr>
<td></td>
<td>High Achieving Schools</td>
<td>.104</td>
</tr>
<tr>
<td>Relations</td>
<td>Low Achieving Schools</td>
<td>.175</td>
</tr>
<tr>
<td></td>
<td>High Achieving Schools</td>
<td>.217</td>
</tr>
<tr>
<td>Resources</td>
<td>Low Achieving Schools</td>
<td>.215</td>
</tr>
<tr>
<td></td>
<td>High Achieving Schools</td>
<td>.127</td>
</tr>
<tr>
<td>Decisions</td>
<td>Low Achieving Schools</td>
<td>.115</td>
</tr>
<tr>
<td></td>
<td>High Achieving Schools</td>
<td>.180</td>
</tr>
<tr>
<td>Innovation</td>
<td>Low Achieving Schools</td>
<td>.163</td>
</tr>
<tr>
<td></td>
<td>High Achieving Schools</td>
<td>.205</td>
</tr>
<tr>
<td>Overall</td>
<td>Low Achieving Schools</td>
<td>.082</td>
</tr>
<tr>
<td></td>
<td>High Achieving Schools</td>
<td>.055</td>
</tr>
</tbody>
</table>

* This is a lower bound of the true significance.

Figure 4.1. Boxplots for Overall Perceptions (High and Low Achieving Schools)

Levene’s test of homogeneity of variance was employed and confirmed that the variances
in the Revised SLEQ scores for the high achieving schools group and low achieving schools group were statistically equivalent (F (.002) = 148, p = .960). The Levene’s F test for equality of variance and the set level of significance α = .05, are the most common statistical factors utilized for assessing the assumption of homogeneity of variance (Gastwirth, Gel, & Miao, 2009). The result of the test was not significant, (F (.002) = 148, p = .960) indicating that the assumption of equality of variance was tenable. Table 3 reflects the results of the Levene’s F test for equality of variance.

Since this study entailed the testing of multiple hypotheses, a Bonferroni correction was conducted as a follow up procedure to prevent a Type 1 error (Green & Salkind, 2014). EW is the experiment-wise α, k is the number of significant tests performed in the entire study and PCα is the per comparison alpha. Therefore, the formula for this particular study was PCα = .05/6 = .008. The null hypothesis will be rejected if p<.008.

An Independent-samples t-test was conducted to compare teachers’ perceptions of overall school climate in high performing schools and low performing schools as measured by the Revised SLEQ. The independent samples t-test determined whether significant differences were present by comparing the means of two groups on the same continuous dependent variable (Creswell, 2015). There was a significant difference in the scores for high performing schools (M = 84.97, SD = 1.05) and low performing schools (M = 75.45, SD = 9.58) conditions; t(148) = -6.23, p = .000. Utilizing a significant level of p < .008 (two-tailed), it was concluded that there was a statistical difference (p = .000) in perceptions of overall school climate between 75 teachers in high performing schools and 75 teachers in low performing schools and therefore the null hypothesis was rejected. The t-test revealed that teachers employed in high achieving
schools had more positive perceptions of overall school climate than their teacher counterparts in low achieving schools (Table 3). Results from the independent samples t-test confirmed that the null hypothesis should be rejected. There is a significant difference in the perceptions of overall school climate on behalf of teachers in high achieving schools and low achieving schools.

Table 3

Independent Samples Test

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>Collaborate</td>
<td>.146</td>
<td>.703</td>
<td>-2.538</td>
</tr>
<tr>
<td></td>
<td>.318</td>
<td></td>
<td>-2.538</td>
</tr>
<tr>
<td>Relations</td>
<td>15.047</td>
<td>.000</td>
<td>-10.336</td>
</tr>
<tr>
<td></td>
<td>.118</td>
<td></td>
<td>-10.336</td>
</tr>
<tr>
<td>Resources</td>
<td>1.659</td>
<td>.200</td>
<td>-4.294</td>
</tr>
<tr>
<td></td>
<td>.400</td>
<td></td>
<td>-4.294</td>
</tr>
<tr>
<td>Decisions</td>
<td>2.407</td>
<td>.123</td>
<td>-2.04</td>
</tr>
<tr>
<td></td>
<td>.167</td>
<td></td>
<td>-2.04</td>
</tr>
<tr>
<td>Innovation</td>
<td>.001</td>
<td>.974</td>
<td>-5.117</td>
</tr>
<tr>
<td></td>
<td>.017</td>
<td></td>
<td>-5.117</td>
</tr>
<tr>
<td></td>
<td>.018</td>
<td></td>
<td>-6.227</td>
</tr>
</tbody>
</table>

Null Hypothesis Two

Null hypothesis two examined the difference in perceptions of collaboration between teachers in high performing schools and low performing schools. An exploratory data analysis was conducted to determine if the Revised SLEQ score distribution was normally distributed. Results for the Kolmogorov-Smirnov test for normality (Green & Salkind, 2014) indicated that the Revised SLEQ distribution for high achieving schools deviated significantly from a normal distribution (D = .104, p = .043) as did the distribution for the low achieving schools (D = .137, p = .001) (Table 2). The distribution of scores for both low and high achieving schools produced results that indicated that they were not equally distributed (p < .05). If a Kolmogorov-Smirnov is
significant (p < .05), it indicates that the distribution is significantly different from a normal
distribution (Green & Salkind, 2014). In conjunction with the Kolmogorov-Smirnov test,
boxplots are also provided and additionally, kurtosis for high achieving schools and low
achieving schools were -.507 and 1.361 respectively and skewness for the two groups was -.477
and -1.008 respectively (See Appendix H for the table of detailed descriptive statistics).
Examination of the box and whiskers plot indicated that there were only two outliers in one of
the groups (low achieving schools) on the low end of the frequency distribution. Outliers were
included in the data set because there was a lack of good rationale for the removal of outliers and
the elimination of outliers would reduce the sample size in the study (Warner, 2013). Analysis
was conducted a second time to determine if the inclusion or exclusion of outliers had an effect
on the outcome of the analysis (Warner, 2013). The results for second analysis with the
extraction of outliers produced evidence on the Kolmogorov-Smirnov test for normality that the
distribution of scores for the Revised SLEQ did deviate significantly from a normal distribution
(p = .012). The t-test results on the second analysis were also not significant (p = .019) in
addition to the results on the Mann-Whitney U test (p = .017).
Figure 4.2. Boxplots for Collaboration (High and Low Achieving Schools)
Levene’s test of homogeneity of variance was employed and confirmed that the variances in the Revised SLEQ scores for the high achieving schools group and low achieving schools group were statistically equivalent (F (.146) = 148, p = .703). The Levene’s $F$ test for equality of variance and the set level of significance $\alpha = .05$, are the most common statistical factors utilized for assessing the assumption of homogeneity of variance (Gastwirth, Gel, & Miao, 2009). The result of the test was not significant, (F (.146) = 148, p = .706) indicating that the assumption of equality of variance was tenable. Table 3 reflects the results of the Levene’s $F$ test for equality of variance.

An independent-samples t-test was used to analyze the second Null Hypothesis that looked at the difference in perceptions of collaboration between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ. Utilizing a significant level of $p < .008$ (two-tailed), it was concluded that there was not a statistical difference in perceptions of collaboration ($p = .012$) between 75 teachers in high performing schools ($M = 25.18$, $SD = 3.57$) and 75 teachers in low performing schools ($M = 23.58$, $SD = 4.12$) and therefore the null hypothesis was not rejected. Furthermore, the assumption of normality was assessed using a Kolmogorov-Smirnov test ($p < .05$). The results of the Kolmogorov-Smirnov test revealed that that the scores were not normally distributed ($p < .05$) for both high achieving and low achieving schools (Table 3). Therefore, a nonparametric test (the Mann-Whitney U test) was conducted as an additional analysis. A Mann-Whitney U test indicated that the perceptions of collaboration was not significantly greater for teachers in high achieving schools (Mdn = 25) than for teachers in low achieving schools (Mdn = 24), $U = .05$, $p = .017$. The Mann-Whitney U test provided evidence that there was not a significant difference
between the two groups and therefore the null hypothesis was not rejected (Table 4).

Table 4

Mann-Whitney U Test

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>Test</th>
<th>Sig.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The distribution of Collaborate is the same across categories of Group.</td>
<td>Independent-Samples Mann-Whitney U Test</td>
<td>.017</td>
<td>Reject the null hypothesis.</td>
</tr>
<tr>
<td>2 The distribution of Relations is the same across categories of Group.</td>
<td>Independent-Samples Mann-Whitney U Test</td>
<td>.000</td>
<td>Reject the null hypothesis.</td>
</tr>
<tr>
<td>3 The distribution of Resources is the same across categories of Group.</td>
<td>Independent-Samples Mann-Whitney U Test</td>
<td>.000</td>
<td>Reject the null hypothesis.</td>
</tr>
<tr>
<td>4 The distribution of Decisions is the same across categories of Group.</td>
<td>Independent-Samples Mann-Whitney U Test</td>
<td>.578</td>
<td>Retain the null hypothesis.</td>
</tr>
<tr>
<td>5 The distribution of Innovation is the same across categories of Group.</td>
<td>Independent-Samples Mann-Whitney U Test</td>
<td>.000</td>
<td>Reject the null hypothesis.</td>
</tr>
<tr>
<td>6 The distribution of Overall is the same across categories of Group.</td>
<td>Independent-Samples Mann-Whitney U Test</td>
<td>.000</td>
<td>Reject the null hypothesis.</td>
</tr>
</tbody>
</table>

Null Hypothesis Three

Null hypothesis three examined the difference in perceptions of decision making between teachers in high performing schools and low performing schools. An exploratory data analysis was conducted to determine if the Revised SLEQ score distribution was normally distributed. Results for the Kolmogorov-Smirnov test for normality (Green & Salkind, 2014) indicated that the Revised SLEQ distribution for high achieving schools deviated significantly from a normal distribution (D = .180, p = .000) as did the distribution for the low achieving schools (D = .115, p = .016) (Table 2). The distribution of scores for both low and high achieving schools produced results that indicated that they were not equally distributed (p < .05). If a Kolmogrov-Smirnov is significant (p < .05), it indicates that the distribution is significantly different from a normal distribution (Green & Salkind, 2014). In conjunction with the Kolmogorov-Smirnov test, boxplots are also provided and additionally, kurtosis for high achieving schools and low
achieving schools were -.244 and -.457 respectively and skewness for the two groups were -.469 and -.233 (See Appendix H for the table of detailed descriptive statistics). Examination of the box and whiskers plot indicated that there were no outliers for either group.

Figure 4.3. Boxplots for Decision Making (High and Low Achieving Schools)

Levene’s test of homogeneity of variance was employed and confirmed that the variances in the Revised SLEQ scores for the high achieving schools group and low achieving schools group were statistically equivalent (F (2.40) = 148, p = .123). The Levene’s $F$ test for equality of variance and the set level of significance $\alpha = .05$, are the most common statistical factors utilized for assessing the assumption of homogeneity of variance (Gastwirth, Gel, & Miao, 2009). The result of the test was not significant, (F (2.40) = 148, p = .123) indicating that the assumption of equality of variance was tenable. Table 3 reflects the results of the Levene’s $F$ test for equality of variance.

An independent-samples t-test was used to analyze the third Null Hypothesis that observed the difference in perceptions of decision making between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ. An
independent-samples t-test was used to analyze the third Null Hypothesis that looked at the difference in perceptions of decision making between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ. Utilizing a significant level of $p < .008$ (two-tailed), it was concluded that there was a not a statistical difference in perceptions of decision making ($p = .839$) between 75 teachers in high performing schools ($M = 8.64, SD = 2.67$) and 75 teachers in low performing schools ($M = 8.56, SD = 2.08$) and therefore the null hypothesis was not rejected. The t-test revealed that teachers’ perceptions of decision making in high achieving schools did not differ significantly than teachers in low achieving schools. (Table 2). Furthermore, the assumption of normality was assessed using a Kolmogorov-Smirnov test ($p < .05$). The results of the Kolmogorov-Smirnov test revealed that that the scores were not normally distributed ($p < .05$) for both high achieving and low achieving scores. Therefore, a nonparametric test (the Mann-Whitney U test) was conducted as an additional analysis. A Mann-Whitney U test indicated that the perceptions of decision making was not significantly greater for teachers in high achieving schools (Mdn = 9) than for teachers in low achieving schools (Mdn = 9), $U = .05, p = .578$. The Mann-Whitney U test provided evidence that there was not a significant difference between the two groups and therefore the null hypothesis was not rejected (Table 4).

**Null Hypothesis Four**

Null hypothesis four examined the difference in perceptions of instructional innovation between teachers in high performing schools and low performing schools. An exploratory data analysis was conducted to determine if the Revised SLEQ score distribution was normally distributed. Results for the Kolmogorov-Smirnov test for normality (Green & Salkind, 2014)
indicated that the Revised SLEQ distribution for high achieving schools deviated significantly from a normal distribution (D = .205, p = .000) as did the distribution for low achieving schools (D = .163, p = .000) (Table 2). The distribution of scores for both low and high achieving schools produced results that indicated that they were not equally distributed (p < .05). If a Kolmogrov-Smirnov is significant (p < .05), it indicates that the distribution is significantly different from a normal distribution (Green & Salkind, 2014). In conjunction with the Kolmogorov- Smirnov test, boxplots are also provided and additionally, kurtosis for high achieving schools and low achieving schools were .574 and 1.373 respectively and skewness for the two groups were -.993 and -.888 respectively (See Appendix H for the table of detailed descriptive statistics). Examination of the box and whiskers plot indicated that there were only two outliers in each of the two groups on the low end of the frequency distribution for each of them. Outliers were included in the data set because there was a lack of good rationale for the removal of outliers and the elimination of outliers would reduce the sample size in the study (Warner, 2013). Analysis was conducted a second time to determine if the inclusion or exclusion of outliers had an effect on the outcome of the analysis (Warner, 2013). The results for second analysis with the extraction of outliers produced evidence on the Kolmogorov-Smirnov test for normality that the distribution of scores for the Revised SLEQ did deviate significantly from a normal distribution (p = .000). The t-test results on the second analysis were also significant (p = .000) in addition to the results on the Mann-Whitney U test (p = .000).
Levene’s test of homogeneity of variance was employed and confirmed that the variances in the Revised SLEQ scores for the high achieving schools group and low achieving schools group were statistically equivalent (F (.001) = 148, p = .974). The Levene’s $F$ test for equality of variance and the set level of significance $\alpha = .05$, are the most common statistical factors utilized for assessing the assumption of homogeneity of variance (Gastwirth, Gel, & Miao, 2009). The result of the test was not significant, (F (.001) = 148, p = .974) indicating that the assumption of equality of variance was tenable. Table 3 reflects the results of the Levene’s $F$ test for equality of variance.

An independent-samples t-test was used to analyze the fourth Null Hypothesis that looked at the difference in perceptions of instructional innovation between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ. Utilizing a significant level of $p < .008$ (two-tailed), it was concluded that there was a statistically
significant difference in perceptions of instructional innovation ($p = .000$) between 75 teachers in high performing schools ($M = 17.24, SD = 2.25$) and 75 teachers in low performing schools ($M = 15.29, SD = 2.39$) and therefore the null hypothesis was rejected. The t-test revealed that teachers employed in high achieving schools had more positive perceptions of instructional innovation than their teacher counterparts in low achieving schools (Table 2). Furthermore, the assumption of normality was assessed using a Kolmogorov- Smirnov test ($p < .05$). The results of the Kolmogorov- Smirnov test revealed that the scores were not normally distributed ($p < .05$) for both high achieving and low achieving schools. Therefore, a nonparametric test (the Mann-Whitney U test) was employed as an additional analysis. A Mann-Whitney U test indicated that the perceptions of instructional innovation was significantly greater for teachers in high achieving schools (Mdn = 18) than for teachers in low achieving schools (Mdn = 16), $U = .05, p = .000$. The Mann-Whitney U test provided evidence that there was a significant difference between the two groups and therefore the null hypothesis was rejected (Table 4).

**Null Hypothesis Five**

Null hypothesis five examined the difference in perceptions of student relations between teachers in high performing schools and low performing schools. An exploratory data analysis was conducted to determine if the Revised SLEQ score distribution was normally distributed. Results for the Kolmogorov-Smirnov test for normality (Green & Salkind, 2014) indicated that the Revised SLEQ distribution for high achieving schools deviated significantly from a normal distribution ($D = .217, p = .000$) and low achieving schools ($D = .175, p = .000$) (Table 2). The distribution of scores for both low and high achieving schools produced results that indicated that they were not equally distributed ($p < .05$). If a Kolmogorov-Smirnov is significant ($p < .05$), it
indicates that the distribution is significantly different from a normal distribution (Green & Salkind, 2014). In conjunction with the Kolmogorov-Smirnov test, boxplots are also provided and additionally, kurtosis for high achieving schools and low achieving schools were .522 and -.177 respectively and skewness for the two groups were -.279 and -.768 respectively (See Appendix H for the table of detailed descriptive statistics). Examination of the box and whiskers plot indicated that there was only one outlier in one of the groups (high achieving schools) on the low end of the frequency distribution. Outliers were included in the data set because there was a lack of good rationale for the removal of outliers and the elimination of outliers would reduce the sample size in the study (Warner, 2013). Analysis was conducted a second time to determine if the inclusion or exclusion of outliers had an effect on the outcome of the analysis (Warner, 2013). The results for second analysis with the extraction of outliers produced evidence on the Kolmogorov-Smirnov test for normality that the distribution of scores for the Revised SLEQ did deviate significantly from a normal distribution (p = .000). The t-test results on the second analysis were also not significant (p = .000) in addition to the results on the Mann-Whitney U test (p = .000).

Figure 4.5. Boxplots for Student Relations (High and Low Achieving Schools)
Levene’s test of homogeneity of variance was employed and confirmed that the variances in the Revised SLEQ scores for the high achieving schools group and low achieving schools group were not statistically equivalent ($F (15.047) = 148, p = .000$). The Levene’s $F$ test for equality of variance and the set level of significance $\alpha = .05$, are the most common statistical factors utilized for assessing the assumption of homogeneity of variance (Gastwirth, Gel, & Miao, 2009). The result of the test was significant, ($F (15.047) = 148, p = .000$) indicating that the assumption of equality of variance cannot be assumed; therefore, the results of the $t$ test results will be reported using the equal variance not assumed value. Table 3 reflects the results of the Levene’s $F$ test for equality of variance.

An independent-samples $t$ test was used to analyze the fifth Null Hypothesis that looked at the difference in perceptions of student relations between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ. Utilizing a significant level of $p < .008$ (two-tailed), it was concluded that there was a statistical difference in perceptions of student relations ($p = .000$) between 75 teachers in high performing schools ($M = 17.13, SD = 1.92$) and 75 teachers in low performing schools ($M = 12.92, SD = 2.96$) and therefore the null hypothesis was rejected. The t-test revealed that teachers employed in high achieving schools had more positive perceptions of student relations than their teacher counterparts in low achieving schools (Table 2). The assumption of normality was assessed using a Kolmogorov- Smirnov test ($p < .05$). The results of the Kolmogorov- Smirnov test revealed that that the scores were not normally distributed ($p < .05$) for both high achieving and low achieving scores. Therefore, a nonparametric test (the Mann-Whitney U test) was employed as an additional analysis. A Mann-Whitney U test indicated that the perceptions of student
relations was significantly greater for teachers in high achieving schools (Mdn = 17) than for teachers in low achieving schools (Mdn = 14), U = .05, p = .000. The Mann-Whitney U test provided evidence that there was a significant difference between the two groups and therefore the null hypothesis was rejected (Table 4).

**Null Hypothesis Six**

Null hypothesis six examined the difference in perceptions of school resources between teachers in high performing schools and low performing schools. An exploratory data analysis was conducted to determine if the Revised SLEQ score distribution was normally distributed. Results for the Kolmogorov-Smirnov test for normality (Green & Salkind, 2014) indicated that the Revised SLEQ distribution for high achieving schools deviated significantly from a normal distribution (D = .127, p = .004) or low achieving schools (D = .215, p = .000) (Table 2). The distribution of scores for both low and high achieving schools produced results that indicated that they were not equally distributed (p < .05). If a Kolmogrov-Smirnov is significant (p < .05), it indicates that the distribution is significantly different from a normal distribution (Green & Salkind, 2014). In conjunction with the Kolmogorov- Smirnov test, boxplots are also provided and additionally, kurtosis for high achieving schools and low achieving schools were .005 and 1.898 respectively and skewness for the two groups were -.665 and -1.055 respectively (See Appendix H for the table of detailed descriptive statistics). Examination of the box and whiskers plot indicated that there were five outliers for low achieving schools (one on the high end of the frequency distribution and four outliers on the low end of the frequency distribution) and two outliers for high achieving schools (both outliers were on the low end of the frequency distribution). Outliers were included in the data set because there was a lack of good rationale
for the removal of outliers and the elimination of outliers would reduce the sample size in the
study (Warner, 2013). Analysis was conducted a second time to determine if the inclusion or
exclusion of outliers had an effect on the outcome of the analysis (Warner, 2013). The results
for second analysis with the extraction of outliers produced evidence on the Kolmogorov-
Smirnov test for normality that the distribution of scores for the Revised SLEQ did deviate
significantly from a normal distribution (p = .000). The t-test results on the second analysis were
also not significant (p = .000) in addition to the results on the Mann-Whitney U test (p = .000).

Figure 4.6. Boxplots for Resources (High and Low Achieving Schools)

Levene’s test of homogeneity of variance was employed and confirmed that the variances
in the Revised SLEQ scores for the high achieving schools group and low achieving schools
group were statistically equivalent (F (1.659) = 148, p = .200). The Levene’s F test for equality
of variance and the set level of significance α = .05, are the most common statistical factors
utilized for assessing the assumption of homogeneity of variance (Gastwirth, Gel, & Miao,
2009). The result of the test was not significant, (F (1.659) = 148, p = .200) indicating that the
assumption of equality of variance was tenable. Table 3 reflects the results of the Levene’s F
test for equality of variance.

An independent-samples t-test was used to analyze the sixth Null Hypothesis that observed the difference in perceptions of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ. An independent-samples t-test was used to analyze the sixth Null Hypothesis that looked at the difference in perceptions of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ. Utilizing a significant level of $p < .008$ (two-tailed), it was concluded that there was a statistical difference in perceptions of school resources ($p = .000$) between 75 teachers in high performing schools ($M = 16.77$, $SD = 2.51$) and 75 teachers in low performing schools ($M = 15.09$, $SD = 2.26$) and therefore the null hypothesis was rejected. The t-test revealed that teachers employed in high achieving schools had more positive perceptions of collaboration than their teacher counterparts in low achieving schools (Table 2). Furthermore, the results of the Kolmogorov-Smirnov test revealed that that the scores were not normally distributed ($p < .05$) for both high achieving and low achieving schools. Therefore, a non-parametric test (the Mann-Whitney U test) was employed as an additional analysis. A Mann-Whitney U test indicated that the perceptions of school resources was significantly greater for teachers in high achieving schools (Mdn = 17) than for teachers in low achieving schools (Mdn = 16), $U = .05$, $p = .000$. The Mann-Whitney U test provided evidence that there was a significant difference between the two groups and therefore the null hypothesis was rejected (Table 4).

**Additional Analysis**

A Bonferonni Correction was applied following the statistical procedures (multiple t-tests
and the Mann-Whitney U test). Since this study entailed the testing of multiple hypotheses, a Bonferroni correction was conducted as a follow up procedure to prevent a Type 1 error (Green & Salkind, 2014). $EW_\alpha$ is the experiment-wise $\alpha$, $k$ is the number of significant tests performed in the entire study and $PC_\alpha$ is the per comparison alpha. Therefore the formula for this particular study was $PC_\alpha = .05/6 = .008$. 
CHAPTER FIVE: CONCLUSIONS

Overview

This chapter provides a discussion section, which outlines evidence from literature and other studies that either support or contradict the results that were derived for each of the null hypotheses in the study. The implications section of the chapter provides evidence that this particular dissertation has added to the previous body of knowledge pertaining to teachers’ perceptions of school climate and furthermore could motivate educators to make school climate improvements in their schools. A section of the chapter is also dedicated to discussing the specific limitations of this research study. Lastly, the recommendations section provides a variety of concepts that could be explored and researched with regards to teachers’ perceptions of school climate.

Discussion

The purpose of this study was to provide evidence that teachers’ perceptions of school climate in high performing schools differ significantly from teachers’ perceptions of school climate in low performing schools as measured by the revised SLEQ. A sample of 150 participants from six elementary schools from one school district composed of the population sample for this particular study. Three of the elementary schools were the three lowest academically achieving schools in the district while the other three schools were the highest academically achieving schools in the district according to the state administered assessment from the 2014-2015 school year. The data was analyzed using multiple independent samples t-tests and revealed that there was a significant difference of perceptions of school climate on behalf of teachers in high achieving schools and low achieving schools. Additionally, a Mann-
Whitney U was conducted because the tests of normality indicated that the scores were not normally distributed in five out of six of the t tests (the results for overall school climate were equally distributed). Therefore a non-parametric test (the Mann-Whitney U test) was conducted to determine whether there was an observed difference between the distributions of scores for both groups measured on the same variable (teachers’ perceptions) to identify if there was any statistical significance.

**Null Hypothesis 1**

Research question one asked: Is there a difference in perception of school climate between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The null hypothesis stated: There is no significant difference in perceptions of overall school climate between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The results of the study revealed that there was a significant difference in mean scores on behalf of teachers in high achieving schools (M = 84.97) and teachers in low performing schools (M = 75.45). The higher mean score on behalf of teachers in higher achieving schools indicated that the perceptions of overall school climate were more positive than their counterpart teachers in low achieving schools.

The results of the first null hypothesis coincide with the research results from earlier studies which indicated that the perceptions of teachers were related to students’ academic achievement (Bear, Yang, Chunyan, Pell, & Gaskins, 2014; Karadag, Kilicoglu, & Yilmaz, 2014; and Shoupe & Pate, 2010). Furthermore, Jain et al. (2015) focused on four dimensions of school climate in their study, *Inequalities in School Climate in California: staff/student*
relationships, student learning-facilitative behaviors, norms and standards, and perceived safety. The researchers expressed belief that these four dimensions were interrelated and have a strong impact on a variety of student and school-level outcomes. The results of the study produced evidence that a characteristic of high performing schools is that teachers have more positive perceptions of school climate as opposed to teachers employed in low performing schools across all four of the aforementioned dimensions of school climate. Additionally, Jain and colleagues (2015) also discovered that teachers’ perceptions of school climate were lower in schools in large cities, secondary schools, schools that serve low-income populations, Hispanic and black-majority schools, and low-performing schools (Jain, Cohen, Huang, Hanson, & Austin, 2015). Also coinciding with the results of this study, Bear et al. (2014) conducted a study to evaluate if there was a correlation between teachers’ perceptions of school climate and student achievement and suspensions. After conducting a multi-group confirmatory factor analysis on a population sample of 5,781 teachers, administrators, and support staff from 132 schools, it was concluded that the scores were negatively correlated with suspension/expulsion rates and positively correlated with academic achievement.

In relation to theory, Pestalozzi concluded that students could concentrate on their intellectual education only after a caring environment built on mutual trust and an educational climate of emotional security was established (Gutek, 2011). This theory is still relevant in modern times and is reflected in recent research that has assessed school climate and produced evidence that one of the most significant characteristics of high performing schools is that they typically have a positive school climate (referring to both the physical and social aspects of the teaching and learning environment) (Jain et al., 2015). High performing schools typically
maintain a positive school climate, which encompasses safe, caring, participatory, and supportive or responsive environments that provide students with adequate and appropriate structure, supports, and opportunities for learning (Thapa & Cohen, 2013).

**Null Hypothesis 2**

Research question two asked: Is there a difference in perception of collaboration between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The null hypothesis stated: There is no significant difference in perceptions of collaboration between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The results of the study revealed that there was not a significant difference in mean scores on behalf of teachers in high achieving schools (M = 25.18) and teachers in low performing schools (M = 23.58), but only after conducting a Bonferonni correction. The higher mean score on behalf of teachers in higher achieving schools indicated that the perceptions of collaboration were more positive than their counterpart teachers in low achieving schools.

The results of this study are contrary with the research by Bilmes (2012), which revealed that colleagues building relationships with one another are essentially important. Additionally, Conner (2014) concluded that camaraderie is crucial for establishing trust and supportive relationships and that relationships are the key to a successful school climate. Furthermore, a positive and trusting climate provides a more encouraging, engaging, and optimistic opportunity for all individuals involved (p. 123). A sense of camaraderie is a vehicle to pedagogical collaboration and more affective problem solving, all of which are consequently related to the improvement of a positive school climate (Bilmes, 2012). Research by Collie et al. (2011)
produced evidence that student relations and collaboration predicted teacher commitment. Furthermore, a positive school climate was related to three types of teacher commitment: future professional commitment, general professional commitment, and organizational commitment.

In relation to theory, Mezirow’s Transformational Learning Theory (1991) the expectations and assumptions that adults behold can be modified or changed after critical reflection and dialogue with other individuals that may shed light on those preconceptions. Collaboration amongst teachers fosters a supportive environment that has the potential to nurture adult learning (Parsons & Beauchamp, 2011). Attard (2012) conducted a study to determine how structured learning communities can stimulate professional learning and reflective awareness through collaborative examinations of professional experience. The study produced results that were aligned with Mezirow’s theory, being that the participants improved their teacher practice through collaboration. Furthermore, a climate of trust was a prerequisite for knowledge sharing and collaborative learning. Trust was the bridge that allocated participants to open lines of communication and in turn promoted a more positive atmosphere.

**Null Hypothesis 3**

Research question three asked: Is there a difference in perception of decision making between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The null hypothesis stated: There is no significant difference in perception of decision making between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The results of the study revealed that there was not a significant difference in mean scores on behalf of teachers in high achieving schools (M = 8.64) and teachers in low performing schools (M = 8.56). The similar mean scores
on behalf of teachers in higher achieving schools and low achieving schools indicated that the perceptions of collaboration were similar between both groups of participants.

Research by Inandi and Gilic (2016) explored the relationship between teachers’ level of participation in decision making, school culture, and their level of readiness for change. The results of the study revealed that there was a significant relationship between teachers’ level of participation in decision making (PDM), school culture, and their level of readiness for change. In other words, teachers that had higher levels of PDM had more positive perceptions of school climate. Kosar and Calik (2011) discovered in their research that there was positive correlation between the administrators’ personality power style and reward power. Therefore, at schools in which personality and reward power styles are prevalent, more positive atmospheres are maintained. On the contrary, schools that behold administrators where coercive power styles are prevalent maintain a less positive atmosphere. Therefore it could be interpreted that teachers’ level of willingness for change increases in direct proportion to bureaucratic culture (Kosar & Calik, 2011).

In relation to theory, classical theorists such as Henri Fayol, F.W. Mooney, and Lyndall Urwick all conveyed that the idea of management is a process of planning command, control, coordination, and organization. The “classical management theory” was based upon management techniques such as management by objectives (MBO), programming, planning, budgeting systems, and other various methods that stressed rational planning and control. Organizations that implement these principles typically portray the familiar pattern in a hierarchical manner, which has precisely defined jobs and defined lines of command (Morgan, 2006). Making major decisions on behalf of the organization as a whole are typically made at
the top of the hierarchy and trickle down to the remainder of the organization in the “classical management theory,” which is still a common norm in present day. The results of this particular study resembles the principles outlined in the “classical management theory” being that regardless of an academic status of a school, teachers perceptions of decision making are not significantly different.

**Null Hypothesis 4**

Research question four asked: Is there a difference in perception of instructional innovation between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The null hypothesis stated: There is no significant difference in perception of instructional innovation between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ. The results of the study revealed that there was a significant difference in mean scores on behalf of teachers in high achieving schools (M = 17.24) and teachers in low performing schools (M = 15.29). The higher mean score on behalf of teachers in higher achieving schools indicated that the perceptions of instructional innovation were more positive than their counterpart teachers in low achieving schools.

The literature provided evidence that teacher perceptions of school climate are also significantly related to teacher optimism (the efforts and beliefs of improving student achievement) (Kilinc, 2013), knowledge creation activities, and knowledge sharing (Song et al., 2014). According to Collie et al. (2011), teachers are more motivated to seek and pursue more efficient teaching methods when they had a heightened sense of teacher commitment.
Furthermore, it was revealed in the literature (Collie et al., 2011) that teachers’ perceptions of school climate were significantly correlated with three different forms of commitment: greater general professional commitment – the degree of psychological attachment toward the teaching profession in general on behalf of teachers; organizational commitment – the level of involvement and identification that an individual has within a particular organization; and future professional commitment – an individual’s motivation to exert effort to support the organization and remain a member of the organization. Furthermore, teacher commitment is directly related to the teaching and learning facet of school climate and is a predictor of teacher turnover, absenteeism, attrition, teaching performance, and burnout. Teaching and learning has been deemed as one of the most important dimensions of school climate. It has been supported by research that a positive school climate is positively correlated with cooperative learning, respect, mutual trust, group cohesion, student classroom participation, and ultimately students’ ability to learn (Cohen et al., 2010) which all enhance overall academic achievement (Thapa et al., 2013).

In relation to theory, William Chandler Bagley proclaimed schools must maintain curriculum containing basic skills and academic subjects, however, teachers should not only be effective and efficient while utilizing the curriculum, but they must also be creative with theory transmission of skills and subjects to students (Gutek, 2011). While being innovative, teachers should not ignore the interests of their students; on the contrary, they should acknowledge their interests and utilize them to guide instructional transmissions. Moreover, Bagley proclaimed that once children expend the effort to learn a new skill or subject, they often become interested in it.
Null Hypothesis 5

Research question five asked: Is there a difference in perception of student relations between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The null hypothesis stated: There is no significant difference in perception of student relations between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The results of the study revealed that there was a significant difference in mean scores on behalf of teachers in high achieving schools (M = 17.13) and teachers in low performing schools (M = 12.92). The higher mean score on behalf of teachers in higher achieving schools indicated that the perceptions of student relations were more positive than their counterpart teachers in low achieving schools.

Conner (2014) emphasized that relationship building among teachers to students and teachers to teachers should be a primary element to consider in improving school climate. Relationship building is the key to preparing students of the 21st Century for career and college goals because positive relationships have been correlated with student academic achievement and positive behavior (Conner, 2014). When students have positive relationships with their teachers then they have a sense of belonging and consequently feel more connected to the school environment. In addition to developing and maintaining relationships with students, research has also provided evidence that when teachers build cooperative relationships with their colleagues, a team is developed and then trust and support are established. After trust and support are established amongst colleagues the process of authentic collaboration is established for the purpose of improving student achievement (Conner, 2014). The trends of norms, goals, values, and interactions that shape relationships in schools provide a crucial area of school climate. How
people feel connected to one another in a school is one of the most important aspects of relationships in addition to relations with our own selves (how we take care of and feel about ourselves (Cohen et al., 2013). Research has also provided evidence that in schools where students perceive more positive student-teacher relationships, the frequency and probability of behavior problems is lower (Wang, Selman, Dishion, & Stormshak, 2010). The perceptions of these relationships on behalf of students were also positively correlated with self-esteem and grade point average and were negatively correlated with depressive symptoms (Jia, Way, Ling, Yoshikawa, Chen, Hughes, & Lu, 2009).

In relation to theory, over 150 years ago, Pestalozzi recognized and conveyed in his writings that relationships were paramount to any teaching circumstance and that students essentially needed love, attentiveness, appreciation, and attention to foster their intellect (McKenna, 2010). Pestalozzi discovered that the initial teaching method that was essential was to teach to the heart by creating a safe, caring atmosphere that was based upon a mutual trust between the students and teachers. After this ideal atmosphere was created, it was afterward that the teacher could implement the second phase of instruction, which was to teach through the senses. Although Pestalozzi’s teaching methods were swift and simplistic, it was believed that these specific methods strengthened the self-esteem of his students (Trohler, 2013). Pestalozzi’s quick and easy pedagogy was a true innovation of his time because it was believed that it strengthened the self-esteem of students (Trohler, 2013). Pestalozzi’s goals included: making the world a better place for children and treating children with compassion and dignity. These commendable goals were eloquently conveyed in his writing for the purpose of being discovered and utilized by future generations, which are indeed worth reconsidering today. The
understanding and implementation of these attributes could contribute to positive changes in the pedagogy of modern day educators and also produce a more positive learning environment (McKenna, 2010).

**Null Hypothesis 6**

Research six question asked: Is there a difference in perception of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The null hypothesis stated: There is no significant difference in perception of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ? The results of the study revealed that there was a significant difference in mean scores on behalf of teachers in high achieving schools (M = 16.77) and teachers in low performing schools (M = 15.09). The higher mean score on behalf of teachers in higher achieving schools indicated that the perceptions of school resources were more positive than their counterpart teachers in low achieving schools.

Research studies that have evaluated and assessed school climate have produced evidence that high performing schools share a common theme: they are schools that are capacity rich, which means that they do not typically lack key capacity of human, cultural, or fiscal factors. The lack of those factors could result in the lack of resources in addition to a lack of a quality teaching staff, high staff turnover, lack of professional community, lack of understanding the cultural background of students, and outdated or inadequate school facilities (JoHyun & Kemp-Graham, 2013). It was also revealed that schools in rural settings with impoverished populations face special challenges such as sparse availability of assistance programs, distances from social services, and a shortage of resources to support student learning and educational programs.
More specifically, it was discovered in research that school library services were more scarce in schools with various concentrations of students living in poverty (Pribesh, Gavigan, & Dickinson, 2011). The researchers evaluated the school library gap between high and low socioeconomic groups, namely the differences in school library characteristics (schedule, staffing, books added to collection, and number of days closed). The research concluded with a recommendation to close the gap by attending to access in high and low poverty schools in order to close the gap.

The purpose of research question number six was to evaluate if there was a difference in perception of school resources between teachers in high performing schools and teachers in low performing schools as measured by the Revised SLEQ. This particular research question could be correlated with Maslow’s Hierarchy of Needs Theory (1943), which maintained that there was a classification of human basic needs that are divided into five categories. Understanding the hierarchy of needs contributes to comprehending that individuals require specific needs before they can feel safe. The feeling of safety is an essential need for individuals in the school setting because a trusting and positive climate provides more encouraging, engaging, and optimistic opportunities for all individuals involved (Conner, 2014). Furthermore, it was hypothesized that specific needs must be met before individuals can build relationships with one another which has been shown to be correlated with several positive outcomes (Zullig et al., 2011; Conner, 2014; Benson, 2012; & Bilmes, 2012). Furthermore, Maslow proclaimed that specific needs must be met before an individual can experience a positive self-esteem and teachers who possess a high self-esteem maintain a more positive outlook, which consequently can influence how their students perceive themselves (Bissessar, 2014). Needs at each level of Maslow’s hierarchy
motivate an individual to progress to the higher level and progression should be resumed until the transcendence state has been reached. Our educational system could be thought of as a ladder and should assist individuals to continue through the various layers (Gobin, et al., 2012).

**Implications**

The concept of school climate has obtained an expanding of attention as a means to enhance student achievement as well as reducing problematic behaviors (Wang, et al., 2015). Over the past three decades educators and researchers have progressively acknowledged and articulated the importance of K-12 school climate in the abundance of recent research (Cohen, et al., 2013). However, there is a gap between the aforementioned research findings and teacher education practice, guidelines, school climate policy, and state departments of education (Cohen, et al. 2009). More thorough investigations of the perceptions of school climate could contribute to the development of more effective policies, which would support successful schools and improve unsuccessful schools (Thapa et al., 2013). It was expressed that is imperative to assess school climate with a valuable and reliable instrument (Zullig, Kooman, Patton, & Ubbes, 2010) and then use the results to determine effective strategies for improving school climate via school-based interventions (Rhodes, Camic, Milburn, and Lowe, 2009; Voight, 2014; Drego-Severson, 2012). This particular study utilized a valuable instrument, the Revised SLEQ that was tested and proven to be valid and reliable. (Johnson et al., 2007). The results of this study could prompt officials in the school system where the study was conducted to 1) distribute the survey to additional schools and 2) to determine which areas of school climate should be focused upon and to determine effective strategies for improvement via school-based interventions.
More specifically, this study aimed to fulfill a recommendation by Bear et al. (2015): to determine discriminant validity in schools (an examination to determine if school climate scores on behalf of educators discriminate between low and high performing schools). This contribution to the field of education is directly related to this particular study because the goal of the study is to glean a more in-depth understanding of the phenomenon of school climate, the perceptions of teachers of school climate, and if student achievement has an impact on these stipulated perceptions. This study contributed to educational research by determining that the teachers’ perceptions of school climate in high achieving schools did in fact differ significantly from teachers’ perceptions of school climate in low achieving schools in one school district. The mean scores of teachers’ perceptions of school climate in high achieving schools were higher than those in low achieving schools, indicating that they have more positive perceptions than teachers employed in low achieving schools. More specifically, this study examined five separate subscales to identify whether student academic achievement status of a school has an impact on teachers’ perceptions of all or some of the following factors: collaboration, student relationships, school resources, decision making, and instructional innovation. The results for each subscale except for decision making indicated that teachers employed in high achieving schools had more positive perceptions for those four domains in comparison to teachers employed in low achieving schools in one school district.

A lack of research that permits researchers and educators from viewing a perspective that identifies which factors have an impact on teachers’ perceptions (Bear et. al, 2015) provoked this particular study. A means to improving a school’s climate relies on a thorough investigation of the perceptions of this phenomenon. The problem is that there is a lack of sufficient research to
determine if there is a difference between teachers’ perceptions of school climate in high performing schools versus low performing schools. The contribution of this study helped close the gap in literature by 1) presenting a thorough investigation of research pertaining to school climate and perceptions of school climate and 2) providing the results of the study which contributed to the understanding of differing perceptions of school climate between teachers who are employed in diverse settings.

**Limitations**

A limitation of this study was that only a convenience sample was obtained. The results on a survey on behalf of 150 participants from one school system in Middle Tennessee was analyzed and reported. Initially, this study was designed to incorporate eight schools and 200 participants. One of the low achieving schools consists of only grades three to five and therefore has less teachers employed and therefore submitted and insufficient amount of surveys. A threat to external validity is that only 150 participants represent the 2,047 teachers in one school system or more vastly, teachers in other counties or states that are employed in schools with similar academic status.

Furthermore, the population that was selected was not randomly selected. The eight schools selected for the study were selected due to their academic achievement status on one state administered assessment. Incorporating a large number of participants controlled for external validity.

Another limitation was that TCAP results were not available for the 2015-2016 school year because the Tennessee Department of Education suspended state testing for the 2015-2016 school year for grades three through eight due to the inability of their testing vendor to deliver a
reliable testing platform (Tennessee Department of Education, 2016). Therefore the study incorporated state assessment data for the 2014-2015 school year in lieu of more current data.

This study did not incorporate any discrimination of subgroups such as race, gender, or grade level only teachers. The study was open to certified teachers, which included special education teachers, resource teachers, and special area teachers.

Conducting a Bonferroni correction controlled for internal validity. Multiple t-tests were conducted therefore a Bonferroni correction was conducted to control for a Type I error. Additionally, a Mann-Whitney U was conducted because the tests of normality indicated that the scores were not normally distributed in five out of six of the t tests (the results for overall school climate were equally distributed). Therefore a non-parametric test (the Mann-Whitney U test) was conducted to determine whether there was an observed difference between the distributions of scores for both groups measured on the same variable (teachers’ perceptions) to identify if there was any statistical significance.

**Recommendations for Future Research**

Teachers’ perceptions of school climate in low achieving and high achieving schools could be researched on a more extensive scale by incorporating a larger population of participants in larger counties or even a statewide basis. The incorporation of a larger populations would provide even more thorough and in-depth understanding of teachers’ perceptions in schools that have diverse academic achievement statuses. A more specific avenue to pursue would be to conduct research in schools that contain either early childhood children (pre-k to second grade schools) and schools that only contain grades three to five. Although, the
dynamics of these particular school settings are not common, it would be beneficial to study in order to determine if teachers’ perception vary amongst these school settings.

Another recommendation would be to conduct a similar study, however a future study should incorporate more recent data. The data utilized for this study was obtained two years prior to the study being conducted because the statewide assessment data was not available for the 2015-2016 school year. The data was not available because the Tennessee Department of Education suspended state testing for the 2015-2016 school year for grades three through eight due to the inability of their testing vendor to deliver a reliable testing platform (Tennessee Department of Education, 2016).

A future study may also include the incorporation of discrimination of subgroups such as race, gender, or grade level only teachers. This study included certified teachers, which expanded beyond grade level teachers and included special education teachers, resource teachers, and special area teachers. A future study could evaluate the perceptions’ of teachers specific to a grade level, special education teachers, or special area teachers.

Lastly, the instrument utilized in this study was the Revised School Level Environment Survey (SLEQ). This instrument was selected for this study because it was developed to specifically evaluate teachers’ perceptions of school climate, however, this particular instrument contains both positively worded statements and negatively worded statements. The combination of the two types of statements may have caused some confusion for the participants completing the surveys. It may behoove future researchers to utilize instruments that contain either only positively worded items or only negatively worded items.
Cohen et al. (2009) maintained that it is feasible to assess school climate with a variety of methods such as focus groups, interviews, town hall discussions, study circles, and surveys. However, the most efficient method for evaluation of school climate comes in the form of survey that has been confirmed to be scientifically sound and comprehensive in (1) measuring all of the dimensions of school climate and (2) recognizing personal voice (Bear, Yang, & Pasipanodya, 2015). Additionally, Freiberg, Templeton, and Helton, (2013), maintained that an observation of the changes of a school’s climate over a period of multiple years could demonstrate both the conflicts created and potential solutions to these conflicts. Assessing a school’s climate is essentially beneficial to all stakeholders because the clarification of “What Is” versus “What Should Be” holds great value in understanding the teaching and learning climate, predicting teachers’ and students’ attitudes and behaviors, and to design pre-service and in-service trainings (Johnson, Johnson, & Zimmerman, 1996).
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APPENDICES

Appendix A: Permission to use the Revised School Level Environment Questionnaire
Appendix B: School Level Environment Questionnaire – Revised
Appendix C: Revised School Level Environment Questionnaire – Items and Factors
Appendix D: Instructions for administering the Revised SLEQ
Appendix E: IRB Approval Letter
Appendix F: School District Approval Letter
Appendix G: Notification to Principals Regarding Research Study
Appendix H: Descriptive Statistics for High and Low Achieving Schools
Appendix A: Permission to use the Revised SLEQ

To: Johnson, Bruce P - (brucej)
Subject: Revised SLEQ

Dear Mr. Johnson,

I am writing to you to ask for permission to use the Revised SLEQ in a research study that I will be conducting for the partial fulfillment for a doctorate degree at Liberty University. I will be conducting the study in my school system in Middle Tennessee. The research questions will be:

**RQ1:** Is there a difference among teachers’ perceptions of overall school climate who are employed in high performing schools or low performing schools as measured by the Revised SLEQ?

**RQ2:** Is there a difference among teachers’ perceptions of collaboration, decision making, instructional innovation, student relations, and school resources who are employed in high performing schools or low performing schools as measured by the Revised SLEQ?

I was wondering if you could provide me with permission to use the instrument, the instrument itself, instructions for administering (if applicable), and directions for scoring the instrument.

I really appreciate your time Mr. Johnson.

Briget Ethier, Ed.S.

Pre-Kindergarten Teacher

To: Briget Ethier
Cc: Joe Stevens [stevensj@uoregon.edu]; Johnson, Bruce P - (brucej) [brucej@email.arizona.edu]

RE: Revised SLEQ

Johnson, Bruce P - (brucej) [brucej@email.arizona.edu]

Certainly, Briget. I have attached 3 articles on the Revised SLEQ, the instrument, and an
From: Briget Ethier [mailto:briget.ethier@cmcss.net]  □Sent: Saturday, January 09, 2016 6:55 PM
□To: Johnson, Bruce P - (brucej) □Subject: RE: Revised SLEQ

Hello Mr. Johnson,

I was just wondering if you could provide any information about the scoring procedures for the instrument?

Thank you,

Briget Ethier, Ed.S

Pre-Kindergarten Teacher, St. Bethlehem Elementary School

Clarksville-Montgomery County School System
Office: 931-648-5670
Email: briget.ethier@cmcss.net

From: Johnson, Bruce P - (brucej) [brucej@email.arizona.edu]
Sent: Tuesday, January 12, 2016 4:16 PM
To: Briget Ethier
Cc: Johnson, Bruce P - (brucej)
Subject: RE: Revised SLEQ

Here you are, Briget.

By the way, you should consider changing the wording on item #13 from “Video equipment, tapes and films are readily available.” to something that reflects the technology that is appropriate, maybe something like, “Digital equipment, computers and Internet access are readily available.”

Bruce

Scoring Instructions

All items are designed for a 5-point Likert-type response scale.

For positively worded items (# 1, 2, 4, 5, 6, 7, 8, 11, 12, 13, 15, 17, 19) scoring is as follows:
1= Strongly Disagree, 2= Disagree, 3 = Neither Agree not Disagree, 4 = Agree, 5 = Strongly Agree

For negatively worded items (# 3, 9, 10, 14, 16, 18, 20, 21) scoring is as follows:
5= Strongly Disagree, 4= Disagree, 3 = Neither Agree not Disagree, 2 = Agree, 1 = Strongly Agree

After scoring each item, add up the total and divide by 21 to get the mean total score. For each
factor, add the scores for the items in those factors and then divide that by the number of items in
the factor to get mean factor scores.

From: Briget Campbell [mailto:Briget.Campbell@cmcss.net]

Sent: Tuesday, April 04, 2017 7:00 AM

To: Johnson, Bruce - (brucej) <brucej@email.arizona.edu>

Subject: RE: Revised SLEQ

Hello Mr. Johnson,

I have completed my study after utilizing your Revised SLEQ. I received your permission to use
the instrument in January of 2016. I was contacting you to ask for your permission to include
that I used it in writing in my dissertation.

Thank you very much for your time Mr. Johnson.

Briget Campbell, Ed.S

Pre-Kindergarten Teacher

To: Briget Campbell

Cc: Johnson, Bruce - (brucej) [brucej@email.arizona.edu]

Hello Briget,

It is good to hear that you have finished your data collection. Yes, you can use the Revised
SLEQ in your dissertation.

Bruce

Bruce Johnson

University of Arizona

Professor & Department Head, Teaching Learning & Sociocultural Studies
Co-Director, UA STEM Learning Center

PI, Teachers in Industry

Director, Earth Education Research & Evaluation Team

P.O. Box 210069

Tucson, AZ 85721-0069 USA

Phone: (520) 626-8700

Fax: (520) 621-1853

Email: brucej@email.arizona.edu
Appendix B: School-Level Environment Questionnaire – Revised

<table>
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<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers design instructional programs together.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Most students are well mannered or respectful of the school staff.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Instructional equipment is not consistently accessible.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Teachers are frequently asked to participate in decisions.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>New and different ideas are always being tried out.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>There is good communication among teachers.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Most students are helpful and cooperative with teachers.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>The school library has sufficient resources and materials.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Decisions about the school are made by the principal.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>New courses or curriculum materials are seldom implemented.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>I have regular opportunities to work with other teachers.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Students in this school are well behaved.</td>
<td>±</td>
<td>±</td>
<td>±</td>
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<td>±</td>
</tr>
<tr>
<td>Digital equipment, computers, and Internet access are readily available.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>I have very little say in the running of the school.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>We are willing to try new teaching approaches in my school.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>I seldom discuss the needs of individual students with other teachers.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Most students are motivated to learn.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>The supply of equipment and resources is not adequate.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Teachers in this school are innovative.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Classroom instruction is rarely coordinated across teachers.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
<tr>
<td>Good teamwork is not emphasized enough at my school.</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
<td>±</td>
</tr>
</tbody>
</table>

Appendix C: Revised SLEQ – Items and Factors

Revised SLEQ – Items & Factors

Collaboration

20. Classroom instruction is rarely coordinated across teachers.

11. I have regular opportunities to work with other teachers.

6. There is good communication among teachers.

21. Good teamwork is not emphasized enough at my school.

16. I seldom discuss the needs of individual students with other teachers.

1. Teachers design instructional programs together.

Student Relations

2. Most students are well mannered or respectful of the school staff.

12. Students in this school are well behaved.

7. Most students are helpful and cooperative with teachers.

17. Most students are motivated to learn.

School Resources

18. The supply of equipment and resources is not adequate.

3. Instructional equipment is not consistently accessible.

13. Digital equipment, computers and Internet access are readily available.

8. The school library has sufficient resources and materials.
**Decision Making**

4. Teachers are frequently asked to participate in decisions.

14. I have very little say in the running of the school.

9. Decisions about the school are made by the principal.

**Instructional Innovation**

15. We are willing to try new teaching approaches in my school.

5. New and different ideas are always being tried out.

19. Teachers in this school are innovative.

10. New courses or curriculum materials are seldom implemented.

Appendix D: Instructions for Administering the Revised SLEQ

- Remind participants that this is a study to measure the teacher perceptions of their school’s climate and that all answers on the surveys will remain anonymous.
- Instruct participants to not discuss questions with one another.
- Instruct the participants to place their survey inside of the large envelope that was provided by the researcher.
- Provide each participant with a survey.
- Allow as much time as needed for each participant to complete the survey.
- Once all of the surveys have been completed and collected, an employee designated by the principal will seal the envelope with tape and sign their name over the taped seal on the back of the envelope to assure that the envelope has not been tampered with or opened by any individual other than the researcher.
- The same designated employee will place the envelope in the courier bag in the front office. The envelope should be addressed to Dr. Kimmie Sucharski at Central Office.
Appendix E: IRB Approval Letter

November 16, 2016

Briget Ethier
IRB Exemption 2687.111616: Teachers’ Perceptions of School Climate in High Performing Schools and Low Performing Schools

Dear Briget Ethier,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.
If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

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Appendix F: School District Approval Letter

From: [Redacted]  

To: Briget Ethier (Campbell)  

Subject: Request to Conduct Research in [Redacted]

The [Redacted] County School System Research Committee has met and approved your request to conduct research in the District evaluating teachers perceptions of school climate in high performing and low performing schools. This includes the utilization of surveys and the collection of data.

Sincerely,

[Redacted]
Appendix G: Notification to Principals Regarding Research Study

Glorious afternoon,

At the end of 2015 the district approved a research study that was evaluating teachers’ perception of school climate based on the success rate. The survey that was to be utilized was the state’s. Due to two fiasco’s we are working differently to complete the study and gain valuable data. First fiasco we did not administer the TCAP, second fiasco teachers did not complete the state survey at several of the schools involved because the state sent the survey link to TNCompass accounts which many teachers had not activated or utilized emails they did not check resulting in few completed surveys for CMCSS.

To complete this process, we are going to utilize the success rates last identified in 2014-15, and the researcher obtained a valid climate survey that is only 21 short and concise items, which will have little impact or intrusion on a teacher’s time. The survey is anonymous. The research is a district teacher, Briget Campbell Ethier. At this time the researcher will be contacting you by email to identify a convenient time to talk about how to share the survey with your school, about 5 minutes. The completed surveys, which are anonymous will be sent to me a central office. You may collect all of them in a courier envelope, just identify the school, and send on to me. I will turn them over to the researcher.

If you have any questions, please let me know.

Kimi
### Appendix H: Descriptive Statistics for High and Low Achieving Schools

Table 5

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<th>Group</th>
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Decisions

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