## The Impact of The Leader in Me on School Climate, Academic Achievement, and **Behavior at a Suburban Elementary School**

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Submitted to the Graduate Department and Faculty of the School of Education of Baker University in partial fulfillment of the requirements for the degree of Doctor of Education in Educational Leadership

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Date Defended: April 24, 2018

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#### Abstract

The purpose of this study was to determine if there was a difference in the changes in students' and teachers' perceptions of school climate, student achievement on Renaissance Learning's STAR assessments, and student reactive recovery room visits between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A. The study focused on two elementary schools within School District X with similar enrollment and demographics. Students' data were included in the study if the student attended Elementary School A or Elementary School B, was in third through fifth grade during the 2013-2014 school year or the 2016-2017 school year, completed the Student Advanced Questionnaire (AQ) survey, STAR Reading assessment, or STAR Math assessment. Teachers' data were included in the study if they taught at Elementary School A or Elementary School B and completed the Faculty Advanced Questionnaire (AQ) survey during the 2013-2014 school year or the 2016-2017 school year.

Findings of this study did not provide conclusive evidence that demonstrated TLIM had a positive effect on students' and teachers' perceptions of school climate, students' academic achievement, and students' behavior. The only measured positive effect to Elementary School A was the decrease in student reactive recovery room visits between Elementary School A and an increase at Elementary School B, which was not statistically significant. Other results in this study revealed decreases in the means for Elementary School A on the student and faculty AQ surveys as well as students' achievement on STAR Reading and STAR Math assessments. The only statistically

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significant difference in change between the two schools was the decrease in the students' perceptions of school climate at Elementary School A, which was significantly greater than the decrease at Elementary School B.

# Dedication

To my wife, whose endless love and support has guided me to accomplish more than I ever dreamed possible.

#### Acknowledgements

It was only through the support of the people around me that I was able to complete this amazing journey.

To Dr. Russell Kokoruda, thank you for your support and guidance through this entire process. You provided me with everything I needed when it was needed. Your probing questions in the beginning led me to a study with which I was passionate. You provided feedback that was straightforward and delivered with compassion. And when the end was near, you helped keep me focused on achieving my goal.

To Dr. Peg Waterman, thank you for applying your expertise to my study. I appreciate that you made me a priority. Without that, I never would have finished the last two chapters in the time frame in which they were completed.

To Dr. Sharon Zoellner and Dr. Mike Kimbrel, thank you for joining my dissertation committee. The knowledge and experience you added to the committee resulted in the feedback and questioning required for me to finalize this dissertation.

To my in-laws, Howard and Sheryl Matteson, I appreciate the many times you stepped in to fill the void I left with Krystina and the kids during those many evenings and weekends when I was studying or writing. You likely helped in more ways than I even know, so thank you.

To my friend Shelley Black, I appreciate the extra emotional and professional support at work you provided during the many stressful moments while I have been in school. And although I have been blessed with some very great friends in my life, there may not be another who would be willing to read through this dissertation as many times as you did.

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To Krystina, you are the most amazing wife and best friend. We have been partners in crime since we were teenagers. Even in the early stages of our relationship, you saw something in me that I was unable to recognize in myself. Over our many years together, your unwavering love and support has not only resulted in me achieving more than I dreamed possible, but we also built an amazing life together with two amazing children. I will always be grateful for the extra emotional support, household responsibilities, and parenting challenges you took on so I could pursue this dream. You never cease to amaze me.

To Ryland, without realizing it, you helped with my studies simply because you have always been such a morning person. I will always treasure those countless mornings where you snuck in and woke me up to watch cartoons before our ladies were awake. I studied or wrote my dissertation while you watched cartoons, and for some reason you often crawled your way onto my shoulders to watch those cartoons while I was working on the laptop. With these moments, you helped keep our relationship strong.

To Madyson, for most of my doctoral work, you were too young to realize how much I missed. However, I will always regret the moments I missed while you were a baby. I cherished your ability to lure me away from my studies with a simple "Daddy" followed by a request for a turn typing, a tea party, or just to snuggle. You helped me remember there was more to life than studying. Now that I am done, I am excited to make up for those lost moments.

To Grandpa, you passed away during my doctoral studies. Words cannot express my appreciation for the role you played in my life. Although I am happy you were

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around to know the path I was on, I still wish you were here to see that I finished. Your lessons about work ethic and humility continue to guide me through life.

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#### Chapter 1

#### Introduction

Curriculum is a term commonly used to describe district documents designed to guide classroom instruction toward student mastery of content that is specified by state academic standards. Marzano (2003) classified academic curricula into three categories, which include intended or written curriculum, implemented or taught curriculum, and attained or learned curriculum. However, curriculum exists in contexts beyond explicit academic instruction. Such curriculum is referred to as the unwritten, or hidden, curriculum. Philip Jackson's (1968) description of hidden curriculum included expectations of student behavior such as learning to wait quietly, exercising restraint, trying, completing work, keeping busy, cooperating, showing loyalty to teachers and peers, being neat and punctual, and being courteous. Hlebowitsh (1994) described the hidden curriculum as part of the curriculum design and implementation considerations. Kentli (2009) described hidden curriculum as values, dispositions, and social and behavioral expectations in a school. Kentli (2009) also explained that organizations and companies have collaborated with education researchers to develop integrated school culture reform programs and processes, which has resulted in a formerly hidden curriculum becoming a visible, official one. The Leader in Me (TLIM) program exemplifies what Kentli (2009) described.

The objective of TLIM is not to develop each child into a business leader but instead to develop children into the leaders of their own lives (Covey, 2008b). TLIM is rooted in principles first described by Stephen Covey (2008b) in *The 7 Habits of Highly Effective People*, which was adapted for younger audiences in 1998 with the publication

of Sean Covey's book *The 7 Habits of Highly Effective Teens* and again in 2008 by Sean Covey in *The 7 Habits of Happy Kids* (Covey, 2008a). Application of Covey's 7 Habits in schools emphasizes the use of common language, explicit leadership lessons, integrated leadership lessons, staff professional development, and staff modeling. Since FranklinCovey Education formally began collaborating with schools to implement TLIM in 2009, TLIM has been adopted by over 3,000 schools in 50 countries (FranklinCovey Education, 2017b).

#### Background

This study was conducted in School District X, a moderate-sized suburban school district in the Kansas City, Missouri metropolitan area. At the time of the study, the district included an early childhood education center, ten elementary schools, three middle schools, two high schools, and an alternative school. School District X's K-12 enrollment during the 2016-2017 school year was 11,287 students (School District X, 2017). The student population in the 2016-2017 school year was comprised of 69.5% white, 11.7% African American, 9.3% Hispanic, 4.5% Multi-Racial, 3.2% Asian, 1.4% Pacific Islander, and 0.4% Native American students. School District X (2017) also reported that 27.9% of students qualified for the free or reduced lunch program.

The study focused on two elementary schools within School District X with similar enrollment and demographics. Elementary School A implemented TLIM and Elementary School B did not. Table 1 includes demographic data for the two elementary schools from the years during which the study was conducted.

### Table 1

		Year		
_	2013-2014		2016-20	17
Characteristic	School A	School B	School A	School B
Total Enrollment	441	437	477	518
Ethnicity				
Multi-Racial	22	17	31	25
Pacific Islander	10	7	12	15
Native American	4	3	5	0
Asian	2	17	6	17
Hispanic	57	49	46	52
African American	75	72	78	115
White	271	272	296	294
Undefined			3	
SES Status				
Free/Reduced	216	172	171	194
Full Pay	225	265	306	324
ELLs	49	47	54	75
Mobility Rate	15.7%	14.4%	15.6%	10%

2013-2014 and 2016-2017 Elementary School Demographics

*Note*. Adapted from <sup>a</sup>Elementary School B Principal, personal communication, September 25, 2017. <sup>b</sup>Elementary School A English Language Learner Teacher, personal communication, September 26, 2017. <sup>c</sup>2016-2017 AQ faculty survey, by School District X, 2017. <sup>d</sup>Elementary school handbook: 2014-2015, by School District X, 2014a. <sup>e</sup>Enrollment summary: Scheduling/reporting ethnicity as of 05/19/2014, by School District X, 2014c. <sup>f</sup>Missouri comprehensive data system: School report card, by Missouri Department of Elementary and Secondary Education, 2017b. The principal of Elementary School A had first learned about TLIM through a Missouri Association of Elementary School Principals (MAESP) professional development conference in St. Louis, Missouri in 2010 (Elementary School A Principal, personal communication, January 12, 2017). She attended leadership days at St. Louis Leader in Me schools, which are formal presentation days during which schools demonstrate TLIM's impact for outside guests. Although impressed with what she saw, Elementary School A's principal found it difficult to visualize day-to-day implementation and effectiveness at Elementary School A because the demographics at the schools she visited contrasted with the demographics at her elementary school.

Elementary School A's principal described two parallel paths she considered for the next two years following her attendance at the MAESP professional development conference (Elementary School A Principal, personal communication, January 12, 2017). The school's character education program at that time did not create a school culture in which students displayed the desired character traits or made adequate academic progress. Elementary School A's principal questioned whether students were effectively learning skills they could utilize in their daily lives. One path the principal considered involved altering implementation of the character education program they were using. The second path she considered was abandoning the character education program for something entirely different and more comprehensive.

While Elementary School A's principal was considering those two paths, Elementary School C, a third elementary school in School District X, implemented TLIM during the 2012-2013 school year. This provided Elementary School A's principal with a more comprehensive view of TLIM (Elementary School A Principal, personal communication, January 12, 2017). She was able to investigate its application on a dayto-day basis, rather than through the formal leadership day. She also engaged in dialogue with the principal of the implementing school and gained insight into how closely aligned TLIM's emphasis on continuous improvement mirrored the beliefs and directives of School District X. That new insight was enough for Elementary School A's principal to select TLIM for implementation at her school.

#### **Statement of the Problem**

Elementary School A's proficiency on the state assessment combined with the school's student discipline data in the years preceding this research had reflected a school in need of reform. In 2008 Elementary School A had made adequate yearly progress (AYP) on the state's communication arts and mathematics assessments (Missouri Department of Elementary and Secondary Education, 2017a). However, the school failed to make AYP in communication arts in 2009, 2010, and 2011. Although the school made AYP in mathematics in 2009, the school failed to make AYP in 2010 and 2011. This data demonstrating the school's inability to make AYP on the state assessment supported the principal's intuition that change was necessary. In addition to declining standardized assessment scores, there were a high number of student reactive recovery room visits at Elementary School A. Reactive recovery room visits were instances where students were sent to the recovery room as a result of behavior that interfered with the academic setting or learning environment (School District X, 2014b). The school began storing this discipline data in Matrix, School District X's data storage system, during the 2011-2012 school year (School District X, 2018). During that year, there were 1,021 reactive recovery room visits at Elementary School A.

Elementary School A's data indicated the need for comprehensive reform. If indeed TLIM was a comprehensive school reform model (CSR), then it would impact school climate, academic achievement, and student behavior. Both students and teachers would be able to identify the program's impact, and it would validate implementation of TLIM. Determining the impact of TLIM on Elementary School A required further investigation.

#### **Purpose of the Study**

The first purpose of this study was to determine if there was a difference in the change in students' and teachers' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A. The second purpose of this study was to determine if there was a difference in the change in student achievement on Renaissance Learning's STAR assessments between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A. The third purpose of this study was to determine if there was a difference in student reactive recovery room visits between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A.

#### Significance of the Study

This study could extend the literature on TLIM's impact on schools and provide evidence of TLIM's effectiveness or ineffectiveness for school leaders and district leaders. Evidence could clarify how school climate, students' academic achievement, and students' behavior were affected by implementation of TLIM. Results from this study will contribute to the existing body of research and could be a factor in determining whether TLIM is worth the investment.

#### Delimitations

Lunenburg and Irby (2008) described delimitations as "self-imposed boundaries set by the researcher on the purpose and scope of the study" (p. 134). The following delimitations in this study were used to narrow the scope of the study.

- Archival data, including teacher and student climate survey data and student performance on the STAR assessment, were used from Elementary School A and Elementary School B;
- Student academic and climate data for this study were limited to that which was collected in third through fifth grade because students attending those grades completed the academic assessments and surveys on school climate;
- Renaissance Learning's Standardized Testing and Reporting (STAR) reading and mathematics assessments were selected as the academic measure due to consistency of those assessments;
- Behavior data only included students' reactive recovery room visits because this accounts for more behaviors than those that are severe enough to warrant office discipline referrals.

#### Assumptions

Lunenburg and Irby (2008) described assumptions as "postulates, premises, and propositions that are accepted as operational for purposes of the research" (p. 135). The following assumptions were made regarding the study:

- TLIM elements were implemented with fidelity.
- The schools reported data honestly and accurately.
- Students and staff answered survey questions honestly.
- Staff followed district policies and procedures pertaining to student discipline prior to sending a student to the recovery room.

#### **Research Questions**

The following research questions were used to guide the study:

**RQ1.** To what extent is there a difference in the change in students' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A?

**RQ2.** To what extent is there a difference in the change in teachers' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A?

**RQ3.** To what extent is there a difference in the change in student achievement on Renaissance Learning's STAR assessments between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A?

**RQ4.** To what extent is there a difference in the change in student reactive recovery room visits between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A?

### **Definition of Terms**

This section includes definitions of key terms used in this study. Knowing how these terms are defined will help the reader better understand the study.

**Cohort Effect.** Alwin and McCammon (2003) described cohort effect as the impact that such characteristics as common life experiences, size, cohesiveness, and competition can have on a bonded group of people.

**Lexile.** According to Renaissance Learning (2014), Lexile is a reading level measurement scale ranging from BR400L to 1825L. The "BR" indicates a score below zero that typically indicates beginning readers.

**Mobility Rate.** According to School District X (2014a), mobility rate is the percentage of students who were new to the district in a given year.

**Recovery Room.** The recovery room is described as "a safe place for students to think and problem-solve when they are unable to manage their behavior" (School District X, 2014b, p. 35).

**Scaled Scores (SS)**. Renaissance Learning (2014) defined scaled score as a scale developed by using Item Response Theory (IRT) for adaptive assessment item selection and scoring. Scaled scores are expressed on a common scale across all grade levels, thus becoming comparable with each other regardless of grade level (Renaissance Learning, 2015b).

**School Climate.** According to National School Climate Council (2007), school climate is defined as the quality and character of school life that reflects norms, goals, values, interpersonal relationships, teaching, learning and leadership practices, and organizational structure.

**School Culture.** Gruenert (2008) defined school culture as unwritten expectations, rules, or beliefs that have been developed within the school.

#### **Organization of the Study**

This study is presented in five chapters. The first chapter included an introduction to the study and TLIM as well as background about the school district and schools included in the study. Chapter 1 also included the statement of the problem, purpose statement, and significance of the study, in addition to listing the delimitations, assumptions, research questions, and definition of terms. Chapter 2 includes the review of existing literature. Context for this study is developed through a review of current literature. A description of the study's methodology is in Chapter 3. In Chapter 4, the data analysis results are presented. A summary of the study, review of literature, implications for action, recommendations for further study, and other conclusions are included in Chapter 5.

#### Chapter 2

#### **Review of the Literature**

The purpose of this study was to evaluate whether there is a difference in the changes in school climate, students' academic achievement, and students' behavior between an elementary school that has implemented TLIM and one that has not implemented TLIM. This review of literature established the context for TLIM in the education system. The review of literature also focused on TLIM's perceived and measured impacts.

#### **Contemporary School Reform**

Contemporary school reform can be traced back to *A Nation at Risk* (Gardner et. al., 1983). That report began the systemic reform process by initiating recommendations to increase the rigor of academic standards, to make the school day longer, to improve teacher preparedness, and to hold elected officials accountable to provide fiscal support. The *No Child Left Behind Act* (NCLB) facilitated further school reform in 2001 (U.S. Department of Education, 2001). Principles contained in NCLB included increased accountability, greater school choice for parents and students, more flexibility for school districts and local educational agencies with regard to federal funds, and increased emphasis on reading. Contemporary school reform efforts can often still be traced back to principles expressed in *A Nation at Risk* and NCLB.

FranklinCovey Education (2017b) described TLIM as a "whole-school transformation process" in which emphasis is placed on leadership and life skills that develop a culture of empowerment (para. 1). A goal of comprehensive school reform (CSR) models such as TLIM is to improve entire schools and student populations rather

than targeted groups or programs within schools. Characteristics associated with successful schools are similar to characteristics required for successful CSR. Characteristics include shared goals, positive school climate, school-level management, strong leadership and support, curriculum and organizational structure, maximized learning time, staff development, and parental involvement (Desimone, 2002). The U.S. Department of Education (2002) described CSR as a model with a framework requiring schools to integrate individual, specific initiatives to develop a comprehensive reform design based on 11 required components. The eleven components include proven methods and strategies based on scientifically-based research, comprehensive design, professional development, measurable goals and benchmarks, support within the school, support for teachers and principals, parental and community involvement, external technical support and assistance, annual evaluation, coordination of resources, and strategies that improve academic achievement. Those components are addressed through comprehensive character education programs such as Success for All, Institute for Student Achievement, Positive Action, and TLIM due to TLIM's See, Do, Get framework to reform schools with core paradigms (See), highly effective practices (Do), and measurable results (Get) (FranklinCovey Education, 2017a).

#### **Character Education**

Character.org (2017) described character education as an approach to address difficult education-related issues while also developing a positive school culture. It was further explained in Character.org (2017) that character education schools "have transformed their school cultures, reduced discipline referrals, increased academic achievement for all learners, developed global citizens, and improved job satisfaction and retention among teachers" (para. 1).

**Historical context.** Character education in public schools has always been a complex issue. Lickona (1993) credited McGuffey (1909) with the first character education program in 1836, which led the transition from the Bible to other resource books as the basis for moral instruction due to controversy regarding which doctrine of the Bible should be used. McGuffey combined Biblical stories with poems and heroic tales into a sourcebook to teach morals. Since the introduction of *McGuffey Readers* in 1836, there have been rises, declines, and resurgences of character education in schools.

Declining support for character education began in the 1930s and 1940s. Clouse (2001) explained that in the 1930s and 1940s, character education involved teaching 31 qualities deemed representative of good character. Support for character education declined due to the belief that fear-provoking instructional methods and physical discipline were both too harsh and ineffective (Clouse, 2001). According to Hartshorne and May's (1930) study of 11,000 students at public and private schools, students who participated in character education or religious education demonstrated no discernable change in honesty as it pertained to cheating, compared to students who had not participated in character education or religious education. Philosophical beliefs also facilitated the decline in support for character education at that time. Social evolution philosophy resulting from Darwinism led people to view morality and social development in an evolutionary context, which resulted in a social evolution philosophy in which people believed all things, including character development, were "in flux" (Lickona, 1993, p. 6). Furthermore, global issues independent of school systems

influenced the manner in which instructional time was utilized. For instance, the successful launching of Sputnik by the Soviet Union resulted in increased emphasis on science and technology in American schools (Kristjansson, 2002). The resulting effect pertaining to character education was limited instructional time and decreased priority.

Character education remained in the background in the 1960s. Lickona (1993) explained that public emphasis was placed on celebrating the worth, autonomy, and subjectivity of each person, thus emphasizing the individual rights over societal norms or responsibilities associated with the rationale for character education instruction. Lickona (1993) also cited questions pertaining to separation of church and state, along with ambiguity over whose values should be taught as barriers to character education in the 1960s. The 1970s and 1980s served as a transition point back to character education in American schools. Character education's resurgence in part was due to the increased popularity of such child development theories as Kohlberg's moral dilemma discussions and Rath's values clarification (Kirschenbaum, Harmin, Howe, & Simon, 1977; Lickona, 1993).

Lickona (1993) cited three additional causes for the increased resurgence in the 1990s. One cause was what Lickona (1993) referred to as the decline of family. An increased divorce rate resulted in increased support for character education due to the perception that kids were not sufficiently learning morals at home, and in order for effective instruction and learning to occur, schools needed to become communities in which children could learn to control anger and feel loved. Lickona (1993) also described trends in youth character as a cause for the resurgence. Trends included, but were not limited to, rising youth violence, increased dishonesty, peer cruelty, and

decreased work ethic and civic responsibility. Furthermore, Lickona (1993) cited increased public support regarding the importance of ethical values. This was reflected in a commonly shared belief that respect, responsibility, trustworthiness, fairness, caring, and civic virtue were valuable to individuals and society and therefore warranted additional emphasis in schools.

**Defining character.** Varying definitions and vocabulary related to character and character education exist among character education researchers. However, according to Berkowitz (1998), a widely accepted definition of character was offered by Lickona (1991), which included the concept that as a person's character becomes a valued virtue, the individual's inner disposition reliably responds to situations in a morally decent way. Lickona (1991) elaborated by explaining "Character consists of knowing the good, desiring the good, and doing the good-habits of the mind, habits of the heart, and habits of actions" (p. 51). Ambiguity existed with regard to recognizing and measuring the application of psychological terms related to Lickona's composite of six elements of character that support his three inner dispositions (Berkowitz, 1998). The six character elements included conscience, self-esteem, empathy, loving the good, self-control, and humility. Lickona (1993) explained that those character elements are what should lead to moral actions such as competence, will, and moral habit. Competence is described as listening, communicating, and cooperating. Will is explained as mobilizing a person's moral judgment and energy. Moral habit is described as the disposition to respond to circumstances in a morally positive manner.

Berkowitz (1997) attempted to provide a more psychologically focused description of character by concentrating on the psychological components of the

complete moral person. Berkowitz (1997) explained that character "is a complex psychological concept" that requires the following: the capacity to decide right from wrong; experience moral emotions such as guilt, empathy, and compassion; engage in moral behaviors such as sharing and telling the truth; believe in moral goods; act with honesty, altruism, and responsibility (p. 48). Berkowitz's (1997) goal was to differentiate character as moral personality or moral actions, which may be holistically understood as moral anatomy. The seven aspects that Berkowitz (1997) included in the description of moral anatomy were moral action, moral values, moral character, moral emotion, moral reasoning, moral identity, and meta-moral characteristics.

**Related theories.** Berkowitz and Bier (2007) conducted a meta-analysis that focused on discerning elements of character education programs and their relative effectiveness. The meta-analysis included 33 effective character education programs. Berkowitz and Bier (2004) claimed that although character education programs vary in form and effectiveness, theory-based programs have greater potential to positively impact students' social and academic progress. Two of the dominant theoretical approaches associated with character education are commonly referred to as moral reasoning and values clarification (Leming, 1993). According to Berkowitz (2002), moral education is typically associated with constructivist and cognitive character education methodology while values education is typically associated with attitudinal methodology, or methodology not theory-based.

Kohlberg developed another approach that linked cognitive-development theory of moral reasoning with moral education in schools (Leming, 1993). Kohlberg was a prominent moral development theorist who extended the work of Jean Piaget to develop

the theory of moral judgment. Kohlberg's (1971) widely used moral development approach resulted from his observations of Piaget's theories of child development, specifically elements related to children's responses to moral dilemmas (Clouse, 2001). According to Kohlberg (1971), moral development stages can be organized into three levels, with each level including two stages. Level one is the pre-conventional level and is representative of a child's punishment-obedience orientation and relativist orientation, which includes concepts such as fairness, reciprocity, and sharing. Level two is the conventional level, which is characterized by a child's maintenance of, and loyalty to, family, peer, or societal moral expectations. Stages within this level are the good boynice girl orientation and the law and order orientation. The final level in Kohlberg's theory of moral judgment is the post-conventional, autonomous, or principled level. This level is indicative of children who attempt to define personalized moral values and principles with valid application beyond the group or authority with which they identify. Stages within this level include social-contract legalistic orientation and universal ethicalprinciple orientation. Kohlberg's focus on the development of moral thinking has been referenced as a key component in the foundation of an impactful character education program, which provided additional guidance for existing and future character education researchers and program developers (Goss, 2014).

Raths, Harmin, and Simon (1978) are credited with the first statement and explanation of values clarification theory and instructional technique with publication of the first edition of their educational methods textbook in 1966. Values clarification theory was influenced by the work of John Dewey and is based on the observations of individual and societal issues demonstrating perceived values problems (Kirschenbaum et al., 1977). Other issues were referenced by Kirschenbaum et al. (1977) that included over-conformity, over-dissention, perceived lack of purpose in people's lives, and conflicts within families and other groups of people. Values clarification process includes three dimensions to support a person's values development, including prizing, choosing, and acting, along with seven additional subprocesses (Kirschenbaum et al., 1977). The original processes were expanded to include five dimensions, which were comprised of thinking, feeling, choosing, communicating, and acting, along with 18 subsequent subprocesses (Kirschenbaum et al., 1977).

**Character education objectives.** Similar to theoretical foundations, character education objectives also vary. Berkowitz (1998) described character education objectives in the context of progress from its attempts to instruct behavior tendencies through encouragement, role models, and values-focused arts and craft projects to modern character education programs' attempts to produce more varied sets of developmental outcomes such as positive perception of school and social justice activism. Lickona (1998) described character education objectives using three over-arching goals: good people, good schools, and a good society. The first goal indicates good character is required due to the need for good people to have strength of mind, heart, and will in order to be capable of love and work. Lickona's second goal results from the belief that schools function more beneficially when teaching and learning occur in civil, caring, and purposeful communities. The third goal results from the perceived need for a moral society capable of addressing societal problems such as violence, dishonesty, family disintegration, poverty, and other deep rooted, systemic challenges.

**Positive effects.** Existing research suggests character education programs including certain characteristics have greater influence on a program's success. Berkowitz and Bier (2007) collaborated with the Character Education Partnership to perform a meta-analysis of existing character education research to determine whether there was empirical evidence demonstrating that character education programs were effective. If there was evidence, they sought to clarify the effects and common characteristics of effective character education programs. Seventy-three studies met the researchers' scientific design requirements indicating acceptable research designs and methodologies. Sixty-four out of the 73 studies, or 88%, demonstrated program effectiveness, which is empirical evidence that character education programs can be effective if they have certain characteristics.

Two studies included in the meta-analysis by Berkowitz and Bier (2007) were conducted by Battistich (2001) and Flay and Allred (2003). In both studies, researchers investigated the long-term impacts of character education programs. Battistich (2001) conducted the study for The Child Development Project (CDP) that included 334 students from 11 middle schools who had attended a CDP elementary school and 191 students who had not attended CDP elementary schools. Students who attended CDP elementary schools had more positive school-related attitudes and academic performance, including sense of school as a community, educational aspirations, trust and respect for teachers, liking school, higher grade-point averages, and higher scores on achievement tests.

Flay and Allred (2003) investigated the long-term effects of the Positive Action program and included elementary, middle, and high schools in a Florida school district. Schools had varying degrees of implementation of the program that ranged from no implementation to more than four years of implementation. Researchers used archival student academic and discipline data. Elementary school results indicated scores on the state reading test were 40% higher and marginally significant differences were noted that related to incidences of violence, suspensions, and absenteeism at the schools that implemented the Positive Action program. Middle school results revealed that the middle schools with more students who had attended Positive Action program elementary schools scored higher in reading and mathematics and had decreased incidents of violence and property crimes. High school results included a comparison of academic and behavior data among schools with high, medium, and low numbers of students who attended Positive Action program elementary schools. Although there were higher scores on standardized tests, lower dropout rates, and lower numbers of problem behaviors at schools with higher numbers of students who attended Positive Action program elementary schools and the others was less at the high school level than the middle school level (Flay & Allred, 2003).

Berkowitz and Bier (2007) used results from those two studies in addition to 62 other studies to identify the effects and common characteristics in effective character education programs. Character education program effects were then categorized and tested for statistical significance (Berkowitz & Bier, 2007). Categories included Risk Behavior, Prosocial Competencies, School-Based Outcomes, and General Social-Emotional. Each category also included subcategories more specifically demonstrating effects. The 13 most commonly significant effects were highlighted in the study. The three most common effects included sociomoral cognition, prosocial behaviors and attitudes, and problem-solving skills. Berkowitz and Bier (2007) then investigated which character education implementation strategies were most common within the programs deemed effective. The researchers began by categorizing implementation strategies into Content Elements or Pedagogical Elements. Content Elements, beginning with the most common focus, included social and emotional curriculum, explicit character education programs, and academic curriculum integration. Pedagogical Elements, beginning with the most common, included professional development for implementation, interactive teaching strategies, direct teaching strategies, family/community participation, modeling/mentoring, classroom/behavior management strategies, schoolwide or institutional organization, and community service/service learning (Berkowitz & Bier, 2007).

#### The Leader in Me

While many of the character education programs referenced in Berkowitz and Bier's (2007) review of existing research self-reported as character education programs, it is important to note that FranklinCovey Education (2017b) self-reported that TLIM is a "whole-school transformation process" and not a character education program (para. 1). However, notable similarities exist between TLIM and comprehensive character education programs. For instance, the source of Covey's 7 Habits, which is the foundation of TLIM, included character in the book title (Covey, 1989). Other similarities that further connect TLIM with character education pertain to elements of TLIM framework.

**Historical context.** TLIM could be described as the latest CSR effort related to character development. The idea for TLIM began in 1999 when Muriel Summer,

principal at A.B. Combs Elementary School in Raleigh, North Carolina, first applied *The 7 Habits of Highly Effective Teens* to her struggling magnet school (Covey, 2008b). At the time, A.B. Combs exceeded 800 students, which included 18% who spoke English as a second language, 40% receiving free or reduced priced lunch, 21% receiving special services, and 15% were identified as gifted (Covey, 2008b).

Prior to the first application of Covey's 7 Habits in a school setting at A.B. Combs Elementary School, Covey's 7 Habits had only been used with adults (Covey, 2008b). According to Stephen Covey (2008b), the habits were used in boardrooms, government offices, and corporate universities around the world. School systems began teaching the habits shortly after the book was published; however, training on Covey's 7 Habits was only provided to adults within the school systems (Covey, 2008b). According to Stephen Covey (2008b), the number of educators trained in Covey's 7 Habits was estimated at around a half million by 2008. In 1998, Sean Covey, Stephen Covey's son, wrote *The 7 Habits of Highly Effective Teens*, which made the habits more relatable and applicable to younger people (Covey, 1998). According to Stephen Covey (2008b), the number of copies sold exceeded three million by 2008 as its popularity increased with students and adults in middle schools and high schools.

Muriel Summer's application of Covey's 7 Habits at A.B. Combs Elementary School is credited with the first application of the habits with young students (Covey, 2008b). After other schools applied The 7 Habits, and also noted positive results, Sean Covey wrote *The 7 Habits of Happy Kids* in 2008. The book targeted an even younger audience in an effort to make Covey's 7 Habits applicable to people of all ages. *The 7*  *Habits of Happy Kids*, combined with the development of TLIM resources and website, increased the application potential of Covey's 7 Habits in schools (Covey, 2008b).

**Defining leadership principles.** At the center of TLIM's reform process are its leadership habits and principles, which further extend ideas and traits addressed in character education reform. FranklinCovey Education (2017c) sought to clarify the difference between character education and TLIM. FranklinCovey Education (2017c) claimed that TLIM "broadens the definition of character education to include life skills such as planning, communication, time management, and goal setting" (para. 6). Essentially, the claim is that TLIM is a more comprehensive, applicable, and deeply rooted extension of a traditional character education program.

Leadership principles are often taught using a tree metaphor where the first habit forms the roots from which the rest of the tree, or habits, grow. Covey (2008b) defined each of the habits. The first habit is Be Proactive, and it refers to such characteristics as being a responsible person, taking initiative, and doing the right thing without being asked. Begin with the End in Mind is the second habit. This habit references such ideas as planning ahead and setting goals. The third habit is Put First Things First, which refers to prioritizing tasks based on importance. Think Win-Win is the fourth habit and encourages a search for a third alternative when conflicts arise during collaboration. The fifth habit is Seek First to Understand, then to be Understood. Instruction in this habit focuses on communication skills such as listening to, and understanding, other people's ideas and feelings prior to expressing a person's own ideas. Synergize is the sixth habit and emphasizes collaboration among students as a means to attain better results than a single person is capable. Habit 7 is Sharpen the Saw. This habit relates to characteristics of healthy living, such as eating healthy, exercising, sufficient sleep, and spending time with family and friends. There is a lesser-known eighth habit, Find your Voice, which was developed in 2004. Instruction related to this habit teaches students to find their talents, hone them, and then share those talents with others (Covey, 2008b).

**Implementation elements.** TLIM's See, Do, Get framework to reform schools and teach the habits includes three elements, which are core paradigms (See), highly effective practices (Do), and measurable results (Get) (FranklinCovey Education, 2017a). TLIM framework includes five core paradigms. They are the paradigms of leadership, potential, change, motivation, and education (FranklinCovey Education, 2017a). The paradigm of leadership states that everyone can be a leader, rather than being limited to a few individuals. The paradigm of potential suggests that everyone has genius, instead of a limited number of gifted individuals. The paradigm of change indicates that change can start with individual students and does not need to be facilitated by the school system. The paradigm of motivation denotes that students should be empowered by educators to lead their own learning. The paradigm of education states that education should focus on the whole person and not solely on academic achievement. These core paradigms guide the development of the TLIM culture (FranklinCovey Education, 2017a).

Highly effective practices form the second key element in TLIM's framework. The highly effective practices are organized into three categories, which include Teach Leadership Principles, Create a Leadership Culture, and Align Academic Systems (FranklinCovey Education, 2017a). The Teach Leadership Principles category includes practices associated with professional learning, student learning, and family learning. Within Create a Leadership Culture are effective practices related to leadership environment, shared leadership, and leadership events. Align Academic Systems is comprised of aligning school goals, student-led academics, and providing empowering instruction. Concepts addressed with TLIM practices are supported by characteristics of effective schools and effective CSR described by Desimone (2002) as well as the required components for CSR outlined by U.S. Department of Education (2002). Many practices are also supported by results from Berkowitz and Bier's (2007) study, which highlighted common elements of effective character education programs.

Measured results are the final element of TLIM framework. Measurable results are also categorized into Leadership, Culture, and Academics (FranklinCovey Education, 2017a). FranklinCovey Education (2017b) stated the following with regard to measured results: "Although *The Leader in Me* is a fairly new process, research on *The Leader in Me* is advancing quickly and is very promising" (para. 1).

**Current TLIM research.** Since TLIM's official commencement in 2009, it has been implemented in more than 3,000 schools and 50 countries (FranklinCovey Education, 2017a). Survey response data in a TLIM study conducted by Education Direction (2015) were analyzed, and a rationale to support principals' implementations of TLIM was identified. Two of the study's objectives were to determine perceptions of 669 K-12 principals from schools nation-wide on education-related issues such as the importance of life skills in the learning environment and key barriers to learning in their schools. Survey responses indicated that 99% of principals believed social emotional skills were equally or more important than academic skills as they pertained to their students' continued success. The life skills emphasized in this study pertained to leadership. Eighty-four percent of principals believed leadership to be a valuable
behavior and mentality and 69% believed student leadership should be used more often as a method for enhancing students' education. As the researchers sought to clarify key barriers to learning and TLIM's ability to improve the environment, survey items were included that asked about challenges affecting academic achievement and the reasons why principals who implemented TLIM chose to do so. Key barriers to learning were absenteeism, lack of student motivation, classroom disruption, and classroom disengagement. According to Education Direction (2015), the most common reasons for TLIM implementations were to improve school culture, improve academic achievement, and to teach 21<sup>st</sup> century or social emotional skills. The principals' reasons for implementation may imply that they believed implementing TLIM would reduce the impact of those key barriers to learning. The question remained whether TLIM actually did impact barriers to learning.

*Perceptions.* The term perception is often used to describe opinions, interpretations, or intuitions gained from sensory observations (Oxford University Press, 2018). Perception-based studies have been used as one way to measure the impact of TLIM on schools. An additional objective of the Education Direction (2015) study previously mentioned included identifying principals' perceptions of TLIM's effectiveness relative to other CSR models. Survey response data was compared across CSR models. This study yielded some favorable results about TLIM. The models that were compared were Positive Behavior Interventions and Supports (PBIS), Response to Intervention (RtI), and Professional Learning Communities (PLCs). Indicators evaluated and compared included academic achievement, student leadership capabilities, school culture, overall satisfaction, and value of investment. TLIM's perceived impact on school culture, student leadership, and overall satisfaction was higher than PBIS, PLCs, and RtI. However, TLIM ranked lower than PLCs, RtI, and PBIS with regard to academic achievement and lower than PLCs and RtI regarding overall value of investment (Education Direction, 2015).

Hatch and Covey (2012) conducted another study that investigated the impacts of TLIM; however, this perception study had a specific emphasis on survey responses from only 12 TLIM Lighthouse School principals. Lighthouse Schools are TLIM schools that received recognition for producing exceptional results by implementing TLIM with fidelity (FranklinCovey Education, 2017e). Survey responses in the study conducted by Hatch and Covey (2012) were generally very positive; however, survey items related to data support for principals' perceptions revealed inconsistencies. The number of principals who reported having confidence that students were learning necessary life skills and their satisfaction with their schools nearly doubled from five principals before TLIM implementation to nine principals after implementation. Principals responded to a more focused series of observation-based questions related to their perceptions of TLIM's impact on their schools. The scale for these questions included *not observed*, on the negative end, *slightly observed*, *moderately observed*, and *strongly observed*, on the positive end. All 12 principals either reported moderate or strong positive ratings in response to the statements in the 10 related survey items. Survey item topics included elements such as common language, mission and goals, progress monitoring, adult modeling, school aesthetic, staff leadership, and overall culture (Hatch & Covey, 2012).

Principals also responded to a series of questions related to their perceived impact of TLIM on teachers (Hatch & Covey, 2012). After implementation, all 12 principals reported positive results in the following: either *moderately observed* or *strongly* observed teachers having a good understanding of Covey's 7 Habits, modeling Covey's 7 Habits, working more effectively in grade-level teams, sharing TLIM ideas with each other, seeking to understand student or parent needs more, and integrating Covey's 7 Habits into lesson plans. One principal reported negative results due to teachers' talents utilized more and teachers more organized/focused in the classroom only having been slightly observed. One principal reported teachers being more organized/focused in the classroom as *not observed*. Another series of observation-based survey items pertained to the impact on parents. All 12 principals either reported *moderately observed* or strongly observed that parents reported students applying Covey's 7 Habits at home and parents were more satisfied with the school in general. Principals also responded to another short series of survey items focused on their perception of TLIM's impact on parents. Eleven principals reported moderately observed or strongly observed increased parent attendance at student conferences, and 10 principals reported *moderately observed* or strongly observed increased parent involvement (Hatch & Covey, 2012).

Hatch and Covey (2012) revealed that some principals had limited quantitative data to support their perceptions. Principals' responses to whether they had quantitative data to support perceptions are presented in Table 2. Variables relating to the principals' response data are presented in Table 2 as associated with Culture or Academics.

# Table 2

	Quantitative Data Available		
Variable	No	Yes	
Culture			
Discipline Referrals	0	12	
Bullying	3	9	
Climate	3	9	
Attendance/Tardiness	2	10	
Teacher Satisfaction	4	8	
Parent Satisfaction	2	10	
Student Satisfaction	3	9	
Parent Involvement	5	7	
Teacher Retention	2	9	
Parent/Teacher Conference Attendance	2	10	
School Safety	4	8	
Student Self-Confidence	8	4	
Life Skills	5	7	
Student Health	5	6	
Student Collaboration	8	4	
Teacher Collaboration	2	10	
Teacher/Staff Effectiveness	3	9	
Participation in Extracurricular Activities	5	7	
Academics			
Reading Scores	2	10	
Math Scores	2	10	
Homework Turned In	6	6	
Reduction of Students in Resource Classes	8	4	
Impact on Special Needs Students	6	6	

Principals' Responses to Having Quantitative Data to Support Perceptions

*Note*. Adapted from *Impacts of The Leader in Me at Lighthouse Schools*, by D. K. Hatch and J. Covey, 2012, pp. 6-7.

Westgate Research (2014) also sought principals' perceptions regarding TLIM. However, in this study perceptions were gathered through telephone interviews with a random sampling of 260 principals at schools that had completed one year of TLIM implementation in the United States or Canada. Favorable results in this principal perception study were similar to the results reported in the study conducted by Education Direction (2015). Ninety-nine percent of principals stated a positive impact resulting from TLIM (Westgate Research, 2014). Principals were also asked an open-ended question requiring specification about positive impacts they observed. The most commonly stated positive impacts included references to reduced student discipline problems, common language, improved student responsibility, improved leadership skills, improved school culture, and improved academic test scores. It is noteworthy that principal responses that were reported, although positive, were void of statistical evidence to support their statements. Ninety-nine percent of principals also indicated positive reactions to TLIM from teachers and 92% indicated positive reactions from parents. Principals were also asked a question related to their likelihood to recommend TLIM to other principals and were given a 0-10 range to guide their responses. Eightyseven percent of principals responded with the two highest recommendation ratings, which meant they responded with a 9 or 10. It may be interpreted that their willingness to recommend TLIM implied their perceived value in its process (Westgate Research, 2014).

Humphries, Cobia, and Ennis (2015) evaluated the perceptions of teachers relative to TLIM's impact on student discipline. The primary objective was to determine if there was a relationship between elementary teachers' perceptions of the level of TLIM implementation and their perceptions of student discipline referrals. This study was conducted with thorough involvement of a senior consultant for TLIM throughout the study. The Leader in Me consultant was involved in both sampling procedures and survey development.

Humphries et al. (2015) conducted a study of nine TLIM schools that were selected using an established list of criteria. Criteria involved Title I status, AYP status for the 2011-2012 school year, a minimum of two years of TLIM implementation, schools with kindergarten through fifth grade, and permission from the school leaders. Nine schools met the specific guidelines related to those criteria. Limiting participation in the study to schools that met AYP for the 2011-2012 school year was noteworthy due to the implication that participation was being limited to schools that already showed positive data (Humphries et al., 2015).

Data analysis revealed there was a significant positive correlation between teachers' perception of TLIM implementation and a perceived reduction in student discipline referrals. Humphries et al. (2015) elaborated on those results to state "the most unique and significant finding" (p. 99) pertained to the varied degrees of TLIM implementation revealed by survey responses. It would appear based on an interpretation of that fact, that teachers perceived a decrease in student discipline problems regardless of the level of TLIM implementation.

A study by Ross, Laurenzano, and Daniels (2012) yielded both favorable yet inconclusive results in an attempt to evaluate the perceived impact of TLIM. The study by Ross et al. (2012) was designed to evaluate the impacts of TLIM implementation at a suburban K-6 elementary school and a K-5 elementary school in a smaller town within the same region. The first school had implemented TLIM one year prior to the study while the second school implemented TLIM two years prior to the study. Ross et al. (2012) investigated perceived impacts on students' life skills, student discipline, and academic achievement at school, as well as application of TLIM concepts at home and in the community.

Ross et al. (2012) gathered perceptions through focus groups or interviews with students, teachers, community members, and parents that were all selected by the school principals. Ross et al. (2012) acknowledged those participants might have been more informed and supportive of TLIM than others within the same population, which the researchers tried to counteract by asking questions that were designed to reveal positive and negative perceptions of TLIM. According to teachers and principals, the greatest impacts were to student behavior and culture, with specified improvements reported about respect and acceptance of others. Students perceived a decrease in bullying and increase in teachers' approachability, aptitude to listen to students' perspectives, and general niceness. Researchers also reported an increase in students' self-confidence and motivation due to students' attitudes toward willingness to try and willingness to accept failure as a potential byproduct. Teachers, principals, and parents also perceived positive impacts on students' abilities to get along with each other to resolve conflicts. Their perceptions were based on decreased instances of arguments, fighting, disciplinary actions, and suspensions. Both students and adults perceived an impact on academic achievement due to increased students' self-motivation, organization, and acceptance of personal accountability regarding completion of school assignments (Ross et al., 2012).

Cummins (2015) conducted a mixed methods study of TLIM to evaluate teacher perceptions of TLIM, in addition to other measurable impacts like daily student attendance, reading assessment scores, and student discipline referrals. Survey data and qualitative focus group data was gathered from 128 teachers from four geographically similar schools to evaluate teachers' perceptions. Survey responses indicated 75.78% of teachers felt excited or very excited about TLIM. Survey response data revealed teachers perceived "school of vision of leadership" as the most impactful TLIM component (Cummins, 2015, p.141). However, a survey correlation analysis indicated that all four process components were significantly positively correlated, which indicates all TLIM components are necessary for TLIM to be impactful. Focus group data also revealed that teachers believe all components are interconnected and therefore required for TLIM to be impactful (Cummins, 2015).

Stella (2013) conducted a smaller scale study that evaluated the perceived impact of TLIM on an elementary school in eastern North Carolina. Teacher interviews were conducted to gather perception data. Teachers perceived a weak impact on academic achievement. The strongest perceived impacts were to culture, and included improvements to student behavior, establishment of a culture centered on Covey's 7 Habits, improved student conflict resolution, and increased enjoyment and ease of teaching (Stella, 2013).

*Measurable Impacts.* Hatch (2012) shared what TLIM school administrators observed in a report to FranklinCovey Education. He organized the noted impacts of TLIM in three categories: student achievement, culture, and 21<sup>st</sup> century skills. With regard to student achievement, Hatch's (2012) report included anecdotal success stories

from schools throughout the United States after TLIM implementation. Reported impacts included improved performance on state assessments, school ranking status, and students transitioned out of reading intervention programs. The improved academic achievement reported by each school, and within each assessment, varied among schools. The most commonly reported academic measures demonstrating growth in Hatch's (2012) report were state reading and mathematics assessments. Schools using those academic measures included, but were not limited to, A. B. Combs Elementary School, Dewey Elementary School, and Woodmeade Elementary School. After two years of TLIM implementation, A. B. Combs Elementary School in Raleigh, North Carolina increased the percentage of students passing state assessments from 84% to 94%. Dewey Elementary School in Quincy, Illinois also observed an increase in the percentage of students passing the state assessment after two years of TLIM implementation. The percentage increased from 64.5% to 89.7% in reading and from 79.25% to 92% in mathematics. An increase in the number of students passing the state assessments also occurred after three years of TLIM implementation at Woodmeade Elementary School in Decatur, Alabama. The number of third grade students passing increased by 24 students in reading and by 32 students in mathematics. In fourth grade, the number of students passing increased by 29 students in reading and by 40 students in mathematics. The number of fifth grade students passing increased by 29 students in reading and by 50 students in mathematics (Hatch, 2012).

Hatch (2012) also shared anecdotal success stories related to student discipline, student and teacher satisfaction, parent satisfaction, and parent engagement. This section of the report addressed positive improvements reported in seven schools, including Neal Armstrong Elementary School in Port Charlotte, Florida; English Estates Elementary School in Fern Park, Florida; Dewey Elementary School in Quincy, Illinois; Winchester Elementary School in West Seneca, New York; Stanton Elementary School in Fenton, Missouri; Joseph Welsh Elementary in Red Deer, Alberta; and A First Nation (Native American) school in Nova Scotia. Although limited specific data was provided in support, improvements were reported related to student discipline referrals, students' sense of belongingness and community, teachers' perceptions of school climate, perceptions about TLIM's impact, and increased parent participation in school (Hatch, 2012).

TLIM's impact on 21<sup>st</sup> century life skills was also addressed. In his report, Hatch (2012) referred to 21<sup>st</sup> century life skills as working in teams, communicating, initiative, goal setting, conflict resolution, innovating, relationship building, caring for health, working with diversity, and time management. The connection among those life skills and Covey's 7 Habits was explained in testimonial statements made by parents and teachers about TLIM's perceived impact on student self-confidence, teacher development, and business community engagement by school and business leaders (Hatch, 2012).

Teachers' perceptions that were identified in the study conducted by Ross et al. (2012) indicated the belief that TLIM positively impacted academic achievement; however, researchers were unable to definitively claim whether TLIM had a measurable impact on academic achievement. An analysis of both schools' English language arts and mathematics assessment data resulted in a claim by Ross et al. (2012) that it was too early in both schools' TLIM implementation to determine whether TLIM had an impact on their students' academic achievement. Although both schools achieved scores higher than the state average, both schools' scores were also comparable to the rest of their districts (Ross et al., 2012).

Goble et al. (2015) conducted a study evaluating TLIM's impact on student engagement and social-emotional skills, and they presented their findings at the annual meeting of the American Educational Research Association. Like other studies, these researchers also utilized survey data to evaluate perceptions, but expanded their study to also evaluate TLIM implementation fidelity. Goble et al. (2015) focused on 89 schools that had participated in a Federal Race to the Top District (RTT-D) grant called kid•Friendly. The objectives were to assess whether TLIM implementation positively impacted student engagement and social emotional outcomes attributed to students in fourth through eighth grades, and how varied levels of implementation fidelity affect those outcomes (Goble et al., 2015). Schools were separated into two cohorts. Cohort 1 schools implemented TLIM for one year. Cohort 2 schools were used as a control and therefore had not implemented TLIM when the study was conducted. Both cohorts shared similar demographic and academic achievement profiles. Student engagement and social emotional outcomes were measured using the Student Engagement and Performance (STEP) survey developed by the researchers. The level of TLIM implementation fidelity was measured with support from FranklinCovey Education coaches (Goble et al., 2015). Coaches assessed the schools' fidelity through two online and two face-to-face visits and evaluated the schools using FranklinCovey Education's four-criterion, three-tiered evaluation procedure. Fidelity criteria included Fidelity to Process, Strength in Leadership, Staff is Invested, and Barriers to Process. The threetiered results were green to indicate high fidelity by achieving 3-4 criteria, yellow to indicate medium fidelity by achieving 2 criteria, and red to indicate achieving one or none of the fidelity criteria (Goble et al., 2015).

Data analysis has revealed favorable results about TLIM. Scores indicating students' engagement in school were higher for students in Cohort 1, which had implemented TLIM (Goble et al., 2015). Engagement was also higher for students who attended schools with higher levels of implementation fidelity. However, there was no significant difference in social-emotional outcomes between Cohort 1 and Cohort 2. TLIM implementation fidelity levels demonstrated no influence on social-emotional outcomes either. Goble et al. (2015) suggested the lack of significant difference between the two cohorts may suggest that one year of TLIM implementation is insufficient.

A 2015 study by Biggar, Dick, and Bourque also revealed favorable results related to TLIM's impact on schools. In this study, researchers sought to understand the impact of TLIM on their local schools by evaluating student achievement trends in English/language arts and mathematics, as well as trends related to student behavior before and after TLIM implementation. Academic achievement measures included the benchmark reading assessment DIBELS and mathematics benchmark assessment iLEAP or LEAP. Behavior measures included attendance, suspensions, expulsions, and office discipline referrals (Biggar et al., 2015).

Similar to the Goble et al. (2015) study, two cohorts were compared (Biggar et al., 2015). The four schools in Cohort 1 had already implemented TLIM for two or three years while the nine schools in Cohort 2 began implementation the year the study was conducted. Biggar et al. (2015) reported that TLIM appeared to have a strong impact on

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academic achievement both in English language arts and mathematics; however, TLIM appeared to have no significant impact on behavior. Biggar et al. (2015) acknowledged the importance of program fidelity to TLIM while acknowledging their lack of instrumentation for measuring fidelity and lack of student level behavior data as limitations that led them to state "this report should be interpreted with some degree of caution" (p. 20).

In addition to evaluating teachers' perceptions of TLIM, Cummins (2015) evaluated TLIM's impact on student attendance, DIBELS reading assessments, and discipline. Five years of data from a rural, first through third grade elementary school in Louisiana were used to evaluate attendance, reading scores, and discipline referrals. Student data from Cummins' (2015) study was positive but lacked consistent annual improvement. Attendance increased from 95% to 96% after the first year of TLIM implementation, and remained at 96% for the remaining years included in the study. Although DIBELS reading assessment data showed overall increased student achievement relative to the number of students scoring in the desired achievement category, growth percentages were inconsistent. Some of the years included in the study showed large increases, some years had low increases, and other years had decreases in the percentage of students in the desired achievement category. Overall, assessment data collected over a five-year period revealed that reading scores in first grade increased 20%, second grade increased 73%, and third grade increased 130%. Student discipline yielded unexpected results. There was an overall 23% increase in discipline referrals during the study. The first two years of the study revealed a 62% increase, which was followed by a 25% decrease during the remaining years (Cummins, 2015).

Stella (2013) also evaluated the impact of TLIM on academic achievement in an elementary school in eastern North Carolina. Teacher interviews were conducted to gather perception data, and state assessment data was used to evaluate TLIM's impact on academic achievement. An analysis of three years of state testing data revealed a 10.18% increase in reading assessment scores and 2.81% increase in mathematics assessment scores for fourth grade students. In fifth grade, data revealed a 1.58% increase in reading assessment scores and 2.99% increase in mathematics assessment scores.

Wilkens (2013) conducted a study that compared academic and discipline data of fifth grade students attending 30 schools that implemented TLIM to fifth grade students at 30 schools that did not implement TLIM. Academic measures included the State of Texas Assessment of Academic Readiness (STAAR) reading and mathematics assessments. Data on disciplinary removals from classrooms were compared. No statistically significant differences were discovered in academic achievement or discipline data between students at schools that implemented TLIM and schools that did not (Wilkins, 2013).

Hoffman-Bergfeld (2014) conducted a mixed-method study to evaluate TLIM's perceived and measured impact on behavior at a suburban middle school that yielded similar results to Wilkins (2013). Staff and student surveys, in addition to face-to-face interviews, were used to evaluate perceptions of TLIM's impact. Out of school and in school suspension data were used to measure TLIM's impact on behavior. Results from the study revealed neither a perception of difference nor actual difference in student behavior as it pertained to the number of suspensions before and after TLIM implementation (Hoffman-Bergfeld, 2015).

# Summary

Current research related to the impact of TLIM may be separated between perceived impact and measured impact. A positive perception exists among staff within schools implementing TLIM. However, studies analyzing actual academic achievement and behavioral data fail to consistently reveal TLIM's impact in those areas. A description of this study's research design, selection of participants, measurement, data collection, data analysis and hypothesis testing, and limitations are included in Chapter 3.

#### Chapter 3

## Methods

The purpose of this study was to investigate the impact of TLIM on Elementary School A by determining if there was a difference in the change in students' and teachers' perceptions of school climate, student achievement on Renaissance Learning's STAR assessments, and in student reactive recovery room visits between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A. In this chapter, the methodology used to address the research questions is explained. Within the explanation are the research design, selection of participants, measurement, data collection procedures, data analysis and hypothesis testing, and the study's limitations.

### **Research Design**

A causal-comparative approach was used. Lunenburg and Irby (2008) described this ex post facto, or after the fact, research design as a method used to try and determine cause-and-effect relationships between variables after the independent variable already occurred. This type of research is not considered experimental, because there is not a random assignment of participants and the researcher does not manipulate the independent variable. Lunenburg and Irby (2008) added to the explanation of this approach to research by expressing the importance of using two comparable groups. This allows the difference, or lack of difference, in the results of the study to be more likely attributed to the independent variable and not the difference in the two groups being compared. The independent variable in this study was the implementation of TLIM. Dependent variables used in this study included student and teacher perceptions of school climate, students' achievement on STAR Reading and STAR Math assessments, and students' reactive recovery room visits.

## **Selection of Participants**

The population for this study included all students and teachers at Elementary School A and Elementary School B. Those students included in the sample were the students in third through fifth grade during the 2013-2014 school year and students in third through fifth grade during the 2016-2017 school year. Students included in the study were socioeconomically, ethnically, and academically diverse. The students at these two schools were included because both schools included similar demographics, and because one school implemented TLIM and the other school did not. The teachers included in the sample were the teachers employed at the two schools during the 2013-2014 and the 2016-2017 school years.

Purposive sampling was used in this study. Lunenburg and Irby (2008) explained that clear criteria should provide a basis for sampling when using purposive sampling. Students' data were included in the study if the student attended Elementary School A or Elementary School B, was in third through fifth grade during the 2013-2014 school year or the 2016-2017 school year, completed the Student Advanced Questionnaire (AQ) survey, the STAR Reading assessment, or the STAR Math assessments. Teachers' data was included in the study if they taught at Elementary School A or Elementary School B and completed the Faculty Advanced Questionnaire (AQ) survey during the 2013-2014 school year.

#### Measurement

School District X's Advanced Questionnaire surveys for students and teachers were used to measure perceptions of school climate. Students in third through fifth grade completed the student survey, and certified teachers completed the faculty survey. STAR Reading and STAR Math assessments were used to measure students' academic achievement. Students in third through fifth grade completed these assessments. Reactive recovery room visit data was used to measure behavior. This data included the number of students from kindergarten through fifth grade who were sent to the recovery room as a result of behavior that interfered with the academic setting or learning environment (School District X, 2014b). Descriptions of the measurement instruments are included in this section.

Advanced questionnaire (AQ) surveys. Perceptions of school climate were measured using archival student and faculty survey data (see Appendix A & Appendix B). Both surveys were formatted similarly, but phrasing was different because of the ages and roles of the groups completing the surveys. The student AQ survey includes an additional subsection of survey items not included in the faculty AQ survey, which was not used in this study due to relevance. Student AQ surveys were used by School District X to gather students' perceptions of academic and instructional environment and school climate (School District X, 2015b). Faculty AQ surveys were used by School District X to gather teachers' perceptions of academic and instructional environment, school climate, and workforce engagement (School District X, 2015b). Faculty surveys were administered to all district certified employees. Students and teachers completed the survey digitally. The Office of Social and Economic Data Analysis (OSEDA) is credited with the development of the AQ surveys (OSEDA representative, personal communication, January 3, 2018). School District X administered these surveys to gather information beyond the scope of this study; therefore, for the purpose of this study, only responses to questions related to school climate were used. Although phrased differently in the student and faculty AQ surveys, common questions pertain to liking the school, being treated with respect, feeling safe, feeling cared about, and feeling that learning is important. The AQ survey items are organized into subsections with similar response scales (School District X, 2015a; School District X, 2015b). The student AQ survey consists of 43 survey items, and the faculty AQ survey consists of 32 items. Both surveys use Likert-type scales to respond to the given statements. Survey statements are phrased positively. Determining which survey items related to school climate was completed in partnership with School District X's Director of Research, Evaluation, and Assessment.

The items in the first two subsections of the student AQ survey relate to how peers, teachers, and support staff treat students, quality of instruction, and quality of teaching. The response scale uses the response labels *Strongly Disagree, Disagree, Neutral, Agree,* and *Strongly Agree.* The remaining survey items are phrased as questions, and each question has a unique Likert-type response scale that changes depending on the type of question asked. Survey response data is stored in an Excel file where each row is a student and each column is a survey item. For the purpose of this study, only Elementary School A and Elementary School B student responses to the 23 survey items related to school climate, found in the first two subsections, were included in the data (see Appendix A).

Faculty AQ survey items are separated into three subsections where teachers select their level of agreement to a series of statements. Survey statements are phrased positively, and the Likert-type response scale includes *Strongly Disagree, Disagree, Neutral, Agree*, and *Strongly Agree*. Survey response data is stored in an Excel file where each row is a teacher and each column is a survey item. For the purpose of this study, only Elementary School A and Elementary School B teacher responses to the 49 survey items related to school climate were included in the data (see Appendix B).

Lunenburg and Irby (2008) described validity as "the degree to which an instrument measures what it purports to measure" (p. 181). Content validity was addressed by including input from a panel of experts from the Missouri Department of Elementary and Secondary Education and school districts during survey development, revisions, and pilot testing (OSEDA representative, personal communication, January 3, 2018).

AQ survey reliability was addressed with Cronbach's Alpha values (OSEDA representative, personal communication, January 3, 2018). Lunenburg and Irby (2008) described reliability as "the degree to which an instrument consistently measures whatever it is measuring" (p. 182). Survey items pertaining to school climate on the elementary school student AQ survey resulted in an overall Alpha value of .72. The overall Alpha value for school climate survey items on the faculty AQ survey was .84. These values provide strong evidence for the reliability of the two surveys (OSEDA representative, personal communication, January 3, 2018).

Standardized Testing and Reporting (STAR) Assessments. Academic achievement was measured using students' archival data from Renaissance Learning's STAR reading and mathematics assessments. School District X uses results from STAR assessments to monitor students' progress in reading and mathematics (School District X, 2015b). Data are used as part of the Response to Intervention (RtI) screening for students in need of more intense interventions. STAR assessments were administered a minimum of three times per school year. Baseline assessments are administered within the first month of each school year, followed by additional assessments in second quarter and third quarter. For this study, data from the third quarter assessment were used. STAR assessment measurements selected for analysis in this study were students' reading and mathematics scaled scores, respectively.

STAR is a computer-based, formative assessment program used to provide educators with estimates of students' academic achievement in reading and mathematics (Renaissance Learning, 2014). STAR is a computer-adaptive test, commonly referred to as an individualized assessment, which uses Item Response Theory (IRT) for adaptive item, or question, selection for students. The number of questions is uniform, 25 questions for STAR Reading and 24 questions for STAR Math, but the difficulty level and time required vary from one student to another. The first time the assessment is administered each year, the initial test item is said to be one or two grades below a student's actual attended grade level (Renaissance Learning, 2014). Questions that follow vary depending on a student's accuracy of responses. Subsequent administration of the assessment begins with a test item below a student's previous achievement level, rather than grade level of attendance.

STAR Reading was designed to serve three purposes (Renaissance Learning, 2015b). The first purpose was to provide educators with estimates of students' reading comprehension. Another purpose was to assess reading achievement in relation to national norms. The third purpose was to provide a resource to track students' growth in a consistent, longitudinal manner. Students in grades three and above are assessed using 20 vocabulary-in-context items in the assessments' first section and five text passages with multiple-choice comprehension questions in the second section of the test (Renaissance Learning, 2015b). Each time a student answers a question, the student's reading ability estimate is updated based on all responses up to that point. Upon completion of the assessment, students receive results in the form of percentile rank, scaled score, Lexile, and grade equivalent. Students' scaled scores were selected for use in this study. The scaled score is a student's numeric score within a single scale that is used for students in first grade through twelfth grade. The scale is from 0 to 1400. Renaissance Learning (2015b) created a chart with a mean scaled score for each grade level, which provides context for determining how well a student performed on the assessment (Renaissance Learning, 2015b).

STAR Math was developed with two primary purposes (Renaissance Learning, 2015a). The first purpose was to provide educators with quick, norm-referenced, and accurate estimates of students' instructional mathematics levels. The second purpose was to provide educators with a resource to utilize for tracking students' growth in a consistent, longitudinal manner. STAR Math is separated into two sections, although the results from the two sections are combined to produce one score for each student (Renaissance Learning, 2015a). The first 16 assessment items make up the first section,

which includes items referencing number sense and computation processes. The second section of the assessment, items number 17 through 24, incorporated questions from word problems, estimation, data analysis and statistics, geometry, measurement, and algebra. Each time a student answers a question, the student's mathematical ability estimate is updated based on all responses up to that point. Upon completion of the assessment, students receive results in the form of percentile rank, scaled score, and grade equivalent. Students' scaled scores were selected for use in this study. The scale is from 0 to1400. Renaissance Learning (2015a) created a chart with a mean scaled score for each grade level, which provides context for determining how well a student performed on the assessment (Renaissance Learning, 2015a).

Renaissance Learning (2015a, 2015b) reported concurrent validity and predictive validity. The average concurrent validity coefficient was .74 for STAR Reading and .69 for STAR Math. The average predictive validity coefficient was .71 for STAR Reading and .55 for STAR Math. Reported results support the validity of STAR Reading and STAR Math.

Two statistics were used to provide evidence of the reliability of STAR Math and STAR Reading scores (Renaissance Learning, 2015b). Those included: conditional standard errors of measurement (CSEM) and reliability coefficients. CSEM for each test were reported in scaled score units (Renaissance Learning, 2015b). The overall median CSEM for the STAR Reading assessment was 51 scaled score units. The overall mean CSEM for the STAR Math assessment was 40 scaled score points. This provides evidence for the reliability of STAR Reading and STAR Math. The first reliability coefficient measured generic reliability, which was referred to as the proportion of test score variance attributed to authentic variation in traits measured by the test (Renaissance Learning, 2015b). This reliability technique was not predisposed to error variance that results from repeated testing, multiple occasions, and alternate forms. The generic reliability estimates were reported as approximately .95 for STAR Reading and .94 for STAR Math. These provide strong evidence for the reliability of STAR Reading and STAR Math results.

Another reliability coefficient utilized was a split-half reliability (Renaissance Learning, 2015b). Split-half reliability coefficients are independent of generic reliability and rooted in the item response data. The split-half coefficient estimates were reported as approximately .92 for STAR Reader and .94 for STAR Math. This provides strong evidence for the reliability of STAR Reader and STAR Math results.

The third reliability coefficient utilized was a retest coefficient (Renaissance Learning, 2015b). Data from participating schools that administered two 24-item norming tests on two different days were used to calculate the coefficient. The time between the first and second tests averaged between five and eight days for STAR Reader and four days for STAR Math. Estimated test-retest reliability was reported as approximately .91 for both STAR Reading and STAR Math. This provides strong evidence for the reliability of STAR Reader and STAR Math results.

**Reactive recovery room visits.** Behavior was measured using archival data tracking the number of students' reactive recovery room visits. Each time a student visited the recovery room, the recovery room interventionist tracked the day, time, and reason for the visit on a sign-in sheet. School District X distinguishes between two types

of recovery room visits, which are proactive visits and reactive visits (Elementary School A Recovery Room Interventionist, personal communication, February 18, 2018). Proactive recovery room visits are instances where students either make scheduled visits to the recovery room based on behavior plans, or the students' requests to visit the recovery room to prevent discipline issues from occurring (Elementary School A Recovery Room Interventionist, personal communication, February 18, 2018). Reactive recovery room visits are instances where students are sent to the recovery room as a result of behavior that interfered with the academic setting or learning environment (School District X, 2014b). Reactive recovery room visits are coded as reactive minor or reactive major based on the severity of the behavior. This data is then entered and stored in Matrix, School District X's data storage system. The number of students who visited the recovery room for reactive visits was used for measurement in this study.

#### **Data Collection Procedures**

In order to establish the relevance of this study and a cooperative relationship with School District X, an initial meeting was conducted September 4, 2015 with the Executive Director for Quality and Evaluation to discuss district data as it pertained to this study. At this meeting, types of data that could be collected to address research questions were discussed. An initial dialogue pertaining to future data accessibility also occurred.

Prior to collecting data, an Institutional Review Board (IRB) request was completed January 25, 2018 (see Appendix C). The document was mailed electronically. The Baker University IRB committee granted the request February 6, 2018 (see Appendix D). After the IRB approval, a School District X request to conduct research was completed. That document was then mailed electronically to the Executive Director for Quality and Evaluation. Upon his review of the document, permission was granted February 9, 2018 to conduct the study. After Baker University and School District X approved the requests, data collection began.

Quantitative data pertaining to AQ survey results were collected from School District X's Executive Director for Quality and Evaluation in accordance with district data confidentiality procedures. Excel worksheets were created for student AQ survey data at Elementary School A and Elementary School B, respectively, during the 2013-2014 and 2016-2017 school years. The response scales were recoded into a number scale of 1-5, with 1 representing the most negative response and 5 representing the most positive response. An overall mean score was calculated for each survey. The schools' data were merged, and a column was used to distinguish the data from each school. Names were deleted and district-provided student identification numbers and the associated elementary school were used for identification.

Excel worksheets were also created for faculty AQ survey data at Elementary School A and Elementary School B, respectively, during the 2013-2014 and 2016-2017 school years. The response scales were recoded into a number scale of 1-5, with 1 representing the most negative response and 5 representing the most positive response. An overall mean score was calculated for each survey. The schools' data were merged, and a column was used to distinguish the data from each school. Names were deleted and district-provided faculty identification numbers and the associated elementary school were used for identification. Quantitative data pertaining to students' academic achievement for the study were collected from School District X's Executive Director for Quality and Evaluation in accordance with district data confidentiality procedures. Excel worksheets were utilized for STAR Reading data at Elementary School A and Elementary School B, respectively, during the 2013-2014 and 2016-2017 school years. An overall mean scaled score was calculated for each STAR Reading assessment. The schools' data were merged, and a column was used to distinguish the data from each school. Names were deleted and district-provided student identification numbers and the associated elementary school were used for identification. Excel worksheets were also utilized for STAR Math data at Elementary School A and Elementary School B, respectively, during the 2013-2014 and 2016-2017 school years. An overall mean scaled score was calculated for each STAR Math data at Elementary School A and Elementary School B, respectively, during the 2013-2014 and 2016-2017 school years. An overall mean scaled score was calculated for each STAR Math data at the assessment. The schools' data were merged, and a column was used to distinguish the data from each school B, respectively, during the 2013-2014 and 2016-2017 school years. An overall mean scaled score was calculated for each STAR Math data at Elementary School A and Elementary School B, respectively, during the 2013-2014 and 2016-2017 school years. An overall mean scaled score was calculated for each STAR Math assessment. The schools' data were merged, and a column was used to distinguish the data from each school. Names were deleted and district-provided student identification numbers and the associated elementary school were used for identification.

Quantitative data pertaining to behavior for the study were collected from Matrix, School District X's data storage system. Excel worksheets were created for student behavior data at Elementary School A and Elementary School B, respectively, during the 2013-2014 and 2016-2017 school years. Names were deleted, and each reactive recovery room visit was issued a number to identify when a student visited the recovery room. The visit number and associated school were used for identification. The schools' data were merged, and a column was used to distinguish the data from each school.

#### Data Analysis and Hypothesis Testing

Hypotheses were developed to address the study's research questions. For the purpose of this study, the significance level for analyses was set at  $\alpha = .05$ . The following research questions, hypotheses, and analyses were used in this study:

**RQ1.** To what extent is there a difference in the change in students' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A?

*H1*. There is a difference in the change in students' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A.

A two-factor analysis of variance (ANOVA) was conducted to test H1. The two categorical variables used to group the dependent variable, students' perceptions of school climate, were implementation status (before implementation, three years after implementation) and school (School A, School B). The two-factor ANOVA can be used to test three hypotheses: a main effect for implementation status, a main effect for school, and an interaction effect for implementation status by school. The interaction effect was used to test H1.

**RQ2.** To what extent is there a difference in the change in teachers' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A?

*H2.* There is a difference in the change in teachers' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A.

A two-factor analysis of variance (ANOVA) was conducted to test H2. The two categorical variables used to group the dependent variable, teachers' perceptions of school climate, were implementation status (before implementation, three years after implementation) and school (School A, School B). The two-factor ANOVA can be used to test three hypotheses: a main effect for implementation status, a main effect for school, and an interaction effect for implementation status by school. The interaction effect was used to test H2.

**RQ3.** To what extent is there a difference in the change in student achievement on Renaissance Learning's STAR assessments between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A?

*H3.* There is a difference in the change in student achievement on Renaissance Learning's STAR Reading assessment between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A.

A two-factor analysis of variance (ANOVA) was conducted to test H3. The two categorical variables used to group the dependent variable, student achievement on Renaissance Learning's STAR Reading assessment, were implementation status (before implementation, three years after implementation) and school (School A, School B). The two-factor ANOVA can be used to test three hypotheses: a main effect for implementation status, a main effect for school, and an interaction effect for implementation status by school. The interaction effect was used to test H3.

*H4.* There is a difference in the change in student achievement on Renaissance Learning's STAR Math assessment between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A.

A two-factor analysis of variance (ANOVA) was conducted to test H4. The two categorical variables used to group the dependent variable, student achievement on Renaissance Learning's STAR Math assessment, were implementation status (before implementation, three years after implementation) and school (School A, School B). The two-factor ANOVA can be used to test three hypotheses: a main effect for implementation status, a main effect for school, and an interaction effect for implementation status by school. The interaction effect was used to test H4.

**RQ4.** To what extent is there a difference in the change in student reactive recovery room visits between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A?

*H5.* There is a difference in the change in student reactive recovery room visits between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A.

A chi square test of independence was conducted using data from Elementary School A and Elementary School B to address H5. The observed frequencies were compared to those expected by chance.

# Limitations

Limitations of a study are factors outside the scope of the researcher's control and may impact interpretations or generalizability of the findings and results (Lunenburg & Irby, 2008). The limitations of this study included:

- Student perceptions of building climate were limited to students in third through fifth grade, because they are the only students who completed the student surveys;
- The subjective nature of climate survey items may result in skewed responses based on the person's mood when completing the survey;
- Between the 2013-2014 and 2016-2017 school years, student AQ survey proctoring changed from teachers to school administrators at Elementary School A and the school counselor at Elementary School B;
- Students' performance on STAR Reading and STAR Math assessments may be influenced by testing environment and students' physical health and emotional well-being;
- Prior to the start of the 2016-2017 school year, an instructional coach was hired to provide additional support for teachers at Elementary School B;
- Behaviors perceived to be disruptive enough to warrant sending a student to the recovery room may vary among teachers;

- Consistent documentation by recovery room interventionists within each school of students visits to the recovery room may influence behavior data;
- Eighteen new teachers were hired at Elementary School A between the 2013-2014 and 2016-2017 school year, or 52% of the staff;
- The time span between years of data compared may result in significant cohort effect on students' performance on STAR Reading and STAR Math in addition to students' and teachers' perceptions of school climate.

# Summary

An explanation of the methodology used to address the research questions was presented in this chapter. Also presented in this chapter were the research design, selection of participants, measurement, data collection procedures, data analysis and hypothesis testing, and limitations. Chapter 4 includes the study's results, descriptive statistics, and hypothesis testing.

#### Chapter 4

### Results

The current study addressed four research questions and five hypotheses that were developed to investigate the impact of TLIM on Elementary School A by determining if there was a difference in the change in students' and teachers' perceptions of school climate, students' academic achievement, and students' behavior between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A. Included in Chapter 4 are the descriptive statistics and the quantitative results from hypothesis testing. Four two-factor analysis of variances (ANOVAs) were conducted to address H1-H4, respectively, and a chi square test of independence was conducted to address H5.

#### **Descriptive Statistics**

The two elementary schools were selected for this study due to similar student enrollment and demographics (see Table 1). The sample of students included in the data for school climate was limited to students in third through fifth grade, but the sample size was reduced further to only include the students who completed the entire survey. The sample of teachers included in the data for school climate originally included all certified teachers at each school, but the sample size was reduced further to only include the teachers who completed the entire survey. Some students completed the STAR Reading or STAR Math assessment more than once within a testing period. In those instances, only the scaled score from the first assessment completed by the student was included in the study. In addition, some students were sent more than once to the recovery room due to disruptive behaviors. In those instances, only the first reactive recovery room visit was included in the study. Table 3 includes the resulting sample sizes for each hypothesis test.

Table 3

Number of Participants for Hypothesis Testing

	Year			
	2013-2014		2016-2017	
Topic	School A	School B	School A	School B
School Climate				
Students	217	139	124	366
Teachers	25	24	25	24
Academic Achievement				
STAR Reading	302	258	231	227
STAR Math	213	192	229	227
Behavior				
Students	441	437	447	518

## **Hypothesis Testing**

Hypothesis testing was conducted for each hypothesis in order to investigate any difference in changes in perceptions of school climate, academic achievement, and behavior between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A. Data analysis for RQ1-RQ4 is included in the following section. The results of the statistical analysis are explained after each hypothesis.

**RQ1.** To what extent is there a difference in the change in students' perceptions of school climate between Elementary School A and Elementary School B from before

implementation of TLIM to three years after implementation of TLIM at Elementary School A?

*H1*. There is a difference in the change in students' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A.

A two-factor ANOVA was conducted to test H1. The two categorical variables used to group the dependent variable, students' perceptions of school climate, were implementation status (before implementation, three years after implementation) and school (School A, School B). The two-factor ANOVA can be used to test three hypotheses: a main effect for implementation status, a main effect for school, and an interaction effect for implementation status by school. The interaction effect was used to test H1. The level of significance was set at .05.

The test of the interaction effect for implementation status by school indicated a statistically significant difference for the interaction effect for implementation status by school between at least two means, F = 6.311, df = 1, 842, p = .012. The results supported H1, but the changes in perceptions of school climate were less positive at both schools.

Table 4 includes the descriptive statistics from the data analysis that indicates an overall decline in students' perceptions of school climate at Elementary School A, which implemented TLIM, and Elementary School B, which did not implement TLIM.

#### Table 4

School	School Year	М	SD	Ν
School A	2013-2014	4.36	.48	217
	2016-2017	4.17	.57	124
School B	2013-2014	4.31	.53	139
	2016-2017	4.30	.45	366

Descriptive Statistics for the Results of the Test for H1 (Students' Perceptions)

**RQ2.** To what extent is there a difference in the change in teachers' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A?

H2. There is a difference in the change in teachers' perceptions of school climate between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A.

A two-factor ANOVA was conducted to test H2. The two categorical variables used to group the dependent variable, teachers' perceptions of school climate, were implementation status (before implementation, three years after implementation) and school (School A, School B). The two-factor ANOVA can be used to test three hypotheses: a main effect for implementation status, a main effect for school, and an interaction effect for implementation status by school. The interaction effect was used to test H2. The level of significance was set at .05.

The test of the interaction effect for implementation status by school indicated no statistically significant difference for the interaction effect for implementation status by school between at least two means, F = .210, df = 1, 94, p = .648. Although the results
showed a greater decrease in the teachers' perceptions of school climate at Elementary School A, the difference in the change was not statistically significant. The results did not support H2.

Table 5 includes the descriptive statistics from the data analysis that indicates there was an overall decline in teachers' perspectives of school climate at Elementary School A, which implemented TLIM, and Elementary School B, which did not implement TLIM.

Table 5

Descriptive Statistics for the Results of the Test for H2 (Teachers' Perceptions)

School	School Year	М	SD	Ν
School A	2013-2014	4.51	.35	25
	2016-2017	4.20	.45	25
School B	2013-2014	4.12	.33	24
	2016-2017	3.89	.58	24

**RQ3.** To what extent is there a difference in the change in student achievement on Renaissance Learning's STAR assessments between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A?

*H3.* There is a difference in the change in student achievement on Renaissance Learning's STAR Reading assessment between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A.

A two-factor ANOVA was conducted to test H3. The two categorical variables used to group the dependent variable, student achievement on Renaissance Learning's STAR Reading assessment, were implementation status (before implementation, three years after implementation) and school (School A, School B). The two-factor ANOVA can be used to test three hypotheses: a main effect for implementation status, a main effect for school, and an interaction effect for implementation status by school. The interaction effect was used to test H3. The level of significance was set at .05.

The test of the interaction effect for implementation status by school indicated no statistically significant difference for the interaction effect for implementation status by school between at least two means, F = .802, df = 1, 1014, p = .371. Although the results demonstrated a decrease at Elementary School A and an increase at Elementary School B, the difference in the change was not statistically significant. The results did not support H3.

Table 6 includes the descriptive statistics from the data analysis that indicates there was an overall decline in students' achievement on Renaissance Learning's STAR Reading assessment at Elementary School A, which implemented TLIM, and an overall increase in students' achievement on Renaissance Learning's STAR Reading assessment at Elementary School B, which did not implement TLIM.

#### Table 6

School	School Year	М	SD	Ν
School A	2013-2014	558.05	187.78	302
	2016-2017	555.89	216.27	231
School B	2013-2014	578.24	240.49	258
	2016-2017	601.12	245.06	227

Descriptive Statistics for the Results of the Test for H3 (STAR Reading)

*H4.* There is a difference in the change in student achievement on Renaissance Learning's STAR Math assessment between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A.

A two-factor ANOVA was conducted to test H4. The two categorical variables used to group the dependent variable, student achievement on Renaissance Learning's STAR Math assessment, were implementation status (before implementation, three years after implementation) and school (School A, School B). The two-factor ANOVA can be used to test three hypotheses: a main effect for implementation status, a main effect for school, and an interaction effect for implementation status by school. The interaction effect was used to test H4. The level of significance was set at .05.

The test of the interaction effect for implementation status by school indicated no statistically significant difference for the interaction effect for implementation status by school between at least two means, F = .210, df = 1, 94, p = .648. Although the results demonstrated a decrease at Elementary School A and an increase at Elementary School B, the difference in the change was not statistically significant. The results did not support H4.

Table 7 includes the descriptive statistics from the data analysis that indicates there was an overall decline in students' achievement on Renaissance Learning's STAR Math assessment at Elementary School A, which implemented TLIM, and an overall increase in students' achievement on Renaissance Learning's STAR Math assessment at Elementary School B, which did not implement TLIM.

#### Table 7

School	School Year	М	SD	Ν
School A	2013-2014	682.81	108.10	213
	2016-2017	666.39	111.13	229
School B	2013-2014	672.96	111.83	192
	2016-2017	676.70	121.67	227

Descriptive Statistics for the Results of the Test for H4 (STAR Math)

**RQ4.** To what extent is there a difference in the change in student reactive recovery room visits between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A?

*H5.* There is a difference in the change in student reactive recovery room visits between Elementary School A and Elementary School B from before implementation of TLIM to three years after implementation of TLIM at Elementary School A.

A chi square test of independence was conducted using data from Elementary School A and Elementary School B to address H5. The observed frequencies were compared to those expected by chance. The level of significance was set at .05. The results of the chi square test of independence indicated no statistically significant difference between the observed and expected values at Elementary School A ( $\chi^2 =$ 1.153, df = 1, p = .283). The observed and expected frequencies for Elementary School A are presented in Table 8.

#### Table 8

Year	Behavior Status	Observed	Expected
2013-2014			
	Visited	86	79.75
	Did Not Visit	355	361.25
2016-2017			
	Visited	80	86.25
	Did Not Visit	397	390.75

#### School A Student Reactive Recovery Room Status for H5

The results of the chi square test of independence indicated no statistically significant difference between the observed and expected values at Elementary School B,  $\chi^2 = 2.506$ , df = 1, p = .113. The observed and expected frequencies for Elementary School B are presented in Table 9.

#### Table 9

School B Student Reactive Recovery Room Status for H5

Year	Behavior Status	Observed	Expected
2013-2014			
	Visited	157	145.51
	Did Not Visit	280	291.49
2016-2017			
	Visited	161	172.49
	Did Not Visit	357	345.51

Although the frequencies demonstrated a decrease in student reactive recovery room visits in Elementary School A and an increase at Elementary School B, there were no meaningful differences in the results for the two schools. The results did not support H5.

#### Summary

Chapter 4 included the descriptive statistics and results of data analysis for each hypothesis. The results of the two-factor ANOVAs and chi square test of independence were also presented. Chapter 5 includes a summary of the study, major findings, connection to the literature, implications for action, recommendations for future research, and conclusions.

#### Chapter 5

#### **Interpretation and Recommendations**

This chapter includes an overview of the problem, purpose statement and research questions, review of the methodology, and major findings. Also included in this chapter are the current study's connection to the literature, implications for actions, recommendations for future research, and concluding remarks.

#### **Study Summary**

This study was conducted in School District X, a moderate-sized suburban school district in the Kansas City, Missouri metropolitan area. The study focused on two elementary schools within School District X with similar enrollment and demographics. Elementary School A implemented TLIM and Elementary School B did not. This section summarizes the study.

**Overview of the problem.** Elementary School A's proficiency on the state assessment combined with the school's student discipline data in the years preceding this study had reflected a school in need of reform. The school was unable to make AYP on the state's reading assessment in 2009, 2010, and 2011, failed to make AYP on the state's mathematics assessment in 2010 and 2011, and reported 1,021 reactive recovery room visits during the 2011-2012 school year (Missouri Department of Elementary and Secondary Education, 2017a & School District X, 2018).

Elementary School A's data indicated the need for comprehensive reform. Elementary School A's principal selected TLIM for implementation at her school (Elementary School A Principal, personal communication, January 12, 2017). If indeed TLIM was a comprehensive school reform model (CSR), then it would impact school climate, academic achievement, and student behavior. Implementation of TLIM at Elementary School A required the commitment of School District X human and fiscal resources, so it is important that school leaders and district leaders know if it resulted in measurable improvements to the school.

**Purpose statement and research questions.** The purpose of the study was to investigate the impact of TLIM on Elementary School A by determining if there was a difference in the change in school climate, students' academic achievement, and students' behavior between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A. Four research questions were developed to address the purpose of this study.

**Review of the methodology.** A causal-comparative, non-experimental approach was used to address the problem expressed in this study. This approach allowed for the use of archival data from student and faculty AQ surveys, STAR Reading and Math assessments, and recovery room data to compare the changes in school climate, academic achievement, and the number of reactive recovery room visits between Elementary School A and Elementary School B from before implementation of TLIM during the 2013-2014 school year to three years after implementation of TLIM at Elementary School A during the 2016-2017 school year.

Interaction effects from four ANOVAs were used to test H1-H4. The dependent variable varied by hypothesis. Independent variables were implementation status (before implementation, three years after implementation) and school (School A, School B). A

chi square test of independence was conducted to test H5. The observed frequencies were compared to those expected by chance.

**Major findings.** The results from the ANOVAs conducted to test H1-H4 were mixed. The results of the two-factor ANOVA for H1 indicated a decrease in the mean scores for students' perception of school climate between the 2013-2014 and 2016-2017 school years at both schools (see Table 4). The statistically significant decrease was greater at Elementary School A, which implemented TLIM, than Elementary School B, which did not implement TLIM. The results of the two-factor ANOVA for H2 also revealed a decrease in the mean scores for teachers' perception of school climate between the 2013-2014 and 2016-2017 school years at both schools (see Table 5). Once again, the decrease was greater at Elementary School A than Elementary School B, but the difference was not statistically significant.

The results from two two-factor ANOVAs were used to test H3 for a difference in the change in STAR Reading assessment scores and to test H4 for a difference in the change in STAR Math assessment scores. The results of the two-factor ANOVA for H3 demonstrated a decrease in students' mean scaled score on STAR Reading at Elementary School A and an increase in the mean scaled score at Elementary School B between the 2013-2014 and 2016-2017 school years (see Table 6, p. 63). The results of the two-factor ANOVA for H4 also indicated there was a decrease in students' mean scaled score at Elementary School B between the STAR Math at Elementary School A and an increase in the mean scale in students' mean scaled score at Elements' mean scale score on STAR Math at Elementary School A and an increase in the mean scale score at Elementary School B between the years included in the study (see Table 7).

H5 was tested using a chi square test of independence. The results indicated that the number of students sent to the recovery room for reactive visits decreased at Elementary School A and increased at Elementary School B between the 2013-2014 and 2016-2017 school years (see Table 8). The results of the chi square test of independence demonstrated that the difference between the observed changes in the number of students and the expected changes were not statistically significant.

School factors not addressed by TLIM may have had a greater impact on perceptions of climate, academic achievement, and behavior than TLIM. Student and teacher perceptions of school climate declined at both elementary schools, but the decline was greater at Elementary School A, which implemented TLIM. Student achievement on STAR Reading and STAR Math decreased at Elementary School A and increased at Elementary School B. The only positive result for Elementary School A when compared to Elementary School B in this study was the decrease in the number of students who visited the recovery room for disruptive behaviors. These results contradict what a person would expect from a comparison of schools where only one school implemented a CSR such as TLIM. The implication may be that the results highlight the importance of teacher retention due to the direct impact teachers have on students. Teachers' personalities, instructional approach, and abilities to connect with students, in addition to the effect of professional development, may have been too great an influence on perceptions of school climate, academic achievement, and behavior for TLIM to have the desired impact.

#### **Findings Related to the Literature**

This section addresses the relevance of the current study by presenting the findings in the context of previous research on TLIM referenced in the review of literature in Chapter 2. At the time of the current study, a limited body of research

existed that was directly related to TLIM's impact on schools. Although much of the research provided evidence that the implementation was promising, the majority of existing research utilized survey-response or interview data that revealed perceptions of TLIM's impact on school, with limited academic achievement or student discipline data included that demonstrated TLIM's actual impact. When TLIM's impact on academic achievement or student discipline were investigated using assessment or behavior tracking measures, results were inconclusive. In other words, there was a strong, positive perception that TLIM had a positive impact on schools, but there was a lack of quantitative evidence to demonstrate its actual measured impact on academic achievement and student discipline within TLIM schools.

The current study sought to address the mixed or inconclusive results of previous studies with a comprehensive examination of TLIM's impact on schools that compared the difference in changes between two similar schools, one that implemented TLIM and one that did not, using the same measurement instruments. Studies conducted by Humphries et al. (2015), Hatch and Covey (2012), Westgate Research (2014), and Hatch (2012) demonstrated a positive perception of TLIM among study participants in schools that implemented TLIM. Studies conducted by Stella (2013), Hatch (2012), Ross et al. (2012), Cummins (2015), Hoffman-Bergfeld (2015), and Wilkins (2013), which sought to examine the impact of TLIM on actual academic achievement and behavioral data produced mixed evidence. Stella (2013) conducted a study that resulted in improved student performance on state assessments. Anecdotal evidence from administrator interviews in a study conducted by Hatch (2012) revealed positive impacts that included improved performance on state assessments, school ranking status, and number of

students who transitioned out of reading intervention programs, but there was limited specific data in the study to support participants' statements. Ross et al. (2012) believed that TLIM positively impacted academic achievement; however, these researchers were unable to definitively claim whether TLIM had a measurable impact on academic achievement, because it was too early in the schools' TLIM implementation to determine students' academic achievement was attributed to TLIM. Data used in the study conducted by Cummins (2015) to evaluate attendance, reading scores, and discipline referrals were positive but lacked consistent annual improvement. Hoffman-Bergfeld (2015) discovered neither a perception of difference nor actual difference in student behavior as it pertained to the number of suspensions before and after TLIM implementation. Wilkins (2013) found no statistically significant differences in academic achievement or discipline data between students at schools that implemented TLIM and schools that did not (Wilkins, 2013). These were some of the studies with mixed or inconclusive results that revealed a need for the current study.

The results of this study added to the mixed results revealed in the literature review in Chapter 2. In this study, the only measured positive effect to Elementary School A was the decrease in student reactive recovery room visits between Elementary School A and an increase at Elementary School B, which was not statistically significant and therefore not a meaningful difference in results between the two schools. Other results in this study revealed decreases in the means for Elementary School A on the student and faculty AQ surveys, which measured perceptions of school climate, and students' achievement on STAR Reading and STAR Math assessments, which measured changes in academic achievement. The analysis of student AQ survey data demonstrated that the decrease in the students' perceptions of school climate at Elementary School A, which implemented TLIM, was significantly greater than the decrease at Elementary School B, which did not implement TLIM. All other decreases at Elementary School A were not significantly greater than the results at Elementary School B.

#### Conclusions

The results of this study failed to provide clear evidence of TLIM's effectiveness or ineffectiveness for school leaders and district leaders. The difference in the changes in climate and academic achievement data between 2013-2014 and 2016-2017 indicated a greater decline at Elementary School A, the school that implemented TLIM. The only positive difference in changes for Elementary School A pertained to behavior, although it was not a statistically significant change. This study did not provide evidence that TLIM had a statistically significant and positive impact on Elementary School A between 2013-2014 and 2016-2017 and therefore failed to provide evidence that TLIM is worth the investment.

Noteworthy changes occurred at Elementary School A and Elementary School B between the 2013-2014 and 2016-2017 school years that could have impacted the results of this study. One change pertained to the proctoring of the student AQ surveys. In the 2016-2017 school year, a school administrator proctored the student surveys at Elementary School A and the school counselor proctored the student surveys at Elementary School B instead of classroom teachers, which was the practice in 2013-2014. That change was to make the proctoring of the surveys more consistent among classrooms and therefore resulting in more reliable survey data (Elementary School A Principal, personal communication, March 8, 2018; Elementary School B Principal, personal communication, April 13, 2018). Replacing the teachers with the administrator or counselor as the proctor potentially reduced any implied pressure by the teachers' presence for the students to give more positive responses to survey items. Changing the proctor also reduced the potential bias manner in which the survey items might have been read or explained to students. Essentially, changing the survey proctors likely reduced proctor-related bias and increased the validity of the results.

Another change occurred when Elementary School B hired an instructional coach prior to the start of the 2016-2017 school year. That instructional coach was hired to provide more targeted support for teachers at Elementary School B and one other district elementary school (Elementary School A Principal, personal communication, March 8, 2018). This change is noteworthy because of the possible positive effect on 2016-2017 academic achievement, including STAR Reading and STAR Math results. Elementary School A did not have the benefit of an additional instructional coach during that year.

Another factor that may have impacted the results of this study was teacher turnover. Eighteen new teachers were hired at Elementary School A between the 2013-2014 and 2016-2017 school year, or 52% of the staff (Elementary School A Administrative Assistant, personal communication, March 5, 2018). Elementary School B's principal reported a teacher retention rate relative to the 2012-2013 school year (Elementary School B Principal, personal communication, April 9, 2018). Between 2012-2013 and 2016-2017, Elementary School B had an 88.9% teacher retention rate. Teacher turnover may have impacted all aspects of this study because teachers are generally responsible for establishing social, instruction, and behavioral norms that greatly influence students' perceptions of school climate, students' academic achievement, and teachers' reactions to students' disruptive behavior. Those norms are influenced by teachers' personalities, teaching style, professional development, and years experience within the school. Teacher turnover at Elementary School A was so significant that it must be considered an influential factor in this study. Teacher turnover also likely impacted teacher results on the school climate survey due to the fact that 52% of the teachers who took the survey in 2016-2017 did not take the survey during 2013-2014.

**Implications for action.** Results of this study did not provide conclusive evidence that demonstrated whether TLIM had a positive effect on students' and teachers' perceptions of school climate, students' academic achievement, and students' behavior. The focus on using consistent data sources and school similarities to reduce the number of variables that could influence the study was not enough to account for other changes within the schools. School District X administrators have more resources, detailed knowledge, and ability to account for additional school factors that may influence a study such as this.

The impact of teacher turnover was potentially too influential to rely solely on this study to determine the extent of TLIM's impact on Elementary School A. Therefore, school and district administrators should investigate the reason for the staff turnover at Elementary School A and consider emphasizing teacher retention at the school. Further research conducted by school and district administrators may provide more conclusive evidence to help the district determine if TLIM is worth the time, effort, and money required to continue its use. **Recommendations for future research.** The study focused on two elementary schools within School District X that had similar enrollment and demographics in order to minimize the differences between the schools. It was conducted to investigate the impact of TLIM on Elementary School A's school climate, academic achievement, and behavior. Based on the results of this study, it is recommended that School District X conduct further research to determine if TLIM is impacting Elementary School A. Future research would benefit from a more targeted approach with data selection and analysis. The following recommendations are meant to limit the effect that variables outside the scope of the study will have on future research about TLIM's impact. Future research could replicate and extend this study as follows:

- Account for teacher turnover on faculty AQ survey data, and should only include survey results for teachers who were employed at the elementary schools for both years.
- Expand on this study by performing a cohort study to track the changes to students' academic achievement and perceptions of school climate as they progress through the grades.
- Differentiate climate survey responses either by individual survey items or categorize school climate into instructional climate, physical climate, and emotional climate.
- Include an investigation into the changes in the severity of students' disruptive behaviors. Reactive recovery room data, such as the data provided by School District X, could be used to evaluate the difference in the changes to major

reactive student behaviors and minor reactive student behaviors to determine if there was a difference in the change in the severity of students' behaviors.

**Concluding remarks.** This study was conducted to determine if there was a difference in the change in school climate, students' academic achievement, and students' behavior between Elementary School A and Elementary School B from before implementation of TLIM at Elementary School A to three years after implementation of TLIM at Elementary School A. There are too many other influential factors for a clear determination of TLIM's impact to be made. Even when the intended effect of a comprehensive school reform (CSR) model is perceived to be the solution to a school's problems, there will be factors outside the scope of the CSR that, when not addressed, will limit its impact. For school reform to be effective, there needs to be a multifaceted approach that extends beyond the use of common language, explicit leadership lessons, integrated leadership lessons, staff professional development, and staff modeling. Although FranklinCovey Education (2017b) described TLIM as a "whole-school transformation process," the results of hypothesis testing in this study failed to provide statistically significant results that demonstrate the impact of TLIM process on a suburban elementary school.

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## Appendices

## Appendix A: Student AQ Survey

2015-2016 AQ	Survey - E	lementary
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ucation	Summary	Design Survey	Collect Responses	Analyze Result
Edit Survey			Preview Survey	Send Survey >
To change the <b>look</b> of your survey, select a theme below.				
TITLE & LOGO Edit Title + Add Logo				
+ Ad	d Page			
AGE 1 Edit Page Options V Add Page Logic Move Copy Delete			()	Show this page o
+ Add Q	uestion V			
Q1       Edit Question       ▼       Move       Copy       Delete <b>* 1. Please enter your student number.</b> Student number required.				

+ Add Page

PAGE 2	Edit Page Options V	Add Page Logic	Move	Сору	Delete	Show this page onl
					+ Add Question	

Q5 Edit Question V Move Copy Delete

## $\star$ 5. Please fill in the circle that matches your feelings about each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am treated fairly at my school.	0	0	0	0	0
I feel safe at school.	0	0	0	O	O
I have learning goals and my teachers help me track my progress.	0	0	Ō	Ō	0
I learn a lot in this school.	0	0	0	Ó	O
I like going to this school.	0	0	Ō	Q	Ō
If a student has a problem there are teachers who will listen and help.	0	0	Ō	Ō	0
		+ Add Quest	ion V		

+ Add Dage

# Q6 Edit Question V Move Copy Delete

# $\pm$ 6. Please fill in the circle that matches your feelings about each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
If I do well in school, it will					
help me when I grow up.	0	0	0	0	0
My school is meeting my needs as a student.	0	0	0	0	0
My teachers are good teachers.	0	0	0	0	0
My teachers make clear what I am supposed to learn.	0	0	Ô	0	0
My teachers make learning interesting.	0	0	0	0	Ô
My teachers think I can learn.	0	0	0	0	0

## Q7 Edit Question V Move Copy Delete

# \*7. Please fill in the circle that matches your feelings about each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Teachers connect what students are learning with the real world.	0	0	Ô	0	Q
Teachers in my school really care about me.	0	0	Ô	Ô	Ô
Teachers treat me with respect.	0	0	Ô	Ô	Q
I have internet access at home.	Ô	0	Ô	Ô	Q
I use technology at school to support my learning.	0	0	Ô	Q	Q
I feel safe on the bus.	Ô	0	Ô	Ô	Ó

Q8 Edit Question V Move Copy Delete

## **\***8. Please fill in the circle that matches your feelings about each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The workers in the cafeteria are friendly.	0	0	O	0	Ó
There is a feeling of belonging at my school.	0	0	0	0	Ó
Students in this school respect differences in other students (for example, if they are a boy or a girl, where they come from, what they believe)	0	0	0	0	O)
In my school, there are clear rules against hurting other people (for example, hitting, pushing or tripping)	O	0	Q	0	Ó
I have been insulted, teased, harassed, or otherwise verbally abused more than once in this school.	0	0	Ô	0	Ó
My teachers help me.	Ō	0	0	0	Ō

## Appendix B: Faculty AQ Survey Items Used

\* 3. Please select your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I routinely analyze disaggregated student data and use it to plan my instruction.	0	0	0	0	0
I am satisfied with my job.	0	0	0	0	0
I have students keep track of their own performance on their learning.goals.	0	0	0	0	0
Clear rules that promote good behavior are enforced in our school.	0	0	0	0	0
Teachers in our school, use effective practices to keep all students actively engaged in learning.	O ITTATTA	O	0	O	o
I feel safe at this school.	O	C This is a second s	O	0	0
My supervisor cares about me.	0	0	0	0	O
	0	0	0	0	0
In our school, there is adequate support for classroom teachers to address special education students' IEP goals	0	Ô	0	0	0
I have been atzequately informed of my students'	0	0	0	0	0
IEP modifications or 504 accommodations.	0	0	0	Ö	Q.
My school's administration protects instructional time available to teachers from interruptions	0	0	0	0	0

\* 7. Please select your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Teachers are routinely engaged in collaborative problem solving around instructional issues.	0	Ö	O	0	0
In our school, we communicate effectively to parents and the community.	0	0	0	0	0
In our school, teachers are encouraged to be instructional leaders.	0	0	Ο	0	0
My school's principal fosters shared beliefs and a sense of community and cooperation.	0	0	0	0	0
My school's principal monitors the effectiveness of school practices and their impact on student learning.	0	0	0	0	0
I believe that I can positively impact student performance.	0	0	0	0	0
Discipline is handled fairly in this school.	0	0	0	0	0
Our school teaches and reinforces student self- discipline and responsibility.	0	0	0	0	0
I have the skills necessary to meet the needs of all learners in my classroom.	0	0	О	0	0
I am recognized for my work.	0	0	0	0	0
\* 8. Please select your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
For students in my classroom that have an IEP, I regularly provide the accommodations and modifications as listed in their IEP.	0	0	0	0	0
I provide students with specific feedback on the extent to which they are accomplishing their learning goals.	0	0	0	0	0
There are effective supports in place to assist students who are in jeopardy of academic failure.	0	0	0	0	0
Educators in our school use effective practices to promote positive behavior.	0	0	0	0	0
An assessment system is used to provides timely feedback on specific knowledge and skills for individual students.	0	0	0	0	0
Our professional development improves student achievement.	0	0	0	0	O
There are open channels of communication among students, staff, and administrators.	0	0	0	O	0
I alter instructional strategies when students are having difficulty learning the material.	0	0	0	0	0
My school administers assessments throughout the school year that are used to guide instruction.	0	0	0	0	0

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My professional development has improved the way I teach.	0	0	0	0	0

2017-2018 AQ Survey - Faculty

\* 9. Please select your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My district has high standards and ethics.	0	0	0	0	0
There is adequate professional development for teachers working with special education students in our school.	0	0	0	0	0
I usually look forward to working each day as a teacher.	0	0	0	•	0
I know my district's vision, mission, and values.	0	0	0	0	0
I begin instructional units by presenting students with clear learning goals.	•	0	0	0	0
My school uses assessment data to evaluate and align the curriculum.	0	0	0	0	0
I have received adequate training in using computers and other technology to support my work with students.	0	•	0	0	0
I assess the level of prior knowledge of all students before initiating instruction.	0	0	0	0	0
The professional development activities I attend are related to my district's Comprehensive School Improvement Plan.	•	O	0	0	O
I have received professional development on differentiating instruction for learners.	0	0	0	0	0

\* 10. Please select your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
If I had a chance to choose all over again, I would still choose teaching as a career.	0	0	O	O	0
The board has high expectations for student achievement.	0	0	0	0	0
My district obeys laws and regulations.	Ö	0	0	0	0
The board establishes policies and permits administrators to implement these policies on a day-to-day basis.	0	0	0	0	0
My school adequately prepares all students for post-secondary education and/or successful entry into the workforce,	0	0	0	0	0
Career-Technical education is an essential part of the district's program of studies.	0	0	0	0	0
I am satisfied with working in the satisfied with	0	0	0	0	0
I am satisfied with the activity opportunities in the Employee Health and Wellness program,	0	0	0	0	0
I have opportunities to provide input for administrative decisions that affect me.	0	O	0	0	0
Staff are recognized for service and accomplishments.	0	0	0	0	0

## \* 11. Please select your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Professional development and training, including opportunities provided in-district and out-of- district, has improved my teaching and/or professional practices.	O	0	0	0	О
Professional development and training, including opportunities provided in-district and out-of- district, has positively impacted my students' learning and achievement.	0	0	0	0	0
guides are useful tools in guiding my instruction.	O	0	0	0	0
The content considered essential for all students to learn versus that considered supplemental has been identified and communicated to teachers.	0	0	0	0	0

# 2017-2018 AQ Survey - Faculty

\* 12. Please select your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My work is meaningful.	0	0	Ő	0	0
I have the opportunity to share ideas and best practices.	0	0	0	0	0
On the job, I am treated with dignity and respect.	0	0	Ö	0	0
I would recommend the as a great place to work.	0	0	0	0	0
Values are evident in our practices.	0	0	0	0	0
My work provides opportunities for intelligent risk taking.	0	0	0	0	0
I consistently provide Tier 1 interventions in my classroom for students who do not fully understand the core lesson.	0	0	0	0	0

2017-2018 AQ Survey - Faculty

# Appendix C: IRB Request Form



**IRB** Request

Date January 25, 2018

IRB Protocol Number

(IRB use only)

I. Research Investigator(s) (students must list faculty sponsor)

Department(s) Graduate School of Education

Name Sign   1. Casey Mannell Image: Case of the second secon	Principal	Investigator k if faculty sponsor k if faculty sponsor k if faculty sponsor
Principal investigator contact information finalized, signed form to the IRB, please ensure that you cc all investigators and faculty sponsors using their official Baker University (or respective organization's) email Faculty sponsor contact information	Phone (816) 72 Email casey.m Address 7007 NV Kansas 64152 Phone (913) 34 Email russ.kok	29-7390 Iannell@gmail.com N 73rd Terrace City, MO 14-1221 Koruda@bakeru.edu
Expected Category of Review: 🖌 Exempt	Expedited	Full Renewal

### II. Protocol Title

The Impact of The Leader in Me on School Climate, Achievement on STAR Reading

and STAR Math Assessments, and Behavior at a Suburban Elementary School

Baker IRB Submission form page 1 of 4

#### **III.** Summary:

The following questions must be answered. Be specific about exactly what participants will experience and about the protections that have been included to safeguard participants from harm.

A. In a sentence or two, please describe the background and purpose of the research.

The purpose of this study is to determine if The Leader in Me, has an impact on the variables school climate, student academic achievement, and student behavior. The variables will be compared between two schools, one that implemented The Leader in Me and one that did not, using data from one year prior to The Leader in Me's implementation at one school and data from three years after its implementation at the same school. The study will be conducted in a moderate-sized suburban Missouri school district.

B. Briefly describe each condition, manipulation, or archival data set to be included within the study.

The archival data to be included within the study are student and teacher survey results, student achievement data on STAR Reading and STAR Math assessments, and student recovery room visits at the two schools included in the study.

#### **IV.** Protocol Details

A. What measures or observations will be taken in the study? If any questionnaire or other instruments are used, provide a brief description and attach a copy.

This study uses archival data, so no questionnaires orother instruments will be used.

B. Will the subjects encounter the risk of psychological, social, physical, or legal risk? If so, please describe the nature of the risk and any measures designed to mitigate that risk.

This study uses archival data, so no subjects will encounter any of the risks of psychological, social, physical, or legal risks.

C. Will any stress to subjects be involved? If so, please describe.

This study uses archival data, so no subjects will experience any stress.

Baker IRB Submission form page 2 of 4

D. Will the subjects be deceived or misled in any way? If so, include an outline or script of the debriefing. This study uses archival data already collected by the school district, so no subjects will be deceived or misled in any way.

E. Will there be a request for information which subjects might consider to be personal or sensitive? If so, please include a description.

This study uses archival data, so no information will be requested from subjects.

F. Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading? If so, please describe.

This study uses archival data, so no subjects will be presented with

G. Approximately how much time will be demanded of each subject? This study uses archival data, so no time will be demanded of subjects.

H. Who will be the subjects in this study? How will they be solicited or contacted? Provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of any written solicitation as well as an outline of any oral solicitation.

This study uses archival data, so no subjects will be involved.

1. What steps will be taken to insure that each subject's participation is voluntary? What if any inducements will be offered to the subjects for their participation?

This study uses archival data, so no subjects will be involved.

Baker IRB Submission form page 3 of 4

J. How will you insure that the subjects give their consent prior to participating? Will a written consent form be used? If so, include the form. If not, explain why not.

This study uses archival data, so no subjects will be involved.

K. Will any aspect of the data be made a part of any permanent record that can be identified with the subject? If so, please explain the necessity.

No aspect of the data will be made a part of any permanent record that can be identified with the subject.

L. Will the fact that a subject did or did not participate in a specific experiment or study be made part of any permanent record available to a supervisor, teacher, or employer? If so, explain.

The fact that a subject did or did not participate in the study should not be made part of any permanent record available to a supervisor, teacher, or employer.

M. What steps will be taken to insure the confidentiality of the data? Where will it be stored? How long will it be stored? What will be done with the data after the study is completed?

Confidentiality will be ensured by using no names or personal identifiers in the data. A random numerical value will be assigned to each student and teacher within the sample to help with identification of applicable variables. Data will be provided by the school districts Executive Director of Quality and Research. Data will be stored on a password-protected computer, and it will be stored for five years. After five years, the data will be deleted.

N. If there are any risks involved in the study, are there any offsetting benefits that might accrue to either the subjects or society?

There are no risks involved in the study.

O. Will any data from files or archival data be used? If so, please describe.

Archival data from the 2013-2014 and 2016-2017 school years will be used. The data will include student and teacher advanced questionnairre (AQ) survey results, third through fifth grade students' spring STAR Reading and STAR Math scores, and the number of recovery room visits.

Baker IRB Submission form page 4 of 4

# Appendix D: IRB Approval Form

Baker University Institutional Review Board

February 6<sup>th</sup>, 2018

Dear Casey Mannell and Ross Kokoruda,

The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

- 1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
- 2. Notify the IRB about any new investigators not named in original application.
- 3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
- 4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
- 5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.

Please inform this Committee or myself when this project is terminated or completed. As noted above, you must also provide IRB with an annual status report and receive approval for maintaining your status. If you have any questions, please contact me at <a href="mailto:npoell@bakeru.edu">npoell@bakeru.edu</a> or 785.594.4582.

Sincerely,

Nathan D. Ray

Nathan Poell, MA Chair, Baker University IRB

Baker University IRB Committee Scott Crenshaw Jamin Perry, PhD Susan Rogers, PhD Joe Watson, PhD