SUPERINTENDENTS' USE OF TRANSFORMATIONAL LEADERSHIP AND THE IMPACT ON COLLECTIVE TEACHER EFFICACY

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LIST OF ABBREVIATIONS

CTE – Collective Teacher Efficacy

EAC – Educator Advancement Council

MLQ – Multifactor Leadership Questionnaire

ODE – Oregon Department of Education

OSES – Oregon Statewide Educator Survey

TELL – Teaching, Empowering, Leading, and Learning Survey

ABSTRACT

This study sought to determine whether there was correlation between a superintendent's use of a transformational leadership and levels of collective teacher efficacy. Four research questions were answered in this study: Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' overall use of transformational leadership? Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of the five individual components of transformational leadership? Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of transactional leadership behavior? Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of passive-avoidant leadership?

All superintendents in Oregon were invited to participate in the research through the Multifactor Leadership Questionnaire (79 responded). Collective teacher efficacy (CTE) was measured using a selected subset of questions from the 2023 Oregon Statewide Educator Survey and 34 districts with response overlapped with the superintendent respondents. Findings showed a statistically significant correlation between transformational leadership overall and CTE, and specifically with the transformational leadership subcomponents of intellectual stimulation and individualized consideration. This research has implications for leadership development, administrative licensure, and superintendent hiring and evaluation practices. Future research should explore the validity of a constructed CTE scale as well as qualitative analysis of the link between transformational leadership and CTE as found in this research.

CHAPTER 1

INTRODUCTION

One may wonder if leadership matters in education. More precisely, they may wonder if the school district superintendent's leadership matters. When school boards hire superintendents, there is usually significant fanfare about how the new district leader is going to impact student learning and boost achievement (Björk & Kowalski, 2005; Waters & Marzano, 2006). Many new superintendents have claimed they will impact students by unpacking student data, creating a culture of high expectations, or implementing specific instructional practices (Hattie, 2009; Waters & Marzano, 2006). The reality, however, is few people have known what the superintendent can do that tangibly impacts the students in the classroom.

Background

Superintendent

Although the position of superintendent dates to the 1830s, the role of the district leader has evolved over time and has been described by key research from Callahan (1966) and Kowalski (2005, 2013). Callahan defined four successive typologies of the superintendent. He described the earliest superintendents as teacher–scholars. This role then transitioned to that of a business executive in the earliest part of the 20th century, followed by the role of democratic leader or educational statesman through much of World War II, and lastly the role of applied social scientist which developed in the 1950s and 1960s. More recently, in Kowalski's (2013) seminal work on the superintendency, a fifth typology was added, that of the superintendent as communicator.

Callahan's (1966) report concluded by theorizing the superintendent as applied social scientist would become the predominant role for the foreseeable future. Although Kowalski (2005, 2013) theorized all roles are necessary for a contemporary superintendent, in many ways, Callahan's assertion was borne out in the continued emphasis on the role of superintendents as implementers in a modern era of accountability focused on student achievement (Bell, 2019; Feuerstein, 2013).

Student Achievement

If the primary job of the school superintendent, and school districts overall, is to improve student achievement, it is important then to understand what it is and what has a positive impact on it. Student achievement refers to the individual and collective educational attainment of students (Hattie, 2009). This is often reflected in individual student grades or standardized test scores. Student achievement was widely studied in the 21st century, facilitated by the accessibility of data, computer aided statistical analysis, and contemporary social sciences (Hattie, 2009). School leaders have access to a wealth of information regarding student achievement and the research-based practices that impact it.

Hattie's (2009) seminal meta-analysis altered the nature of education in the United States by providing a comprehensive review of hundreds of studies on educational practices and how they impact student learning. Hattie's analysis demonstrated, and updated research has continued to confirm (Corwin, 2021; Visible Learning, 2018)—those educational practices with the highest impact on student achievement are those that exist closest to the classroom and within the teacher domain. Specifically, this analysis

showed collective teacher efficacy (CTE) has either the greatest or second greatest impact on student achievement (Eells, 2011; Hattie, 2009; Visible Learning, 2018).

Collective Teacher Efficacy

CTE refers to the concept that the teachers in a school collectively believe they are effective and can make a difference for students (Bandura, 1997; Eells, 2011). The theory is derived from Bandura's (1977, 1997) work on the theory of self-efficacy in which he found a team's collective confidence leads to greater success or effectiveness of the team. Bandura (1977) outlined four components to collective efficacy: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Several studies, notably those from Goddard et al. (2000), Eells (2011), Donohoo (2017), and Donohoo et al. (2018), applied the theory to the educational setting and all showed that as a team's belief in its own effectiveness increased, so did student achievement.

Given the significant impact that collective efficacy has on student achievement, it is important for district leaders to understand the ways in which they can impact this antecedent to success. Early research was mixed on the impact that building principals have on CTE (Dussault et al., 2008; Leithwood et al., 2010; Pierce, 2014); however, recent studies have shown the conditions under which leaders can foster it (Donohoo, 2017; Dussault et al., 2008; Meyer et al., 2020). One study suggested that leaders can impact collective efficacy by creating the conditions for (a) a nonthreatening, evidence-based instructional climate; (b) a culture of collaboration focused on meaning and impact, goals and progress; (c) a focus away from task-related concerns and on overall impact; and (d) a cultural expectation of collaboration that entrusts teachers to conduct frequent

and productive collaborations as a way of learning from each other (Donohoo et al., 2018).

Transformational Leadership

The question for superintendents, then, is what behaviors they can adopt or model that would positively impact CTE similar to principals. There has been a limited body of research on the impact that superintendents have on efficacy and student achievement. In Hattie's (2009) meta-analysis, there was no reference to school district leadership. However, one notable meta-analysis on the impact of superintendents by Waters and Marzano (2006) found successful leadership teams focus on five goal-oriented efforts: collaborative goal setting; nonnegotiable goals for achievement and instruction; board alignment and support of district goals; monitoring goals for achievement and instruction; and the use of resources to support achievement and instructional goals (Waters & Marzano, 2006). Their study was primarily a compilation of qualitative studies; thus, the findings are limited. However, it does provide a useful guidebook for understanding effective leadership. As a result, superintendents often look to budgeting, strategic planning, goal setting, and other political aspects of the position when intending to impact student achievement. But superintendent leadership can, and should, also be considered within the scope of academic leadership theories. One such theory is worthy of review in this area: transformational leadership.

Transformational leadership theory is not a single discrete model of leadership such that someone is either transformational or not transformational (Bass, 1985; Bass & Avolio, 1993; Burns, 1978). Rather, transformational leadership, as originally presented by Burns (1978) and later significantly refined by Bass (1985), is a theory for

understanding all leadership behaviors on a continuum. Leader behavior is measured and placed on a scale with pure transformational leadership on one end, transactional leadership in the middle, and laissez-faire on the other end (Northouse, 2019).

Transformational components are idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Avolio et al., 1999; Northouse, 2019). Transactional leadership is associated with contingent reward and management by exception and a laissez-faire style is simply the absence of leadership (Avolio et al., 1999; Northouse, 2019). Unlike traditional leadership theory focused on leader traits or qualities, transformational leadership focuses on leader behaviors and on the relationship between leaders and followers as a way of creating positive change in individuals and organizational systems (Avolio et al., 1999; Northouse, 2019).

Gaps in the Research

Although limited studies have focused on the leadership behaviors of superintendents, a few studies found that transformational leadership appears to be the predominant adopted leadership style (Bird & Wang, 2013; Fenn & Mixon, 2011). However, these studies stopped short of analyzing the relationship to collective efficacy. Dussault et al. (2008), studying principal use of transformational leadership, did find a positive correlation between the transformational leadership components of idealized influence and individual consideration and collective efficacy.

Tenets of transformational leadership are aligned to organizational improvement in noneducational sectors (Eagly et al., 2003; Nam & Park, 2019), and transformational leadership has proven to be an impactful leadership model when implemented by school-level leaders (Dussault et al., 2008; Metz et al., 2019). Superintendents are often charged

by boards with the challenge of directly impacting student achievement. Yet, studies have focused mostly on superintendent leadership in the abstract or in understanding the impact on overall district effectiveness (Bird & Wang, 2011; Björk & Kowalski, 2005; Waters & Marzano, 2006). Although many superintendents expressed an adoption of transformational leadership styles, limited research examined the impact of such leadership behaviors on research-based practices that directly impact student achievement.

Problem Statement

Seminal research on education and student achievement has lacked a focus on the impact of district superintendents; research that does exist has reported findings on the impact of a superintendent on overall district operations and board/superintendent relationships (Bird et al., 2013; Bird & Wang, 2011; Hattie, 2009; Visible Learning, 2018; Waters & Marzano, 2006). Most education research examined the effect that individuals much closer to the classroom have on student achievement, such as teachers and the programs teachers implement (Hattie, 2009; Visible Learning, 2018). Thus, although there is a lack of knowledge about the way superintendents impact students, understanding the ways superintendents influence teachers is important for unlocking the potential of district leaders to positively impact student achievement. Through this research study, I aimed to understand the impact of superintendents on students by examining the relationship of superintendent leadership to collective efficacy of teachers.

Purpose of the Study

The purpose of this study was to understand the degree to which transformational leadership has been used by school superintendents and determine if it was correlated

with higher levels of CTE. Additionally, this study sought to determine the level of correlation between CTE and the individual components of transformational, transactional, and laissez-faire leadership.

Research Questions

One may wonder if superintendents are effectively applying transformational leadership practices, whether these practices can be identified at the classroom level, and if they impact CTE. Therefore, the purpose of this study was to understand the degree to which transformational leadership has been used by school superintendents and determine if it was correlated with higher levels of CTE. As such, the research questions answered in this study were:

1. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' overall use of transformational leadership?
2. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of the five individual components of transformational leadership: idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual stimulation, and individualized consideration?
3. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of transactional leadership behavior?

4. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of passive–avoidant leadership?

Methodology

The study primarily focused on two variables, one independent and one dependent variable. Superintendent leadership, the independent variable in this study, is the level of transformational leadership exhibited by the superintendent as measured by the Multifactor Leadership Questionnaire (MLQ). CTE, the dependent variable in this study, was the level of CTE exhibited in a district as measured by a constructed scale developed from a subset of questions on the Oregon Statewide Educator Survey (OSES). The population studied in this research was the total population of superintendents in Oregon and the districts they lead. In Oregon at the time of this study, there were 197 school districts and slightly fewer superintendents as a small handful of districts designated the local education service district as the superintendent of record or share a superintendent with another district.

The nationally normed MLQ was used to measure transformational leadership in superintendents (Avolio & Bass, 2004). The questionnaire is a leading tool used by researchers when studying transformational leadership. The MLQ was developed to measure and assess leadership styles and has been widely used and refined over more than 35 years (Avolio & Bass, 2004). The MLQ is used in direct application to support leadership and as a research tool. The survey was self-administered through an online survey instrument distributed to all current school district superintendents in Oregon.

To determine the level of CTE in a school district, an index was developed using a series of questions from the OSES. The survey was comprised of questions covering a wide variety of areas of a teacher's working conditions. Questions from the OSES were compared with questions from the short CTE survey developed by Goddard (2002). This cross mapped matrix was reviewed by a selected sample of educators and leaders for validity. The final collection of questions formed the constructed OSES-CTE framework used to measure CTE in Oregon school districts. These two datasets composed the independent and dependent variables for this research. The data on superintendent leadership were also analyzed independently of CTE data to understand the level of transformational leadership exhibited by school district superintendents.

Significance of the Problem

Everyday superintendents grapple with how best to serve their students and their community. They make decisions about budgets, strategic plans, goal setting, and personnel. The type of leadership they exhibit may influence the advancement of student achievement. This study has the potential to further understand the significance of the role of superintendent as transformational leader, expanding Callahan's (1966) and Kowalski's (2005) leadership typology.

The results of this study can be used to help design and implement more effective professional development. This study was conducted in conjunction with aligned research on school board behaviors and their impact on fostering transformational leadership in superintendents. Research in this field could influence board–superintendent relationships and provide insight into the development of a more impactful leadership model in

districts, creating a through-line leadership approach from the board to the superintendent, to the classroom teacher, and to the student.

Definitions

Transformational Leadership

For this study, transformational leadership refers to the spectrum of leadership described by Avolio and Bass (2004), incorporating traits of transformational, transactional, and laissez-faire leadership.

Superintendent

A superintendent is the highest-level employee of a public school district. Employed by a local school board, the superintendent serves as the chief executive of the school district (Björk & Kowalski, 2005).

Collective Teacher Efficacy (CTE)

For this study, CTE refers to the notion that all teachers in a school or school district believe they are effective and can successfully impact student learning. The construct is derived from Bandura's (1977, 1993) seminal research and theory on efficacy.

Student Achievement

Although there are many definitions of student achievement, for this study, this term refers to standardized outcomes of the education system, including graduation rates and scores on standardized tests in math and language arts (Hattie, 2009).

Delimitations

This study had several delimitations that should be noted. A delimitation refers to a decision made by the researcher to limit the scope of the research design that may limit

applicability beyond the specifics of the study (Creswell & Creswell, 2018). This study was first limited by the population studied. The research sought to understand superintendent leadership but was limited in scope to the population of superintendents in the state of Oregon. As school districts in each state are defined by that state's governing laws, so too is the role of superintendent and may vary slightly or evenly significantly from one state to the next. Further, leadership turnover poses a significant delimitation on the results of this study. Since March 2020, nearly half of all superintendents in the nation's 500 largest districts left their positions (Blad, 2023; ILO Group, 2022). Given the noted high turnover of school district superintendents, it is possible that the impact of shorter tenured superintendents on their teaching corps was limited.

Further, superintendents were asked to self-evaluate their leadership behaviors using the leader form of the MLQ. The MLQ includes a rater form used for followers to evaluate their leader's behaviors; however, this section of the MLQ was not used in this study. Lastly, for evaluating CTE, a metric was generated from the results of the OSES instrument. This metric may fail to capture an accurate reflection of CTE in a school district and further research on this method should be conducted.

Organization of the Study

A review of current and seminal literature related to superintendents, student achievement, CTE, and transformational leadership is contained in Chapter 2. The methodology used for the study is detailed in Chapter 3. Chapter 4 contains the findings of the research, including descriptive and inferential data analysis. Chapter 5 concludes the paper with a discussion of results, interpretation, and integration into the existing field of research, along with a discussion of implications and limitations.

CHAPTER 2

LITERATURE REVIEW

A driving question in public K–12 education for decades has been how schools and school districts impact student achievement. School district leaders have constantly struggled to find ways to make a meaningful impact on student achievement (Chingos et al., 2014). Superintendents have represented the pinnacle of district leadership, and although influential and important, this position has been often organizationally distant from the student and the classroom (Callahan, 1966; Kowalski, 2013). It is, however, a key position for district success, and the superintendent is often the person who is held accountable for the successes and failures of a school district (Björk et al., 2014; Björk & Kowalski, 2005; Henrikson, 2018; Kowalski, 2013). Thus, the question remains of how district superintendents can meaningfully impact student outcomes.

The field of leadership studies can provide insight and potential for understanding how school district leaders can impact student achievement. Leadership studies have shown the many ways in which organizational leaders can impact followers (Northouse, 2019). For school districts then, understanding the role of the superintendent, the impact a superintendent can have on followers in the district, and how those factors impact student outcomes has been a key line of study.

Superintendent

The role of superintendent dates to the 1830s when an era of rural consolidation and urban growth took place that demanded a greater level of managerial oversight (Callahan, 1966; Henrikson, 2019; Kowalski, 2005). The early incarnations of the superintendency varied from clerical support of local education boards, managerial

functions to support the growth of a public agency, to community leadership akin to elected representatives (Callahan, 1966; Henrikson, 2019; Kowalski, 2005). The primary role of these early superintendents, however, was in implementing a common school or common cultural paradigm; they were responsible for essentially assimilating students into U.S. culture in a country experiencing rapid urbanization and significant immigration (Callahan, 1966; Henrikson, 2019; Kowalski, 2005).

The school superintendent can generally be described as filling five roles that developed over time from these initial positions in the 1800s. Kowalski (2005) listed these five roles, drawing the first four from Callahan's (1966) description of the development of the superintendent and adding a fifth role. Callahan defined the first four roles through an historical analysis of the superintendency and viewed the roles as chronological in their evolutionary growth. He described the earliest superintendents as teacher–scholars, with the role transitioning to that of a business executive in the earliest part of the 20th century, followed by the role democratic leader or educational statesman through much of World War II, and lastly the role of applied social scientist which developed in the 1950s and 1960s (Callahan, 1966). Kowalski, relying on this historical account, added the role of superintendent as communicator and theorized that the contemporary superintendent combines all five roles with no single role being relegated to irrelevance.

The concept of superintendent as teacher–scholar found its roots in the role of public education in creating a common school movement (Callahan, 1966; Henrikson, 2019; Kowalski, 2005). In this role, the superintendent was responsible for overseeing the implementation of early state curriculum standards that were generally focused on

assimilating rural and immigrant students into U.S. culture of the time. In many ways, this role was akin to a master teacher, where the superintendent spent much of their time training teachers on the implementation of centralized curricular demands. The superintendent as manager was developed as urban school systems increased in size and complexity, in many ways mirroring the industrial revolution taking place in the United States, and thus demanding a greater emphasis on resource management (Callahan, 1966; Kowalski, 2005).

In many ways, this role was perceived in opposition to the role of the superintendent as teacher–scholar with ever larger school districts even beginning to break these responsibilities into multiple positions. Kowalski (2005) wrote, "Experienced practitioners recognize that many of their leadership attributes become insignificant when budgets are not balanced, school facilities are deemed not to be safe, and personnel problems routinely result in litigation" (p. 7). Currently, in larger districts, people often see dual deputy superintendent roles in districts with one filling an instructional role and the other filling a managerial role (Beaverton School District, 2020). The tension for a superintendent to focus on either instructional or managerial leadership has remained, but leaders must seek to find a balance between these competing demands.

The superintendent as democratic leader conceptualizes a superintendent as a political participant (Kowalski, 2005). Callahan (1966) described this role as arising out of a rejection of the managerial focus and beginning to value community connection to a greater degree. Initially described as an educational statesman, Kowalski (2005) referred to the role as a democratic leader, deemphasizing the aristocratic nature of the term statesman and instead viewing the role as a political strategist. This placed an emphasis

on community-minded leadership that worked to develop public support for education systems and common vision and goals. This role was in many ways an outgrowth of the decentralization and deregulation of education that was occurring contemporaneously (Callahan, 1966; Kowalski, 2005).

The last of Callahan's (1966) role conceptualizations was the superintendent as applied social scientist. This role grew out of a growing discontent with the role of democratic leadership more broadly as it was seen as too idealistic and needed more practicality in organizational settings. However, perhaps more influential was the significant growth in the field of social sciences in the post-World War II expansion of academia (Callahan, 1966; Kowalski, 2005).

Regarding school superintendents, Davies (1951, as cited in Callahan, 1966) wrote, "Any good physical scientist has his theory or theories to guide him in research and decision making. But administrators are still, comparatively, operating at the alchemist stage" (p. 221). Davies was referring to the need and growth of social science research. This rapid expansion can also be seen in the Kellogg Foundation's investment of over $7 million (nearly $80 million in 2021 inflation adjusted dollars) to a number of universities to support research in school administration (Callahan, 1966; Kowalski, 2005). The fifth role conceptualization of a superintendent was added to the first four by Kowalski (2005), describing the superintendent as a communicator. Although communication was traditionally viewed as a skill, it varied based on the role conceptualization of the superintendent. Where a focus on managerial roles requires one type of communication skill, a focus on democratic leadership requires a different communication style and skill.

However, this fifth conceptualization described communication not as a skill but as a role; that is, communications was seen as a predominant role characterization for modern superintendents (Kowalski, 2005). This was an outgrowth of the shift in U.S. society to the information age and the volume of information available to communities at all times. Additionally, combined with an accountability emphasis in education focused both on achievement data and strategic planning, a superintendent has been often viewed as the conduit between communities and education systems that is fundamentally distinct from the aristocratic education statesman as Callahan (1966) described (Björk et al., 2014; Kowalski, 2005; Melton et al., 2019; Waters & Marzano, 2007).

Callahan's (1966) report ended by theorizing that the superintendent as applied social scientist would be the predominant role of the superintendent for the foreseeable future, while Kowalski (2005) combined and expanded to theorize that all roles were necessary for a superintendent. In many ways, Callahan's assertion was borne out in the continued emphasis on the role of superintendents as implementers in a modern era of accountability (Bell, 2019; Feuerstein, 2013; Kowalski, 2005, 2013). Current superintendents have been expected to increase student achievement and have been generally held accountable for doing so (Bell, 2019; Feuerstein, 2013; Kowalski, 2005, 2013). The confluence of the maturity of social science research in education and the information age created an opportunity for superintendents to better understand the elements that impact student achievement (Henrikson, 2019; Kowalski, 2005).

Student Achievement

Student achievement has been widely studied in the 21st century, facilitated by the accessibility of data, computer aided statistical analysis, and contemporary social

sciences (Hattie, 2009). School leaders have access to a wealth of information regarding student achievement and the research-based practices that best impact it. Hattie's (2009) meta-analysis altered the nature of education in the United States by providing a comprehensive review of hundreds of studies on educational practices and how they impact student learning. His analysis focused on categorizing educational practices within domains based on where their contribution came from—the student, the home, the school, the teacher, and the curricula—so studies in each of these areas could be analyzed and compiled to create statistically valid understandings about the impact that each educational practice has on student outcomes (Hattie, 2009). Essentially, each practice would be summarized and the studies for each would be compiled through statistical analysis. A practice would be rated on whether it had desired effects, teacher effects, developmental effects, or reverse effects on achievement. Desired effects were those practices that added to student learning beyond a base effect. Reverse effects at the other end of the scale are practices that detracted from student learning.

Hattie's (2009) analysis demonstrated, and updated research has continued to confirm, that those educational practices that have the highest impact on student achievement are those that exist closest to the classroom and within the teacher domain (Corwin, 2021; Visible Learning, 2018). When originally published, Hattie's analysis revealed collective teacher efficacy (CTE) had the absolute highest impact on student achievement; subsequently, the analysis was updated to include additional studies and show teacher estimates of achievement surpassed CTE as the highest effect size (Corwin, 2021). In either case, the teacher in the classroom was the primary driver of student achievement.

Collective Teacher Efficacy

CTE has been consistently shown to have the highest impact on student achievement (Corwin, 2021; Hattie, 2009; Visible Learning, 2018). CTE refers to the concept that the teachers in a school collectively believe they are effective and can make a difference for students (Donohoo, 2017; Goddard et al., 2000). The theory was derived from Bandura's (1977) work on the theory of self-efficacy in which he found that a team's confidence in itself resulted in greater success or effectiveness of the team. This finding led to several studies applying the theory to the educational setting that all showed as a team's belief in its own effectiveness increased, so did student achievement (Donohoo, 2017; Donohoo et al., 2018; Eells, 2011; Goddard et al., 2000; Goddard & Goddard, 2001; Hattie, 2009).

Bandura's (1977, 1982) theory on self-efficacy and collective efficacy includes four elements: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Performance accomplishments, or mastery experiences, are past actions that will inform one's belief about how they will perform in the future (Bandura, 1977, 1982). Success in task performance will improve mastery expectations whereas failure, particularly early failure, will lower expectations. Mastery experience has consistently proven to have the strongest impact on self-efficacy belief. Vicarious experience refers to observing performance accomplishment performed by others. It is a form of learning from modeling that provides one with a sense of mastery, albeit not as strong as self-performance (Bandura, 1977, 1982). Verbal persuasion is training, mentoring, and coaching, and is often the easiest to deploy organizationally (Bandura, 1977, 1982). Lastly, emotional arousal, or one's affective and physiological state, refers

to the level of stress and agitation someone is in when learning or performing a task (Bandura, 1977, 1982). The higher the level of stress, the less likely one perceives a high level of self-efficacy to perform the task. Further, high levels of negative arousal or stress can increase avoidance behaviors; thus, reduction of stress and/or the creation of a positive affective state can increase engagement by increasing individuals' sense of self efficacy (Bandura, 1977, 1982).

Focusing on the educational setting, Bandura (1993) looked at the impact that various items have on student achievement. Primarily focused on the value and role of self-efficacy, he described in greater detail the role and impact of collective efficacy. Noting teachers in a school do not operate in isolation and although they can and do individually impact students, the overall achievement level is impacted by the whole school system. Bandura (1993) best summarized the two sides of collective efficacy beliefs by stating:

> Schools in which the staff collectively judge themselves as powerless to get students to achieve academic success convey a group sense of academic futility that can pervade the entire life of the school. School staff members who collectively judge themselves capable of promoting academic success imbue their schools with a positive atmosphere for development. (p. 141)

His research was some of the earliest quantitatively outlining the impact that collective efficacy has on achievement. Further, Bandura noted a collection of variables that highlighted the interdependence of the school system with some variables, such as socioeconomic status of the student body having a negative impact on achievement, and others, such as prior academic achievement having a positive impact.

Bandura (1993) placed collective efficacy as the immediate variable preceding achievement such that most other variables directly impacted collective efficacy rather than directly impacting achievement. In his analysis of the variables impacting student achievement, Bandura reviewed prior academic achievement, student body composition, teaching longevity, and socioeconomic status of the student body and the impacts each had on the central path. Bandura's central path theoretical framework found student body composition impacted prior academic achievement, impacting collective efficacy, which combined to impact academic achievement. Notably, from Bandura's work, so-called adverse student body characteristics (primarily low socioeconomic status) have shown the greatest negative impact on collective efficacy, perhaps imparting a jaundiced view of whether the teachers can impact students. Conversely, prior academic achievement positively impacted CTE, likely supporting teacher beliefs in their ability to impact achievement.

The research foundation for the role of CTE impacting student outcomes has been robust and includes validated measurement instruments, tools for practice and improvement, and it has been widely accepted as one of the best practical methods for improving student achievement (Donohoo, 2017; Donohoo et al., 2018; Eells, 2011; Goddard et al., 2000; Goddard & Goddard, 2001; Hattie, 2009; Kurz & Knight, 2004; Tschannen-Moran & Barr, 2004). Although CTE has been regarded as a high value strategy for improving student achievement, it is important to understand the role leadership can play in supporting and improving collective efficacy.

Leadership Influence on CTE

In attempting to better understand the impact of district leadership on factors with the highest impact on student achievement, such as CTE, it is instructive to look at the role building leadership plays and the impact on the teacher. Principal leadership has been widely studied, and in fact, many studies have drawn a direct link between principal leadership and CTE (Donohoo et al., 2018; Dussault et al., 2008; Leithwood et al., 2010; Mayes & Gethers, 2018; Meyer et al., 2020; Ninković & Knežević Florić, 2018; Nordick et al., 2019; Prelli, 2016).

Initial studies in this area were mixed in their results indicating that building leaders had little impact on collective efficacy (Fancera & Bliss, 2011; Leithwood et al., 2010). Leithwood et al. (2010) hypothesized achievement was impacted by four paths: rational, emotional, family, and organizational. Their study found the family path had the greatest impact on achievement and the organizational path the least, and that principals primarily impacted the organizational path. However, as they noted in their limitations, the variables they chose to examine related to principals and the organizational path (i.e., instructional time and professional learning communities) were limited. They believed research on leadership and the impact on student achievement was overly broad and should instead, focus on specific aspects of leadership practice to test those most influencing the intermediary variables that play the greatest role on achievement, such as collective efficacy.

CTE requires a culture of success and collaboration that creates a heightened expectation of achievement thereby creating greater self-efficacy among individual teachers (Donohoo et al., 2018). Put succinctly, “[W]hen efficacy is present in a school

culture, educators' efforts are enhanced—especially when they are faced with difficult challenges. Because expectations for success are high, teachers and leaders approach their work with an intensified persistence and strong resolve" (Donohoo et al., 2018, p. 42). Donohoo et al. (2018) suggested leaders can impact this by creating the conditions for the following:

- a nonthreatening, evidence-based instructional climate;
- a culture of collaboration, focused on meaning and impact, and goals and progress;
- a focus away from task-related concerns and on overall impact concerns; and
- a cultural expectation of collaboration that trusts teachers to conduct frequent and productive collaborations to learn from one another.

Further, empirical study found a strong link between a theory of instructional leadership supporting CTE and student achievement (Goddard et al., 2015). The study looked at the impact strong principal leadership has on teacher collaboration and successively, the impact teacher collaboration has on CTE, and student achievement. In this case, the stronger the rating of instructional leadership, the stronger the rating of collaboration. This movement in research to focus a greater effort on specific leadership tasks and behaviors revealed that principal leadership significantly impacts factors leading to higher levels of collective efficacy. These findings are intuitive, given the role collaboration can play in both mastery experiences as well as vicarious experiences; two of the primary components of self and collective efficacy (Bandura, 1977). The question for superintendents, then, is what behaviors or model would impact CTE similar to principals.

Leadership

Superintendent Leadership

Limited research has focused on the direct relationship between superintendents and student achievement. Hattie's (2009) work and subsequent updated research using his methodology (Corwin, 2021; Visible Learning, 2018) did not even include a reference to school district superintendents. Some studies have attempted to find a statistical correlation between superintendents and student achievement and indicate a modest impact (Bird et al., 2013; Björk et al., 2014; Waters & Marzano, 2006). Numerous studies have analyzed the role of budgeting in superintendent leadership strategies (Bird, 2010, 2011; Bird & Wang, 2011; Waters & Marzano, 2006). These studies have primarily pointed to the effectiveness of resource alignment, where a district's budget is aligned to the strategic and instructional priorities of the district.

Waters and Marzano (2006), conducting a meta-analysis of research on district leadership, found a statistically significant relationship between district leadership and student achievement. Their review of 27 studies revealed 14 that reviewed the relationship between district leadership and student achievement. They found district leadership could account for a nearly 10 percentage point increase or decrease in achievement. Additionally, they found five specific leadership responsibilities with a positive impact on student achievement. Waters and Marzano (2006) found successful leadership teams focus on the following goal-oriented efforts:

- Collaborative goal setting, or the inclusion of all stakeholders, principals, teachers, board members, and the community in the district's goal setting process, not necessarily out of a desire for consensus but rather a desire for

inclusion as goals to be developed should be the nonnegotiable goals of the district.

- Nonnegotiable goals for achievement and instruction, developed from a collaborative process, are goals to which all staff must adhere. They should be achievement targets for the district as a whole as well as individual schools or subpopulations. Instructional goals are not district-adopted curriculum or a single required instructional model, but rather a common framework, language, and strategy set that is broad and inclusive. Additionally, all principals support and align toward the nonnegotiable goals.
- Board alignment and support of district goals where the board is explicit in support for the developed goals through adoption of a multiyear strategic plan that is inclusive of the goals for achievement and instruction is needed, and the board keeps these goals as the top priority for district governance avoiding distraction from other initiatives that might come forward.
- Monitoring goals for achievement and instruction with the superintendent continuously reviewing progress at the district and school level is needed. Individual schools not making progress are reviewed for alignment with instructional goals as well as individual teachers. Any practices that are divergent from current goals should be viewed for change or elimination to ensure progress.
- Use of resources to support achievement and instruction goals is the final responsibility, with superintendents ensuring a meaningful resource allocation supports implementation of the goals for achievement and instruction.

> Additionally, resources should be devoted to professional development for teachers to ensure all have the necessary competencies and skills to achieve the district goals.

Waters and Marzano's (2006) meta-analysis relied primarily on doctoral dissertations; only 3 of the 27 studies included were published in peer-reviewed journals. However, given the lack of research on superintendent leadership and the impact on student achievement, the findings can be instructive while noting this significant limitation. Although limited in scope by the overall lack of peer-reviewed quantitative study in this area, this analysis provides a guidebook for understanding the link between superintendents and student achievement by focusing on tasks and responsibilities of the position.

Other studies focused more qualitatively on understanding the role of the superintendent and their impact on schools (Bird et al., 2013; Burns-Redell, 2013; Fenn & Mixon, 2011; Wright & Harris, 2010). A series of studies looked at superintendent leadership and the impact on school improvement practices (Bird et al., 2013; Bird & Wang, 2011, 2013). These showed a positive correlation between leadership and district improvement. The primary study looked at leader implementation of authentic leadership practices. However, in surveying superintendents, they found authenticity operated primarily as an antecedent to other leadership practices (Bird & Wang, 2011, 2013). This work provides a possible path for understanding leadership behaviors and their impact on schools, but it also indicated that transformational leadership may be an avenue for more effectively studying superintendent leadership behaviors.

Although most of the research focused on how the superintendent impacts the district through actions and behaviors, and although many consider the superintendent to be the pinnacle of school district leadership, it should be noted that most districts have been governed by a school board whose primary responsibilities were to hire and evaluate the superintendent and to approve the budget for the school district (Henrikson, 2019). Many studies have highlighted the role of school boards in impacting success in a school district, beginning with the Iowa lighthouse inquiry (Rice et al., 2001). Several other studies have looked specifically at board behaviors and have attempted to define the behavior set with the greatest positive impact on the district (Alsbury et al., 2018; Blissett & Alsbury, 2018; Dervarics & O'Brien, 2016; Rice et al., 2001). The research-based behaviors and characteristics are:

- a commitment to a vision that establishes high expectations for students,
- a shared belief that all students can learn and the system can facilitate it with effectiveness,
- a focus on system accountability rather than micromanagement of the superintendent,
- a collaborative relationship with the superintendent, community, and other stakeholders,
- a commitment to data-driven decision making,
- allocation of resources to align with the board's clear vision,
- a collaborative relationship with the superintendent and knowledge of their respective roles, and

- participation in their own professional development and training for continuous improvement.

Notably, many of these behaviors have appeared to share traits with the research-based best practice behaviors of superintendents as outlined by Waters and Marzano (2006). However, there has been a lack of research in understanding the role school boards play in impacting superintendents and understanding the influence of board behaviors on superintendent leadership as an intermediary variable to district success.

In general, most studies of school district superintendents have assumed that leadership behavior directly impacts student achievement. However, superintendents are several steps removed from the classroom and, as such, struggle to understand the strategies they can implement that impact student achievement (Björk et al., 2014; Björk & Kowalski, 2005; Hattie, 2009; Waters & Marzano, 2006). Superintendents often look to budgeting, strategic planning, goal setting, and other political aspects of the position, intending to impact student achievement (Alsbury et al., 2018; Bird, 2010, 2011; Bird & Wang, 2011; Melton et al., 2019; Packard, 2018).

Leadership Approaches

Superintendent leadership can also be understood through the application of academic leadership theory. Bird and Wang (2013) asked superintendents to self-identify their leadership model the resulting analysis showed a plurality of superintendents identifying transformational leadership as their adopted model. Additionally, several other studies of superintendent leadership have focused on the application of transformational leadership (Bird et al., 2013; Burns-Redell, 2013; Fenn, 2011; Klocko et al., 2019; Metz et al., 2019). As such, transformational leadership is the primary

leadership construct used for this study. However, it is worth exploring the other contemporary leadership approaches identified by superintendents in Bird and Wang's (2013) study and in other research on education leadership for further context.

Situational Leadership

Situational leadership was described by Bird and Wang (2013) as an adaptive model that shifts depending on the circumstance and was self-identified by just over a quarter of the respondents to their survey (25.25%). In their description of situational leadership, they noted, "The leader applies different patterns of behavior in response to the circumstances at hand" (Bird & Wang, 2013, p. 14). Hersey and Blanchard developed the situational approach in the 1960s and 1970s (Northouse, 2019). Northouse (2019) described the model, stating, "Effective [situational] leaders are those who can recognize what followers need and then adapt their own style to meet those needs" (p. 96). The evolved formal model of situational leadership II (SLII) divided leadership into four quadrants (Northouse, 2019). Each quadrant represented a different level of leadership behaviors and a different combination of supporting behavior or directive behavior. The four SLII leadership styles are directing, coaching, supporting, and delegating (Northouse, 2019).

Situational leadership has been commonly deployed in the private sector, often through consulting work as it is a useful, proscriptive path for developing leaders (Northouse, 2019). In fact, Graeff (1997) provided a critique of SLII leadership, noting that Hersey and Blanchard described SLII as an applied model of leadership rather than an academic theory of leadership. Further critiques of the model called out a lack of clarity in various terminology used, a lack of research-based evidence supporting the

scales and terms, and incongruence between scales (Blank et al., 1990; Fernandez & Vecchio, 1997; Graeff, 1997; Papworth et al., 2009).

No significant research exists on the application of situational leadership by either principals or superintendents; however, some studies have noted the application of situational leadership to the classroom setting (Meier, 2016; Raza & Sikandar, 2018). Meier (2016) found an increase in teacher effectiveness when situational leadership was applied in a blended learning environment. Another study found a measurable and positive impact on student learning when situational leadership was mapped to discrete teaching methods (Raza & Sikandar, 2018).

Servant Leadership

Superintendents in Bird and Wang's (2013) studies were found to identify with servant leadership almost as much as situational leadership (23.9%). Originating from Greenleaf in the 1970s, servant leadership prioritizes followers' needs and the leader's commitment to "be attentive to the concerns of their followers, empathize with them, and nurture them. Servant leaders put followers first" (Northouse, 2019, p. 227). Despite its longstanding existence, servant leadership only recently saw robust theory development, validation, and differentiation from other values-based leadership theories (Eva et al., 2019; Northouse, 2019).

However, defining servant leadership has been challenging; as van Dierendonck (2011) noted, "Despite its introduction four decades ago and empirical studies that started more than 10 years ago (Laub, 1999), there is still no consensus about a definition and theoretical framework of servant leadership" (p. 1229). Eva et al. (2019) discussed this in their meta-analysis of servant leadership research, hypothesizing that the undefined and

ever-changing nature of servant leadership theory for its first several decades inhibited valid research and, by extension, theory development. Northouse (2019) outlined the complexity of servant leadership, requiring three components: antecedent conditions, servant leader behaviors, and outcomes. The antecedent conditions (i.e., context and culture, leader attributes, and follower receptivity) allow for servant leadership behaviors such as conceptualizing, emotional healing, putting followers first, helping followers grow and succeed, behaving ethically, empowering, and creating value for the community (Northouse, 2019). Notably, creating value for an organization is not explicitly included.

Recent research has focused on distinguishing servant leadership from transformational leadership (Eva et al., 2019). Although both share many characteristics, the core difference lies in their goals. Transformational leadership aims to support and change the follower for the organization's benefit, whereas servant leadership focuses on supporting and changing the follower for the follower's benefit (Eva et al., 2019; van Dierendonck, 2011). This servant-first mentality has stabilized servant leadership studies and facilitated the development of measurement tools, allowing for empirical differentiation from other leadership theories (Eva et al., 2019; Irving & Longbotham, 2007).

In education, servant leadership has been studied for its impact. For instance, Black (2010) found servant leadership behavior positively correlated with school climate in an Ontario, Canada school district. Similarly, in Turkey, Cerit (2009) noted that principals' servant leadership traits, such as displaying authenticity and building community, positively impacted teacher job satisfaction.

Democratic Leadership

Another leadership model identified by superintendents in Bird and Wang's (2013) survey was democratic leadership. Bird and Wang described this model as one of inclusive leadership focusing on distributed and inclusive decision-making models. Democratic leadership, as described in this context, appeared to lack robust theory development or even foundational research. Yet, given how readily identified it was in Bird and Wang's study (15%), the concept warrants some further review. Bird and Wang provided no further definition of the concept beyond reference to inclusive practice; however, some literature is illustrative for this review.

One study referring to a concept of democratic leadership appears to align core behaviors with those described in Hollander's (2012) theory of inclusive leadership (Ch et al., 2017). Additionally, it appears to define democratic leadership primarily in contrast to the concept of autocratic leadership. Notably, Bird and Wang (2013) listed autocratic leadership as an option for self-identification, but this option was almost universally rejected by survey participants (1.99%). Ch et al. (2017) described core behaviors of distributed decision making, fostering an autonomous role for teachers, and opinion solicitation and feedback-seeking. Hollander's theory of inclusive leadership emphasized the symbiotic nature of the relationship between the leader and the follower. That is, inclusive leadership focuses on the process of relationship development with distributed or shared decision making and opinion seeking forming the backbone of this process (Hollander, 2012).

With limited studies on the application of democratic leadership in education, there is some value in reviewing the application of inclusive leadership. Such a review

notes a significant overlap between the use if inclusive leadership and an emphasis on social justice in public education (Rayner, 2009; Ryan, 2006; Theoharis, 2007; Wang, 2018). These studies have highlighted an increase in the emphasis on social justice and social justice reform by school leaders. Furman (2012) distinguished the interplay with social justice as emphasizing an end goal—equity and social justice—rather than simply organizational improvement.

Authentic Leadership

One additional concept, authentic leadership, is worthy of review for its mention in other studies in the context of education (Bird et al., 2013; Bird & Wang, 2013). In contrast to more concrete leadership theories, however, authentic leadership has been presented more as an approach to the application of leadership regardless of a specific theory (Bird & Wang, 2013; Walumbwa et al., 2008). Walumbwa et al. (2008) defined authentic leadership as consisting of four dimensions: self-awareness, relational transparency, balanced processing, and internalized moral perspective. Walumbwa et al. (2008) described an authentic leader as follows:

> Authentic leaders show to others that they genuinely desire to understand their own leadership to serve others more effectively (George, 2003). They act in accordance with deep personal values and convictions to build credibility and win the respect and trust of followers. By encouraging diverse viewpoints and building networks of collaborative relationships with followers, they lead in a manner that followers perceive and describe as *authentic.* (p. 96)

With this framework in mind, some research has focused on the role of authentic leadership (or authenticity) as a strategy to augment and enhance the effectiveness of a leader (Bird et al., 2013; Bird & Wang, 2013).

Each of these alternative leadership theories presents a deeper understanding of contemporary leadership. Although some show promise for positively impacting educators or the classroom (Black, 2010; Cerit, 2009; Meier, 2009; Raza & Sikandar, 2018), Bird and Wang (2013) still noted most superintendents have claimed to ascribe to transformational leadership. In addition, a wider body of research exists reviewing the application of transformational leadership in education, thus creating a more robust foundation for the theoretical framework of this study.

Transformational Leadership

In general, studies have pointed to the model of transformational leadership as the theory most applied by superintendents (Bird et al., 2013; Burns-Redell, 2013; Fenn, 2011; Klocko et al., 2019; Metz et al., 2019). Research into school and district leadership behaviors impacting the workplace or student achievement has shown alignment to some of the core principles of transformational leadership (Bryant et al., 2016; Burkman et al., 2019; Decman et al., 2018; Klocko et al., 2019; Leithwood & Azah, 2017; Meyer et al., 2020). Understanding transformational leadership and the ways that transformational leaders impact followers can be applied to and may influence superintendent effectiveness.

Transformational Leadership Theory

Transformational leadership is a model focused on the relationship between the leader and follower; it is centered on the connection that a leader can make with

individual followers to motivate them to exceed expectations (Bass, 1985, 2000; Bass & Avolio, 1993; Burns, 1978; Northouse, 2019). The concept of transformational leadership was originally developed in the 1970s by Burns (1978) and refined significantly in the 1980s by Bass (1985). Bass's work described transformational leadership existing in a continuum with transactional and laissez-faire leadership. The continuum concept imparts both a left–right construct and the notion that leaders can and do move back and forth across the continuum from transformational to transactional to laissez-faire (Northouse, 2019).

On the transformational end, leadership is considered effective, whereas on the laissez-faire end it is considered ineffective (Avolio et al., 1999; Bass, 1985, 2000; Bass & Avolio, 1993). Along this continuum, individual factors are aligned to each of the leadership styles. Idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration are components of transformational leadership (Avolio et al., 1999; Bass, 1985, 2000; Bass & Avolio, 1993). Contingent reward and management by exception are associated with transactional leadership. And lastly, nontransactional or nonleadership is what would be considered laissez-faire (Avolio et al., 1999; Bass, 1985, 2000; Bass & Avolio, 1993).

Transformational leadership has also been expressed through the work of Kouzes and Posner (2017). They provided an approach to leadership that is prescriptive in nature and intended to be used in an applied setting. They described the five practices for transformational leadership as (a) model the way, (b) inspire a shared vision, (c) challenge the process, (d) enable others to act, and (e) encourage the heart (Kouzes & Posner, 2017). In this approach, which was meant to be a way of making leadership

theory accessible, Kouzes and Posner emphasized behavior and practice as opposed to inherent ability. As they aptly said, “Leadership is an observable pattern of practices and behaviors, and a definable set of skills and abilities” (Kouzes & Posner, 2017, p. 302).

At its core, as the name would suggest, transformational leadership is about changing an organization and/or individuals. As summarized by Northouse (2019), “Transformational leadership is a process that changes and transforms people. It is concerned with emotions, values, ethics, standards, and long-term goals” (p. 163). Unlike traditional leadership theory that focused on leader traits or qualities, transformational leadership focuses on leader behaviors and on the relationship between leaders and followers as a way of creating positive change in individuals and organizational systems (Avolio et al., 1999; Bass, 2000; Burns, 1978; Eagly et al., 2003).

Further, research on transformational leadership was advanced by the identification of specific leadership factors studied through the use of a Multifactor Leadership Questionnaire (MLQ; Avolio et al., 1999; Avolio & Bass, 2004). The development of a questionnaire allowed research to progress in a formal, structured, and comparable manner (Northouse, 2019). Additionally, the MLQ allows for the evaluation of the exhibited leadership style of a leader regardless of the self-identified model (Avolio & Bass, 2004). Leadership behaviors, in many ways, are universal in that behavior is not defined by a singular theory of leadership and theories of leadership describe behaviors that are manifested by leaders (Northouse, 2019). The development of the MLQ allowed for identification and evaluation of leadership behaviors in alignment with the transformational leadership continuum and thus comparisons across leaders and analysis for possible correlation with dependent variables (Avolio & Bass, 2004).

Transformational Leadership in Education

Many studies have found the role of the superintendent impacts student achievement through their use of a variety of tools and strategies including budgeting, strategic planning, or other top level leadership practices (Bird & Wang, 2011; Chingos et al., 2014; Waters & Marzano, 2006). In the changing environment of public schools today, leaders have been increasingly challenged to connect and impact a progressively diverse and socially aware student body and, as such, traditional trait-based leadership models may not be ideally suited for the demands of the position (Bird et al., 2013; Ryan, 2006; Theoharis, 2007; Wang, 2018).

Although studies on the leadership styles present in education have been numerous, research into the predominant leadership styles of school superintendents has not been. This has made it difficult to truly catalog or quantify the number of leadership models exhibited. In one study that incorporated a survey of superintendents across a number of southeastern states, Bird and Wang (2011, 2013) discovered a distribution of self-identified leadership styles across four models: democratic, situational, servant, and transformational. Transformational leadership was the top identified leadership style with 32% of respondents identifying as such. These self-identified models are not further validated with observational analysis or evaluation from subordinates or peers but do serve as a basis of understanding for what is likely a similar distribution of leadership beliefs across superintendents.

A study of Texas superintendents approached the question differently. Rather than asking superintendents to self-identify their chosen leadership style, the MLQ was administered to a large sample of superintendents (Fenn & Mixon, 2011). The study

found that superintendents generally rated highly on the MLQ assessment of transformational leadership, with mean scores for each of the questions on the MLQ between 3.86–4.83. The study sought to find a correlation between transformational leadership scores and several demographic components (i.e., years as a superintendent, size of district, years of teaching experience, and years of principal experience). Notably, the study found no statistical significance between these factors and transformational leadership. No analysis of transformational leadership and student outcomes was conducted, nor was any analysis of items such as collective efficacy. Further studies of superintendent leadership have corroborated the identification of transformational leadership as the primary style of leadership exhibited by superintendents (Burns-Redell, 2013; Klocko et al., 2019; Metz et al., 2019).

In the education setting, as noted previously, transformational leadership has appeared to be the most prominent leadership theory adopted by superintendents (Bird et al., 2013; Bird & Wang, 2011; Burns-Redell, 2013; Fenn & Mixon, 2011; Klocko et al., 2019; Onorato, 2013). Based on the volume of studies reviewing the impact of transformational leadership by school principals and the positive impact of this style on CTE, a reasonable assumption can be drawn that it is the dominant leadership theory exhibited at the building level, as well (Bryant et al., 2016; Dussault et al., 2008; Metz et al., 2019; Ninković & Knežević Florić, 2018; Onorato, 2013; Windlinger et al., 2020).

With a few notable exceptions, limited studies of the use of transformational leadership by district superintendents have existed (Bird & Wang, 2013; Fenn & Mixon, 2011). Thus, to assess the impact of transformational leadership, studies of school principals can be informative. From these studies, one can draw a strong link between

transformational leadership and teacher effectiveness. More specifically, it appears that transformational leadership can create a greater sense of belonging and trust in the school, which in turn fosters self- and collective efficacy among teachers (Dussault et al., 2008; Meyer et al., 2020; Ninković & Knežević Florić, 2018; Nordick et al., 2019). Thus, with the definitive research showing CTE directly and positively impacts student achievement it is reasonable to extrapolate that transformational leadership from principals impacts student achievement through the intervening effects of CTE (Donohoo, 2017; Donohoo et al., 2018; Visible Learning, 2018; Windlinger et al., 2020).

In one study that focused on the individual components of transformational and transactional leadership, a high level of correlation was shown between the components of transformational leadership and teacher's self-identified level of collective efficacy (Dussault et al., 2008). The study showed the highest correlation between collective efficacy and the transformational leadership components of idealized influence and individual consideration. It also noted a negative correlation between collective efficacy and laissez-faire leadership, further highlighting the role that effective leadership can have on collective efficacy by showing the negative impact that the absence of leadership can have.

As Dussault et al. (2008) said, "A principal with charisma [idealized influence] can show the way to success and help teachers to structure their activities in such a way that the group of teachers will experience success" (p. 407). In addition, the study showed an additive impact for transactional behaviors when exhibited by a transformational leader. That is, contingent reward generated a higher correlation with collective efficacy when the teacher rated the principal high with components of transformational leadership.

This study on the additive nature of the transformational leadership continuum provided greater context for testing the theory in a school setting, particularly as it relates to collective efficacy (Bass & Avolio, 1993; Dussault et al., 2008).

Another study looked at the impact of transformational leadership on teacher self and collective efficacy but broke down the impact based on leader proximity (near and far) to the teacher (Windlinger et al., 2020). This study further split transformational leadership components into two categories: group focused or individual focused transformational leadership. Idealized influence and inspirational motivation were considered group focused whereas intellectual stimulation and individualized consideration were considered individual focused. This allowed the researchers to use a dual effects model to test the impact of group focused behaviors on collective efficacy and individual focused behaviors on self-efficacy.

Windlinger et al. (2020) affirmed previous findings that transformational leadership has a positive impact on collective efficacy as well as self-efficacy. This study added to the complexity of understanding leadership impacts by looking at the principal span of control (e.g., the degree of interaction between the principal and the teacher). They found essentially that the further the teacher is from the principal, in the span of control, the less impact the transformational behaviors have on collective and self-efficacy. They noted span of control appears to act as a moderating factor, but they did not study physical or power distance from the teacher. This finding is notable as it indicated a superintendent, far from the teacher, may have limited ability using transformational leadership to impact CTE.

Gaps in Research

Studies have shown tenets of transformational leadership have been aligned to organizational improvement in noneducational sectors (Bryant et al., 2016; Eagly et al., 2003; Onorato, 2013), which has proven transformational leadership to be an impactful leadership model when implemented by school-level leaders (Dussault et al., 2008; Metz et al., 2019; Ninković & Knežević Florić, 2018; Windlinger et al., 2020). The specific problem is school district superintendents have had limited resources for directly impacting student achievement (Alsbury et al., 2018; Bird, 2010; Bird et al., 2013), and although many have adopted a transformational leadership approach (Bird & Wang, 2013; Bryant et al., 2016; Burns-Redell, 2013; Fenn & Mixon, 2011; Vaughan, 2002), they have done so based on popular theories of leadership impacts and not based on an empirical study directly correlating effective transformational leadership behaviors with student achievement or the positive intermediating variables.

Superintendent leadership is varied, and the impact on schools and school outcomes is tenuous (Bird et al., 2013; Bird & Wang, 2013; Björk & Kowalski, 2005; Waters & Marzano, 2006). Much of the focus in academic research to date has been on the superintendent's impact on followers from an organizational effectiveness standpoint, thus creating the conditions for redesigning leadership licensure and professional development (Bird et al., 2013; Chingos et al., 2014; Waters & Marzano, 2006). Studies have shown that a focus on superintendent leadership can lead to higher functioning organizations primarily through effective leadership teams (Waters & Marzano, 2006). Notably, many of the components of effective leadership align with the tenets of transformational leadership.

Research into the role of transformational leadership in impacting student achievement through the intermediary variable of CTE has validated the idea that transformational practices can increase collective efficacy in a school (Dussault et al., 2008; Ninković & Knežević Florić, 2018). These studies, however, focused primarily on the role of principal leaders and their impact on teachers. This finding is intuitive in nature, given the physical and professional proximity of principals to teachers as compared with the relative distance between a teacher and a superintendent. However, given the primary role of high functioning superintendents of focusing on strategic planning, goal setting, and resource allocation, the impact one can have on overall district culture is significant (Waters & Marzano, 2006). Although it is clear superintendents have been implementing transformational leadership practices, scant studies have existed to examine the correlation between superintendent transformational leadership behaviors and collective efficacy to determine if such behaviors can impact achievement through this intermediary variable (Bird & Wang, 2013; Fenn & Mixon, 2011; Leithwood et al., 2010).

The degree to which superintendents have been implementing transformational leadership with fidelity has not been clear from the research, nor has the effectiveness with which superintendent's use of transformational leadership impacts the major factors influencing student achievement (Bird & Wang, 2013; Burns-Redell, 2013; Eagly & Johannesen-Schmidt, 2001; Fenn & Mixon, 2011). Researchers have indicated a need to study superintendent leadership on a larger scale because many studies have been limited to a handful of superintendents (Bryant et al., 2016; Fenn & Mixon, 2011; Klocko et al., 2019; Shields, 2017). Additionally, researchers have pointed to the need for

understanding the components of leadership and the impact on districts and students (Bryant et al., 2016; Decman et al., 2018; Fenn & Mixon, 2011; Leithwood et al., 2010; Leithwood & Azah, 2017).

Conclusion

Superintendents serve as the pinnacle of district leadership (Callahan, 1966; Kowalski, 2013). They are the instructional leaders, management leaders, strategic leaders, and communication leaders of school districts, and they are held accountable for overall student success (Björk et al., 2014; Björk & Kowalski, 2005; Chingos et al., 2014). Although researchers have identified numerous ways for teachers to improve student outcomes (Hattie, 2009; Visible Learning, 2018), the ability of a superintendent to improve student achievement has been little understood. Most research has focused on the superintendent's role in district improvement and quality management (Bird, 2010; Chingos et al., 2014; Decman et al., 2018), though more recent research has identified key practices that correlate with higher student achievement (Waters & Marzano, 2006). However, given their distance from the classroom, the likely moderating effects of any number of intermediate variables poses a challenge when understanding the direct impact that a superintendent can have on students.

Most education research has concluded the concept of CTE is a strong, if not the strongest, indicator of student achievement (Donohoo, 2017; Donohoo et al., 2018; Visible Learning, 2018). Some studies have shown this concept to be a stronger indicator of achievement than even socioeconomic status (Bandura, 1993; Donohoo et al., 2018). And growing research has found principals can have a positive impact on CTE through the use of transformational leadership practices (Dussault et al., 2008; Windlinger et al.,

2020). What is not known is the degree to which superintendent use of transformational leadership practices can positively impact collective efficacy. Although intermediate variables are possible, such as principal leadership, reviewing transformational leadership behaviors of superintendents may provide an understanding for how district leaders can impact collective efficacy, and by extension student achievement.

One may wonder if superintendents are effectively applying transformational leadership practices and whether these practices can be seen at the classroom level and if they are impacting collective efficacy. Therefore, the purpose of this study was to understand the degree to which transformational leadership has been used by school superintendents and determine if it was correlated with higher levels of CTE.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

Studies have indicated transformational leadership positively impacts followers and transformational leadership behaviors by school principals positively impacts collective teacher efficacy (CTE; Bass & Avolio, 1993; Bryant et al., 2016; Dussault et al., 2008; Eagly et al., 2003). Further, CTE has been found to be one of the factors with the greatest impact on student achievement (Donohoo et al., 2018; Eells, 2011; Hattie, 2009). Additionally, school district superintendents have regularly self-identified as transformational leaders (Bird & Wang, 2013; Fenn, 2011). However, a clear gap exists in the research on the degree of transformational leadership behaviors exhibited by superintendents, and whether that transformational leadership behavior impacts CTE.

The study sought to determine the relationship between two variables (i.e., superintendent leadership and CTE) through the use of surveys and tools that convert behavioral characteristics into quantifiable data for statistical analysis (Creswell & Creswell, 2018; Vogt & Johnson, 2016).

Purpose of the Study

This study focused not on how school district superintendents impact student achievement directly, but rather on the ways they impact student achievement indirectly through CTE. This study provides superintendents with the practical knowledge and strategies needed to affect a positive impact on CTE. The purpose of this study was to understand the degree to which school superintendents use transformational leadership and to determine if it was correlated with higher levels of CTE.

This study began with superintendents self-assessing their leadership traits on a normed leadership measurement instrument. Using the theoretical framework of transformational leadership as measured with the Multifactor Leadership Questionnaire (MLQ; Avolio & Bass, 2004), leadership can generally be considered transformational, transactional, or laissez-faire.

CTE refers to the degree to which the teachers in a district have a shared sense that all can and are positively impacting student education (Donohoo, 2017; R. D. Goddard et al., 2000). CTE is a framework developed by Bandura (1977, 1993) and has been shown in research to be one of the highest predictors of student success (Eells, 2011; Hattie, 2009). For this study, a series of questions from the Oregon Statewide Educator Survey (OSES; Center for Optimal Learning Environments, 2023) were combined to create a composite CTE score for each school district.

Research Questions

The research questions addressed in this study were:

1. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' overall use of transformational leadership?
2. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of the five individual components of transformational leadership: idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual stimulation, and individualized consideration?

3. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of transactional leadership behavior?
4. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of passive–avoidant leadership?

Variables

Independent Variable

The independent variable in this study was the level of transformational leadership exhibited by superintendents. This variable was self-assessed by current superintendents using the nationally normed MLQ.

Dependent Variable

The dependent variable in this study was the level of CTE exhibited in a school district. This variable was quantified using the publicly available results of the OSES.

Participants

This study included the entire population of Oregon superintendents in its scope. At the time of this study, there were 197 school districts in Oregon, and although most employed a full-time superintendent, 15 districts used the regional education service district as the superintendent of record, employed a superintendent shared by another district, or used a head teacher model (Oregon Department of Education, 2022b). All of these instances were in school districts with fewer than 20 students and 10 of them had less than 10 students (Oregon Department of Education, 2022a). One notable exception was a district with nearly 1,000 students that shared a superintendent with the

overlapping high school district. As a result, 182 discrete superintendents were included in the initial participant solicitation.

Participants were not compensated. However, given the role of the instrument being used for assessing leadership behaviors in leadership development programs (Avolio & Bass, 2004), superintendents were offered to receive their individual results that could be used for personal and professional growth and could have served as an incentive for participation.

At the completion of the data collection stage, responses were evaluated to determine if an adequate sample had been collected to ensure representation of superintendents in Oregon. An analysis of the breakdown of responses by geographic region, location character (i.e., urban, suburban, rural), and district size was conducted to determine the variance from the aggregate characteristics of all districts.

All superintendent responses were included for the purposes of evaluating the use of transformational leadership as encapsulated in Research Question 1. If a surveyed superintendent had been a superintendent in a different district for the 2021–2022 school year, their results would have been compared with the CTE data from that prior district; this applied in a single instance.

For evaluating CTE, the entire population of school teachers in the state of Oregon was considered the participant universe. However, I did not directly participate in the OSES collection. Results of the OSES survey conducted by the Educator Advancement Council (2024) were posted on a publicly available website. The Educator Advancement Council only posted district-wide aggregated responses if at least one school in the district had a minimum response rate of 40%.

Instrumentation

MLQ

The primary instrument used for analyzing transformational leadership behaviors of superintendents was the MLQ. The MLQ was developed by Avolio and Bass (2004) for evaluating leadership behaviors. The MLQ has been used for leadership development, leader evaluation, and a vast array of academic studies on leadership (Antonakis et al., 2003; Avolio et al., 1999; Avolio & Bass, 2004). The current version of the MLQ (5X short) at the time of this study contained 45 items measuring the nine leadership components of the transformation leadership continuum: idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual stimulation, individual consideration, contingent reward, management by exception (active), management by exception (passive), and laissez-faire (Avolio & Bass, 2004). In addition, the instrument measured three areas of the outcomes of leadership: extra effort, effectiveness, and satisfaction. Respondents were asked to rate how frequently leadership behaviors were exhibited on a 0 to 4 scale as follows: 0 – *Not at all*, 1 – *Once in a while*, 2 – *Sometimes*, 3 – *Fairly often*, and 4 – *Frequently, if not always*. A sample version of the MLQ is contained in Appendix A.

In addition to the questions asked on the MLQ, participants were asked a standard set of demographic questions regarding race, gender, age, education level, years as superintendent, and years in current district, name of current district, and name of previous district (if applicable). Although the demographic data can be personally identifiable, all analysis reporting was aggregated and anonymized, as such respondents' results were not publicly identifiable.

Validity and Reliability

In conducting research, it is important to ensure validity and reliability of the instruments to be used (Creswell & Guetterman, 2019). Validity refers to the concept that the instrument effectively measures that which it proposes to measure (Creswell & Guetterman, 2019). Reliability, on the other hand, refers to the notion that an instrument will return consistent results over time (Creswell & Guetterman, 2019). The MLQ has undergone several revisions and refinements based on critique, usage, feedback, and continuous research, with the latest version of the instrument refined to a shorter questionnaire of 45 items, while the original instrument contained 63 items (Avolio & Bass, 2004).

The MLQ has been broadly adopted for both leadership development and academic research purposes (Avolio & Bass, 2004). The instrument has been used, refined, and adjusted over more than 35 years of usage. Studies have shown the MLQ to have a high degree of reliability and validity for determining the use of transformational leadership behaviors (Antonakis et al., 2003; Avolio et al., 1999; Avolio & Bass, 2004). A confirmatory factor analysis was conducted that revealed the six-factor model measured by the MLQ 5x produced fit indexes exceeding recommendations in literature (Avolio & Bass, 2004). Table 1 shows the Cronbach alphas for each of the individual traits of the six-factor model as reported by Avolio and Bass (2004) based on analysis of two different sample sets. Notably, each shows a high degree of reliability.

Table 1

Cronbach's Coefficient Alphas for the MLQ 5X

Leadership style	Leadership trait	Sample Set 1	Sample Set 2
Transformational	Idealized influence	.92	.92
	Intellectual stimulation	.83	.78
	Individualized consideration	.79	.78
Transactional	Contingent reward	.80	.74
	Management by exception	.63	.64
Laissez-faire	Passive–avoidant	.84	.86

Note. Data from *Multifactor leadership questionnaire* [Manual and sample set], by B. J. Avolio & B. M. Bass, 2004. University of Nebraska and SUNY Binghamton.

MLQ Administration

Data collection was conducted using the Mind Garden Transform Survey Hosting tool (Mind Garden, 2022). The tool allowed for data to be collected and scored within a system designed specifically for administering the MLQ. Email contact information for each current superintendent was entered into the Mind Garden Transform Survey Hosting tool. Each participant was sent a unique link from Mind Garden to use to complete the MLQ and accompanying demographic questions. Although an individual superintendent's responses could be identifiable in the dataset, responses were kept confidential. Accompanying the link was an informed consent document, a statement from me about use of the data for this study, and a statement of confidentiality. After initial distribution and response additional follow-up through email was used to generate a greater response rate.

Data Confidentiality

The primary original data collected for the study were the superintendent responses to the MLQ. Participants were provided with a statement of confidentiality, assuring them all data would be collected and stored solely for use by me and for the aligned doctoral research conducted by Kristen Miles. Although superintendents were asked to identify their specific school district so their MLQ scores could be compared with staff responses to the OSES thus making the response personally identifiable, all published data were reported on in the aggregate or with further anonymizing to ensure that an individual response cannot be identified by the reader.

Following completion of the analysis, the dataset was removed from the Mind Garden Transform Survey Hosting Tool. However, I will retain the data on a local hard drive for potential use in further research on superintendent leadership. Participants were provided with a disclosure and consent form prior to completing the MLQ clarifying the intention to retain the data with a strict confidentiality assurance.

Data Sharing

Although this study proposed to investigate the relationship between superintendent leadership and CTE, an aligned study by Kristen Miles proposed to review the relationship between school board behaviors and superintendent leadership. The superintendent leadership dataset was provided to Ms. Miles to be used for her proposed dissertation. Ms. Miles signed a confidentiality statement for use of the data. In addition, each participant was provided with a notice that their responses may be used by Ms. Miles under a signed confidentiality agreement. The aligned research allowed for

greater applicability to school district leadership and avoided duplication of collection from the universe of school district superintendents in Oregon.

OSES-CTE Framework

CTE refers to the idea that the teachers in a school believe they are effective and can positively impact learning as a collective group (Donohoo, 2017; R. D. Goddard et al., 2000). Derived from original theories on self-efficacy (Bandura, 1977, 1993), the concept includes four elements: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Goddard et al. (2000) developed an instrument for measuring levels of collective efficacy across the four domains that they relabeled as mastery experiences, vicarious experiences, social persuasion/socialization, and affective state. The instrument, further refined by Goddard (2002), grouped questions in either task analysis or group competence to determine levels of CTE. The survey asked participants to rate their level of agreement or disagreement with a series of statements using a Likert scale. The statements are shown in Table 2.

Table 2

Goddard's (2002) CTE Questionnaire Components

CTE statement	Group competence or task analysis (positive or negative)
Teachers in this school are able to get through to difficult students.	GC+
Teachers here are confident they will be able to motivate their students.	GC+
Teachers in this school really believe every child can learn.	GC+
If a child doesn't want to learn, teachers here give up.	GC-
Teachers here don't have the skills needed to produce meaningful student learning.	GC-
These students come to school ready to learn.	TA+
Home life provides so many advantages they are bound to learn.	TA+
Students here just aren't motivated to learn.	TA-
The opportunities in this community help ensure that these students will learn.	TA+
Learning is more difficult at this school because students are worried about their safety.	TA-
Drug and alcohol abuse in the community make learning difficult for students here.	TA-
Teachers in this school do not have the skills to deal with student disciplinary problems.	GC-

At the time of this study, there were just over 30,000 certified teachers in the state of Oregon and another 11,000 classroom assistants (Gill, 2021). Thus, conducting a formal CTE survey among all classroom staff was not a feasible proposition. However, teachers in Oregon completed an annual climate survey that could provide useful data for understanding CTE. Prior to the COVID-19 global pandemic, the Educator Advancement

Council (2022) had been administering the Oregon Teaching, Empowering, Leading, and Learning (TELL) survey to all educators in the state. The survey was suspended in the spring of 2020 when the pandemic forced the closure of schools statewide and not administered in 2020–2021 or 2021–2022 school years. For the 2022–2023 school year, the survey was reconstructed into the OSES with the continuing goal of understanding educator attitudes in the workplace (Educator Advancement Council, 2023).

OSES

For analyzing the level of CTE in a school district, a subset of questions from the OSES was compiled to create a CTE metric to be used as the dependent variable in this study. The OSES was administered by the Oregon Department of Education's Educator Advancement Council to all educators in the state of Oregon in the spring of 2023 (Educator Advancement Council, 2023). OSES was an anonymous survey used to assess teaching conditions at all levels. In 2018, the prior version of the statewide survey—the TELL survey—was completed by nearly 20,000 educators (i.e., teachers, other instructional staff, and administrators) statewide, or about 55% of all possible respondents (Educator Advancement Council, 2022). The revised OSES survey administered in the spring of 2023 garnered a response rate of just over 7,000 licensed, school-based educators, or roughly 19% (Educator Advancement Council, 2023).

Results from the OSES survey were posted to the Educator Advancement Council (2024) website and made available for public use. Responses were aggregated to the school and district level if each had a minimum of five respondents and a 40% response rate. If a district had at least one school with reportable data, district level data were available in the publicly available individual school data files.

The survey was comprised of questions covering a wide variety of areas of a teacher's working conditions and respondents are asked to indicate their level of agreement with statements using a 4-point scale with a fifth option of "Don't Know" (Center for Optimal Learning Environments, 2023). Statements were organized into six domains: equitable access; professional development; leadership; instructional practices; behavior management; and time, workload, and staffing. A copy of the full survey is contained in Appendix B.

OSE-CTE Metric Development

Questions from the OSES were compared with questions from the short version of CTE survey developed by Goddard (2002). Questions were reviewed to determine if they use similar verbiage and if they were attempting to measure the same domains of teacher efficacy. Specifically, the framework attempted to identify at least three questions from the OSES that measured each of the four CTE characteristics: mastery experiences, vicarious experiences, social persuasion/socialization, and affective state (Goddard, 2002). The framework also balanced the questions across the two primary domains of group competence and task analysis.

Validity and Reliability

A group of three teachers and two leaders, drawn as a convenience sample (Creswell & Creswell, 2018; Vogt & Johnson, 2016), reviewed the short CTE survey, the full OSES survey, and the proposed matrix for validity. The final collection of questions formed the OSES-CTE constructed framework that was used to measure CTE in Oregon school districts. This method for measuring CTE in a district is a novel approach using existing public data collections.

Given the arduous nature of using a nationally normed CTE instrument such as the one developed by Goddard (2002) to measure CTE across multiple districts with thousands of educators, using public data in this manner provided a model that future research on CTE could follow to further validate the initial methodology used here. Table 3 outlines the questions pulled from the OSES along with their respective OSES category, mapped CTE characteristic, and whether the item was focused on group competence or task analysis.

Table 3

OSES Questions Selected for CTE Scale

OSES question	OSES category	CTE trait	GC/TA
Professional development improves teachers' abilities to improve student learning and proficiency.	Professional development	Mastery experiences	GC
Professional development provides ongoing opportunities for teachers to work with colleagues to refine teaching practices.	Professional development	Mastery experiences	GC
Professional development is evaluated by participants and results are shared.	Professional development	Vicarious experiences	TA
The faculty has an effective process for making group decisions to solve problems.	Leadership	Affective state	GC
Provided supports (i.e. instructional coaching, professional learning communities, etc.) translate to improvements in instructional practices by teachers.	Instructional practices	Social persuasion	TA
Teachers have knowledge of the content covered and instructional methods used by other teachers at this school.	Instructional practices	Vicarious experiences	GC
Teachers lead inclusive practices aligned to state standards in core instruction.	Instructional practices	Affective state	TA
Teachers believe every student can accelerate in their learning.	Instructional practices	Affective state	GC
The school has supports (i.e. resources, personnel, etc.) in place to support positive student behavior regardless of students' cultural background, ethnicity, and identity.	Behavior management	Social persuasion	GC
Teachers consistently apply rules for student conduct across student groups.	Behavior management	Vicarious experiences	TA
This school provides the materials, resources, and training necessary for me to support students' mental health, physical health, and nutrition.	Behavior management	Mastery experiences	GC
Teachers have time available to collaborate with colleagues.	Time, workload, staffing	Social persuasion	GC

Note. GC/TA = group competence or task analysis CTE category.

Data Analysis Methods

Raw data from the MLQ were downloaded from the Mind Garden Transform Survey Hosting Tool (Mind Garden, 2022) and entered into the statistical software program IBM SPSS Statistics, version 28.0.1. In addition, the aggregated district level data from the OSES were entered into SPSS for analysis. SPSS allowed me to manage the data effectively, conduct the analytics needed to understand the nature of the relationship between the two variables, and run descriptive statistics on the individual variables.

Statistical Analysis

This study used both descriptive and inferential statistics in the analysis of the findings. Descriptive statistics provided a method for understanding the basics of the population studied and to summarize and organize the respondent set (Vogt & Johnson, 2016). Inferential statistics provided the deeper level analysis necessary for answering the research questions; they allowed for the quantification of the level of prediction and relationship between the variables (Vogt & Johnson, 2016).

Descriptive Statistics

As an initial level of analysis, a variety of descriptive statistics were used to understand the data. Descriptive statistics provided a level of analysis focused on summarizing, organizing, and describing the data set (Vogt & Johnson, 2016). Descriptive statistics described the center (i.e., mean, median, mode), the dispersion (i.e., standard deviation), and the shape (i.e., central limit and skewness) of the data set. A combination of descriptive statistics from the Mind Garden Transform Survey Hosting Tool and SPSS provided for a descriptive analysis suitable for understanding the extent to

which superintendents were exhibiting the various components of transformational leadership.

Inferential Statistics

For determining the nature of the relationship between superintendent leadership and CTE a deeper level of statistical analysis was necessary. Inferential statistics provided a way to draw conclusions and make predictions based on a data set (Vogt & Johnson, 2016).

Spearman's Rank-Order Analysis. Specifically, to determine the relationship between superintendent leadership and CTE a Spearman's rank order analysis was used. Spearman's rank order analysis calculates a correlation coefficient, or rho, between two rank ordered continuous or ordinal variables (Vogt & Johnson, 2016). A Spearman's analysis determined the strength and direction of the relationship between the two variables to provide an answer to the primary research questions.

Pearson's Product-Moment. In addition to Spearman's rho, a Pearson's product-moment test was used to cross-check the results of the analysis and to determine the monotonic trend between the two variables. A Pearson's analysis determines the strength of the relationship between two linear variables (Vogt & Johnson, 2016), in this case the relationship between the independent variable, superintendent leadership, and the dependent variable, CTE.

Conclusion

The methodology detailed provided the foundation for a reliable quantitative study of superintendent leadership and its relationship to CTE. A universal population approach provided broader reliability of the results and by extension applicability of the

conclusions. The quantitative research conducted for this study can also provide the basis for further qualitative research as called for in Chapter 5. This study provides a practical model for linking top level leadership to ultimate organizational outcomes.

The study relied on an existing and proven method for understanding leadership behaviors and linked to a new method for understanding CTE using publicly available data. Although this approach may prove useful in conducting future research on the impact that various independent variables have CTE, the novel approach to developing an alternative metric for quantifying CTE has clear limitations and will require further study to determine validity of the proposed metric. Further, by limiting the analysis of leadership behaviors to a self-assessment, the study was limited to the degree to which superintendents responded with fidelity. Further research should consider using versions of the MLQ that ask district employees to evaluate the behaviors exhibited by their superintendents.

CHAPTER 4

RESEARCH FINDINGS

This chapter details the results of the study of self-identified superintendent leadership behaviors and analyzes for a statistically significant impact on collective teacher efficacy (CTE). Superintendent leadership behavior was identified through the use of the Multifactor Leadership Questionnaire (MLQ) administered to superintendents in Oregon from December 2022 through March 2023. CTE was measured through a composite score derived from a subset of questions from the Oregon Statewide Educator Survey (OSES) administered to licensed, school-based educators in Oregon in the spring of 2023 by the Oregon Educator Advancement Council.

Research Questions

This research was guided by four primary research questions and used quantitative analysis of the results from two survey instruments to answer them. The four research questions were as follows:

1. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' overall use of transformational leadership?
2. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of the five individual components of transformational leadership: idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual stimulation, and individualized consideration?

3. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of transactional leadership behavior?
4. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of passive–avoidant leadership?

This chapter discusses how datasets were collected, how the CTE scale was developed, and a demographic overview of the superintendents and their districts are included in the primary analysis. The inferential statistical analysis used for answering the research questions is detailed for each question, focusing on areas of statistical significance. Following this review of the research questions, the findings from additional analyses conducted are presented, including descriptive statistics regarding superintendent use of transformational leadership behaviors, gender distinctions in the uses of these leadership behaviors, and further inferential analysis of teacher beliefs in relation to leadership behaviors beyond the primary CTE scale.

Instrumentation and Data Collection

Superintendent Leadership

Superintendents' use of transformational leadership was measured using the MLQ. The MLQ was developed by Avolio and Bass (2004) as a tool for evaluating leadership behaviors for both academic research and leadership development. This study used the version of the survey described as MLQ (5X short). The version used contains 45 items measuring the nine leadership components of the transformation leadership continuum: idealized attributes, idealized behaviors, inspirational motivation, intellectual

stimulation, individual consideration, contingent reward, management by exception (active), management by exception (passive), and laissez-faire (Avolio & Bass, 2004). Respondents were asked to rate how frequently leadership behaviors are exhibited on a 0–4 scale as follows: 0 – *Not at all*, 1 – *Once in a while*, 2 – *Sometimes*, 3 – *Fairly often*, and 4 – *Frequently*, *if not always*. In addition to the questions asked on the MLQ, participants were asked a standard set of demographic questions regarding race, gender, age, education level, years as superintendent, years in current district, name of current district, and name of previous district (if applicable).

A list of all superintendents in the state of Oregon was pulled from the Oregon School Directory (Oregon Department of Education, 2022b) and augmented by individual school district websites. Ultimately, 180 current superintendents were invited to participate in the study. A link to participate was distributed by email through the MindGarden survey system, Transform, beginning in December 2022. Follow-up emails were distributed over the course of the successive 3 months. The survey was closed at the end of March 2023. In all, 79 individual superintendents consented to participate and completed the questionnaire for a response rate of 43.9%.

Of the survey respondents, 55 (69.6%) identified as men and 23 (29.1%) identified as women and one declined to answer. Nearly all, 73 (92.4%) identified as White/European American, three (3.8%) identified as Hispanic/Latino, one identified as Black/African American, one as Asian, one as Native Hawaiian/Pacific Islander, and two as other or declined to identify. The average age of respondents was 54 and the median age was 53. The average tenure at their current school district was 4.8 years and the median tenure was 4 years. The average number of years a respondent had been a

superintendent in any district was 7.4 years and the median was 6 years. Table 4 details the mean, standard deviation, and range for selected demographic data of the respondents and the school districts they represent.

Table 4

Demographic Data of Superintendent Respondents and Their School Districts

Demographic data	*M*	*SD*	Range
Age	54.11	6.992	37–71
Years at current district	4.78	4.275	1–24
Years in any district	7.48	5.870	1–26
District enrollment	5,098.72	8171.517	154–44,393
Number of teachers	288.70	463.934	10–2,765

District demographic information was retrieved from district profiles publicly available at the Oregon Department of Education's (2023) website. Overall superintendent respondents represented school districts serving a combined 402,799 students or 72.9% of Oregon's student population of 552,380 in the 2022–2023 school year. Additionally, respondent districts collectively employed 22,807 teachers or 69.2% of the 32,932 teachers employed in Oregon.

CTE Scale

CTE refers to the idea that the teachers in a school believe they are competent, effective, and possess the ability to positively impact student learning as a collective group (Donohoo, 2017; Goddard et al., 2000). Although Goddard et al. (2000) developed an effective instrument for measuring CTE, a subset of questions was gleaned from an existing educator survey for the current study as a way of creating a proxy measurement

for CTE. Prior to 2000, the Oregon Educator Advancement Council administered the Oregon TELL survey for understanding teacher attitudes, beliefs, and working conditions. During the COVID-19 global pandemic, the survey was halted and for the 2022–2023 school year a new instrument was developed and administered statewide. The OSES was created to replace the TELL survey, but is still intended to measure attitudes, beliefs, and working conditions in an expanded format (Educator Advancement Council, 2023).

The OSES survey contained 60 survey questions and six demographic questions. Of the 60 questions, 50 asked respondents to rate their level of agreement with various statements on a five-option scale: *Strongly Agree*, *Agree*, *Disagree*, *Strongly Disagree*, and *Don't Know*. For the purposes of this analysis, both levels of *Agree* were combined to create an *Agree* percentage for each question. A response of *Don't Know* was categorized as a *Disagree* response and included in the overall response total when calculating agree percentages. *Don't Know* was categorized in this manner as the priority for understanding the impact of transformational leadership was placed on agreement with the belief statements presented. The assumption was made that if an educator responded with *Don't Know*, it would be plausible to assume that the leadership behaviors of the superintendent were not positively impacting that educator related to the item queried. The OSES placed questions into six categories: equitable access; professional development; leadership; instructional practices; behavior management; and time, workload, and staffing levels. There was an additional uncategorized question asking if the district was overall a good place to work.

The OSES was administered through an online anonymous survey tool by the Oregon Educator Advancement Council in the spring of 2023 (Educator Advancement Council, 2023). All reportable OSES data from the 2023 administration were posted to the EAC website for public use on January 11, 2024. The survey data were released almost a full year after the survey was initially administered, creating a delay in data analysis for this study. However, both the OSES and the MLQ used in this study were administered contemporaneously (i.e., Spring 2023).

The statewide response rate for the survey was 19%. For the purposes of this study, district level aggregated data were necessary for comparison. For the OSES, 34 districts from among the 79 superintendent respondents had sufficient responses to produce district-level aggregated data. District-level aggregated data were retrieved from publicly available data files posted to the Educator Advancement Council (2024) website.

A subset of questions from the OSES was used to create a scale representing CTE. Goddard et al.'s (2000) CTE instrument contained statements framed in both positive and negative language (e.g., "teachers here are good" or "teachers here are bad"); whereas the OSES framed all questions as a positive (e.g., only "teachers here are good"). Using the researcher's understanding of the Goddard et al. (2000) CTE instrument and the primary components of CTE, a set of questions from the OSES was pulled for review. Twelve questions were selected that either aligned with an existing question from Goddard et al.'s (2000) instrument or clearly aligned with a core principle of CTE. Additional questions from the full OSES survey were eliminated from consideration for lack of any clear alignment to existing CTE survey questions or components of collective

efficacy. Table 3 lists the questions selected along with their OSES category and whether they would be considered group competence or task analysis under the CTE framework.

The 12 selected OSES questions and the 12 questions from Goddard's (2002) short CTE questionnaire were provided to a convenience sample of five licensed educators and two licensed administrators currently employed by Oregon school districts for review. Prior to review, the evaluators were given a verbal briefing on the components of CTE. Reviewers all confirmed the selected OSES questions did adequately represent components of CTE. However, they expressed concern that the questions selected did not adequately represent the grouping of questions in Goddard's (2002) survey regarding teacher beliefs about student motivation (e.g., "These students come to school ready to learn," "Homelife provides so many advantages they are bound to learn," and "Students here just aren't motivated to learn"). A review of the unselected questions from the OSES did not reveal any additional questions to be included in the CTE composite scale. This finding is discussed further in the limitations section of Chapter 5.

Findings

To assess whether a significant relationship exists between CTE and the individual components of superintendent leadership, a Spearman's rank-order correlation and a Pearson's product-moment correlation were used.

Research Question 1

Research Question 1 asked, is there a statistically significant correlation between collective teacher efficacy and school district superintendents' overall use of transformational leadership? The analysis compared the results of the MLQ in the

combined five I's of transformational leadership with the constructed CTE scale from the OSES. Spearman's correlation requires the variable to have a monotonic relationship; this was verified through visual inspection of a scatter plot. The final analysis indicated a moderate and significant correlation ($p < .05$) between the five I's of transformational leadership and the constructed CTE scale ($r_s = .365$, $p = .034$).

Pearson's correlation analysis requires data to be normally distributed. A Shapiro-Wilk's test showed the relationship to be linear with variables normally distributed ($p > .05$). The results of Pearson's correlation showed a statistically significant ($p < .05$) moderate relationship between the two variables ($r = .39$, $p = .021$). The Pearson's product-moment correlation validates the findings from the Spearman's rank-order correlation.

Research Question 2

Research Question 2 asked, is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of the five individual components of transformational leadership: idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual stimulation, and individualized consideration? To answer this research question, analyses were run on each of the individual components of transformational leadership paired with the constructed CTE scale: idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual stimulation, and idealized consideration. A visual inspection of scatter plot graphs for each variable pair showed a monotonic relationship necessary for Spearman's correlation.

The Shapiro-Wilk's test of normality for each revealed 2 of the 5 components, inspirational motivation and intellectual stimulation lacked normal distribution ($p < .05$). However, the decision was made to still run a Pearson's correlation because this test is somewhat resistant to deviations in normality and the Pearson's correlation was serving to validate the primary analysis of the Spearman's correlation.

Spearman's correlation showed moderate correlation with statistical significance in two components of transformational leadership. Intellectual stimulation showed a moderate correlation ($r_s = .410$, $p = .016$), and individualized consideration showed a moderate correlation ($r_s = .443$, $p = .009$). Pearson's correlation validated the findings from the Spearman's analysis for intellectual stimulation ($r = 432$, $p = .011$) and individualized consideration ($r = .457$, $p = .007$). Further, Pearson's showed a statistically significant moderate relationship between CTE and idealized influence-behavioral ($r = .405$, $p = .018$). Table 5 summarizes these findings.

Table 5

Spearman's and Pearson's Correlations for Individual Components of Transformational Leadership and CTE

Components	Spearman's rank-order		Pearson's product-moment	
	r_s	p	r	p
Idealized influence-attributed	.121	.494	.098	.580
Idealized influence-behavioral	.281	.107	.405*	.018
Inspirational motivation	.176	.320	.221	.210
Intellectual stimulation	.410*	.016	.432*	.011
Individualized consideration	.443**	.009	.457**	.007

Note. * $p < .05$. ** $p < .01$.

Research Question 3

Research Question 3 asked, is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of transactional leadership behavior? To answer this research question, analyses were run on each of the individual components of transactional leadership paired with the constructed CTE scale: contingent reward, management by exception-active, and management by exception-passive. A visual inspection of scatter plot graphs for each variable pair showed a monotonic relationship necessary for Spearman's correlation. The Shapiro-Wilk's test of normality for each revealed 1 of the 3 components, management by exception-passive lacked normal distribution ($p < .05$). However, the decision was made to still run a Pearson's correlation because this test is somewhat resistant to deviations in normality and the Pearson's correlation was serving to validate the primary analysis of the Spearman's correlation.

Spearman's correlation showed moderate correlation with statistical significance in one component of transactional leadership. Management by exception-passive showed a moderate correlation ($r_s = .342$, $p = .048$). Pearson's correlation failed to find a statistically significant relationship between the individual components of transactional leadership and the constructed CTE scale. Table 6 summarizes these findings.

Table 6

Spearman's and Pearson's Correlations for Individual Components of Transactional Leadership and CTE

Component	Spearman's rank-order		Pearson's product-moment	
	r_s	p	r	p
Contingent reward	.277	.113	.286	.101
Management by exception-active	-.129	.468	-.085	.633
Management by exception-passive	.342*	.048	.245	.163

Note. * $p < .05$. ** $p < .01$.

Research Question 4

Research Question 4 asked, is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of passive-avoidant leadership? To answer this research question, an analysis was run on the laissez-faire component of the MLQ compared with the constructed CTE scale. A visual inspection of scatter plot graphs for the variable pair showed a monotonic relationship necessary for Spearman's correlation. The Shapiro-Wilk's test of normality showed a lack of normal distribution ($p < .05$). However, the decision was made to still run a Pearson's correlation because this test is somewhat resistant to deviations in normality and the Pearson's correlation was serving to validate the primary analysis of the Spearman's correlation.

Spearman's correlation showed moderate correlation with statistical significance ($p < .05$). Laissez-faire showed a moderate negative correlation ($r_s = -.345$, $p = .46$).

Pearson's correlation failed to find a statistically significant relationship to validate the findings of the Spearman's correlation (r = -.201, p = .254).

Summary of Findings from Research Questions

Overall, the analyses showed varied correlations across the components of transformational leadership. Spearman's rank-order correlation showed a statistically significant relationship between two components of transformational leadership (i.e., intellectual stimulation and individualized consideration) and one component of transactional leadership (i.e., management by exception-passive). The analysis showed a statistically significant negative correlation with laissez-faire leadership. And overall, it showed a moderate and statistically significant relationship with the composite transformational leadership score (i.e., five I's of transformational leadership).

The Pearson's product-moment correlation validated the correlation with the two components of transformational leadership and the overall correlation with the composite transformational leadership score (i.e., five I's). It showed an additional statistically significant correlation with the transformational leadership component of idealized influence-behavioral but failed to validate the other findings of the Spearman's rank-order. Table 7 summarizes the findings for all four of the research questions.

Table 7

Spearman's and Pearson's Correlations for All Components of Leadership Measured by MLQ 5x and CTE

Leadership component	Spearman's rank-order		Pearson's product-moment	
	r_s	p	r	p
RQ1: Five I's of transformational leadership	.365*	.034	.393*	.021
RQ2: transformational leadership				
Idealized influence-attributed	.121	.494	.098	.580
Idealized influence-behavioral	.281	.107	.405*	.018
Inspirational motivation	.176	.320	.221	.210
Intellectual stimulation	.410*	.016	.432*	.011
Individualized consideration	.443**	.009	.457**	.007
RQ3: Transactional leadership				
Contingent reward	.277	.113	.286	.101
Management by exception-active	-.129	.468	-.085	.633
Management by exception-passive	.342*	.048	.245	.163
RQ4: Laissez-faire	-.345*	.046	-.201	.254

Note. * $p < .05$. ** $p < .01$.

Additional Analysis

In addition to answering the research questions, the data gathered allowed for additional analysis of transformational leadership behaviors self-identified by superintendents and the impact behaviors have on broader teacher beliefs as expressed through other components of the OSES. In other studies, transformational leadership was shown to be the most widely adopted leadership style by school district superintendents

(Bird et al., 2013; Bird & Wang, 2011; Burns-Redell, 2013; Fenn & Mixon, 2011; Klocko et al., 2019; Onorato, 2013). However, these studies generally lacked a deeper analysis of the various behavioral traits of transformational leadership. Although the research questions in the current study narrowed the dataset to 34 cases, the broader list of all superintendents that responded to the MLQ survey (i.e., 80) can provide a richer understanding of the use of transformational leadership by superintendents in Oregon.

Descriptive Statistics

Overall superintendents self-identified a high level of usage of transformational leadership behaviors. On a 0–4 scale, the mean score for all superintendents on the combined five I's of transformational leadership was 3.29 with a range of 2.5–4.0. On the individual components of transformational leadership, the lowest mean score was 3.05 on idealized influence-attributed with the highest score of 3.52 on idealized influence-behavioral. In the areas of transactional leadership and laissez-faire leadership superintendents identified much lower use of these behaviors, with the exception of contingent reward (M = 2.73). Laissez-faire leadership showed the absolute lowest mean score of 0.38 followed by management by exception-passive at 0.67. Table 8 summarizes the descriptive statistics for all superintendent respondents.

Table 8

Descriptive Statistics of Superintendent Leadership Behavior

Leadership behavior	*M*	*SD*	Range (min–max)
Five I's of transformational leadership	3.29	0.32	2.5–4.0
Transformational leadership			
Idealized influence-attributed	3.05	0.53	1.3–4.0
Idealized influence-behavioral	3.52	0.33	2.8–4.0
Inspirational motivation	3.43	0.39	2.3–4.0
Intellectual stimulation	3.19	0.44	2.3–4.0
Individualized consideration	3.26	0.44	1.8–4.0
Transactional leadership			
Contingent reward	2.73	0.66	1.3–4.0
Management by exception-active	1.40	0.77	0.0–3.3
Management by exception-passive	0.67	0.50	0.0–3.0
Laissez-faire	0.38	0.49	0.0–2.5

Note. $n = 80$.

Gender Distinctions

An independent-samples *t* test was run to determine any differences in transformational leadership behaviors between male and female superintendents. In several areas, male superintendents tended to identify transformational leadership at a lower level than female superintendents. Overall, male superintendents exhibited lower scores on the collective five I's of transformational leadership ($M = 3.23$, $SD = 0.30$) than female superintendents ($M = 3.46$, $SD = 0.30$). This difference was statistically significant, $M = -0.23$, 95% CI [-0.38, -0.08], $t(78) = -3.12$, $p = .003$. A summary of the *t*-test results for each of the leadership subcomponents is shown in Table 9.

Table 9

Summary of t-Test Results for Gender Differences in Leadership Behaviors

Leadership behavior	Male *M* (*SD*)	Female *M* (*SD*)	t test *M*	*p*
5 I's of transformational leadership	3.23 (0.30)	3.46 (0.30)	-0.23**	.003
Transformational leadership				
Idealized influence-attributed	2.99 (0.47)	3.21 (0.65)	-0.22	.094
Idealized influence-behavioral	3.47 (0.30)	3.65 (0.36)	-0.17*	.029
Inspirational motivation	3.35 (0.38)	3.62 (0.37)	-0.27**	.005
Intellectual stimulation	3.09 (0.43)	3.44 (0.38)	-0.35**	.001
Individualized consideration	3.21 (0.43)	3.37 (0.46)	-0.16	.153
Transactional leadership				
Contingent reward	2.65 (0.68)	2.94 (0.55)	-0.29	.071
Management by exception-active	1.29 (0.75)	1.65 (0.78)	-0.36	.059
Management by exception-passive	0.72 (0.52)	0.57 (0.46)	0.15	.240
Laissez-faire	0.42 (0.51)	0.29 (0.44)	0.14	.264

Note. Male $n = 57$. Female $n = 23$. M = mean difference. p = two-tailed test of significance. *$p < .05$. **$p < .01$.

OSES Category Analysis

Aside from the constructed CTE score used in this study, the OSES can be reduced to seven other scale scores. Each category can be combined to create a scale score in six areas of focus and a seventh score can be created reflecting an average score for the entire instrument. The six categories are as follows: equitable access (EAA); professional development (PDA); leadership (LDA); instructional practices (IPA); behavior management (BMA); and time, workload, and staffing (TWA).

Overall, the analysis showed the most statistically significant correlations in the transformational leadership components of intellectual stimulation and individualized consideration and in the transactional leadership component of management by exception-passive, and several statistically significant negative correlations with laissez-faire. Additionally, the overall transformational leadership metric of the five I's of transformational leadership showed a statistically significant correlation in several categories.

The OSES questions were framed in a positive language such that the higher the score, the more positive or favorable view of the behaviors or working conditions queried. Thus, a positive correlation indicates that the greater level of identification of leadership behaviors measured, the more favorable the belief response from the educator corps. Table 10 summarizes the strength of correlation and statistical significance of transformational, transactional, and laissez-faire leadership behaviors compared with the various OSES categories and overall average OSES score.

Table 10

Spearman's Correlations for Transformational, Transactional, and Laissez-Faire Leadership Components and OSES Category Scores

Leadership behavior	Oregon statewide educator survey categories						
	EAA	PDA	LDA	IPA	BMA	TWA	AVG
Five I's of transformational leadership	.120 (.498)	.201 (.255)	.114 (.521)	.413* (.015)	.403* (.018)	.399* (.019)	.274 (.117)
Transformational leadership							
Idealized influence-attributed	.059 (.740)	.034 (.848)	-.042 (.812)	.207 (.239)	.251 (.152)	.143 (.420)	.078 (.661)
Idealized influence-behavioral	.074 (.675)	.226 (.198)	.147 (.408)	.322 (.063)	.283 (.104)	.157 (.376)	.228 (.194)
Inspirational motivation	-.030 (.866)	.048 (.789)	-.031 (.864)	.264 (.132)	.168 (.343)	.252 (.150)	.117 (.510)
Intellectual stimulation	.147 (.407)	.286 (.101)	.212 (.228)	.359* (.037)	.438* (.010)	.429* (.011)	.318 (.067)
Individualized consideration	.317 (.068)	.313 (.072)	.279 (.111)	.475** (.005)	.450** (.008)	.515** (.002)	.390* (.022)
Transactional leadership							
Contingent reward	.286 (.101)	.228 (.195)	.082 (.646)	.328 (.058)	.376* (.028)	.131 (.460)	.225 (.201)
Management by exception-active	-.280 (.109)	.050 (.778)	-.151 (.395)	-.120 (.501)	-.114 (.523)	-.226 (.198)	-.150 (.398)
Management by exception-passive	.218 (.216)	.394* (.021)	.296 (.089)	.252 (.151)	.313 (.072)	.401* (.019)	.339 (.050)
Laissez-faire	-.203 (.250)	-.358* (.037)	-.242 (.168)	-.262 (.135)	-.381* (.026)	-.308 (.076)	-.350* (.042)

Note. * $p < .05$. ** $p < .01$.

Higher levels of rating on the composite five I's of transformational leadership had a moderate and statistically significant correlation with educator beliefs in IP (r_s =

.413, $p = .015$), BM ($r_s = .403$, $p = .018$), and TWA ($r_s = .399$, $p = .019$). In addition, these same three areas of teacher beliefs showed a moderate correlation with the two specific transformational behaviors of intellectual stimulation and individualized consideration.

Summary

In this chapter, the findings of a quantitative study comparing superintendents' self-identified leadership behaviors to teacher beliefs were detailed. Overall, the study found several moderate correlations between higher levels of transformational leadership and CTE. Specifically, the overall scale for transformational leadership, the five I's, showed a statistically significant modest correlation with CTE in both a Spearman's rank-order and a Pearson's product-moment correlation analysis. The two specific transformational leadership behaviors of intellectual stimulation and individualized consideration showed statistically significant and slightly stronger correlations with CTE as well as with several general areas of teacher beliefs (i.e., IP, BM, and TWA).

In addition to these, a *t*-test analysis of leadership behaviors by male and female superintendents indicated a statistically significant difference with female superintendents exhibiting higher levels of transformational leadership behaviors overall as well as in the individual components of intellectual stimulation, individualized consideration, and idealized influence-behavioral. Lastly, in an overall analysis of superintendent leadership behaviors, the findings showed that superintendents generally identified as exhibiting predominantly transformational leadership behaviors. Superintendents also self-identified as hardly ever exhibiting laissez-faire or management by exception-passive behaviors, both traits noted as negative leadership behaviors.

Chapter 5 discusses these findings and interprets the results. The findings are placed in the context of existing scholarly research, in addition to identifying areas of need for future research on superintendent leadership. The chapter also contains a discussion of limitations and how they can be remedied. Lastly, the final chapter contains recommendations for practice and further implications of the findings of this study.

CHAPTER 5

DISCUSSION AND FUTURE CONSIDERATIONS

School district superintendents increasingly focus on student achievement in leading school districts. Although the canon of research around student achievement and how to impact it has been robust, few studies have focused on the role of the superintendent as the pinnacle leader of an organization focused on student achievement (Björk & Kowalski, 2005; Hattie, 2009; Waters & Marzano, 2006). Some research has suggested when superintendents focus on organizational priorities and activities, such as budgeting and strategic planning, they produce a positive impact on student achievement (Waters & Marzano, 2006). However, this research has been limited and failed to identify leadership behaviors of the individual resulting in a positive or negative impact.

Indeed, the challenge with understanding superintendent impact on student achievement is the volume of intermediating variables between a superintendent and the classroom as well as the relatively limited resources available for directly impacting student achievement (Alsbury et al., 2018; Bird, 2010; Bird et al., 2013). Hattie's (2009) analysis of the literature on impacting student achievement highlighted that the areas closest to the student exercise the greatest positive impact on achievement. Specifically, collective teacher efficacy (CTE)—the concept that all teachers in a school believe and behave as though they can collectively impact students—has been shown to lead to one of the greatest effects on student achievement (Donohoo et al., 2018; Eells, 2011; Hattie, 2009). Thus, the question arises about what leadership model or behaviors can create the greatest positive impact on CTE.

Although numerous academic and popular theories of leadership can be applied by individual leaders, this study focused on the model of transformational leadership as both a behavioral theory (as opposed to a trait-based theory) and a theory focused on the relationship between the leader and the follower (Bass, 1985, 2000; Bass & Avolio, 1993; Burns, 1978; Northouse, 2019). Some research found superintendents generally self-identify by adopting transformational leadership as a model or exhibit specific transformational leadership behaviors, thus indicating some common knowledge about transformational leadership among practitioners (Bird & Wang, 2013; Bryant et al., 2016; Burns-Redell, 2013; Fenn & Mixon, 2011; Vaughan, 2002). However, the focus for the current study was not whether a superintendent claims to exhibit transformational leadership, but whether they exhibit the behaviors aligned with transformational leadership. By comparing superintendent leadership behaviors with teacher beliefs aligned with CTE, this study significantly adds to the understanding of which behaviors result in the greatest impact on teacher belief and by extension student achievement.

Research Questions and Methodology

This study sought to answer four specific research questions through a quantitative analysis of superintendent leadership and collective teacher efficacy. The research questions were:

1. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' overall use of transformational leadership?
2. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of the five individual

components of transformational leadership: idealized influence-attributed, idealized influence-behavioral, inspirational motivation, intellectual stimulation, and individualized consideration?

3. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of transactional leadership behavior?
4. Is there a statistically significant correlation between collective teacher efficacy and school district superintendents' level of passive–avoidant leadership?

The study used the results of the Multifactor Leadership Questionnaire (MLQ; Bass & Avolio, 1993) administered to all superintendents in the state of Oregon to understand the independent variable of transformational leadership. A selection of 12 questions, curated from the Oregon Statewide Educator Survey (OSES), were used to represent CTE, the dependent variable. The results of the surveys were analyzed for correlations using Spearman's rank-order analysis and further validated with Pearson's product-moment analysis. Descriptive statistics were also reviewed for further analysis.

The following section provides a review of the findings of the study, including a discussion for each key finding of the possible explanation for the finding and how it fits within existing literature. A review of the implications from the findings is included as well. This chapter then reviews the limitations to the study and applicability of the findings and discusses several areas of future research that are indicated from the results of this study.

Summary of Findings

Overall, the current study found superintendents did generally self-identify as exhibiting transformational leadership behaviors. It also noted a significant difference between male and female superintendents' use of transformational leadership. The study found superintendents generally do not exhibit the negative leadership behaviors of laissez-faire or management by exception-passive. In answering the key research questions, the current study found several correlations between transformational leadership and CTE. Table 7 summarizes the relationships between all of the components of transformational leadership and the constructed CTE scale.

In general, the relationships showed moderate strength and positive correlation, such that the stronger the presence of transformational leadership behaviors, the stronger the collective efficacy. The overall strength of all aspects of transformational leadership exhibited was moderately correlated to a statistically significant level with CTE and two specific behaviors were individually correlated with CTE to a significant level.

Transformational Leadership

General Use of Transformational Leadership

When considering the underlying question of whether superintendents exhibit behaviors aligned with transformational leadership, this study found a high degree of use self-identified by superintendents. Mean scores for the components of transformational leadership ranged from 3.05–3.52, with the composite scale of the five I's of transformational leadership at 3.29. This finding aligned with other studies regarding self-identified use of transformational leadership (Bird et al., 2013; Bird & Wang, 2011; Burns-Redell, 2013; Fenn & Mixon, 2011; Klocko et al., 2019; Onorato, 2013). One

study of Texas superintendents indicated a similar level of rating (Fenn & Mixon, 2011). These underlying findings lend credence to the idea that transformational leadership behaviors are commonly accepted practice among education leaders.

Correlation Between Transformational Leadership Overall and CTE

When answering the first research question of the study, whether a statistically significant correlation exists between CTE and school district superintendents' overall use of transformational leadership, I found such a relationship did exist. The final analysis found a moderate and significant correlation between the five I's of transformational leadership and the constructed CTE scale (r_s = .365, p = .035). As noted, research on superintendent use of transformational leadership has been limited, but the literature on principal use has been instructive, and these findings aligned with other studies that have shown the positive impact of transformational leadership on CTE (Dussault et al., 2008; Meyer et al., 2020; Ninković & Knežević Florić, 2018; Nordick et al., 2019). This finding is intuitive given the impact of transformational leadership on followers (Avolio et al., 1999; Bass, 2000; Burns, 1978; Eagly et al., 2003). The implications are discussed further, but it is clear from these findings that transformational leadership can be a key leadership construct for school district superintendents.

Relationship With Components of Transformational Leadership

The second research question sought to determine if any relationship could be found between the individual components of transformational leadership and CTE. This study found a moderate and statistically significant relationship between CTE and the individual components of intellectual stimulation (r_s = .410, p = .016) and individualized consideration (r_s = .443, p = .009).

Intellectual Stimulation. Intellectual stimulation refers to a leader's ability to foster innovation and creativity among followers (Bass, 1985; Bass & Avolio, 1993). Although Dussault et al. (2008) showed a limited relationship between intellectual stimulation and collective efficacy, this study seems to indicate this area was, indeed, correlated. This finding would seem to validate related findings from Donohoo et al. (2018) that indicated when leaders focus on creating the conditions for success (i.e., evidence-based instructional climate, culture of collaboration, focus on impact over tasks, culture of collaborative trust) collective efficacy is enhanced. Given intellectual stimulation centers on innovation and creativity, it may be a key for creating the conditions for success (Donohoo et al., 2018). This culture of innovation is likely to foster an iterative approach to success that tolerates smaller failures in search of greater innovation.

Individualized Consideration. The second subcomponent showing a statistically significant correlation—individualized consideration—refers to the behaviors of a leader focused on supporting the individual needs of followers (Bass, 1985; Bass & Avolio, 1993). Notably, this finding aligned with Dussault et al.'s (2008) study of principal leadership that found individualized consideration to be one of two subcomponents with the highest levels of correlation. The other was idealized influence. Although Dussault et al. (2008) studied principals, the current study's findings present an interesting question about how a superintendent with leadership intermediaries (i.e., other administrators and principals) could effectively provide individualized consideration for teachers in schools. Although a superintendent would not likely be able to provide individual support district-wide, a possible explanation would be that a superintendent, by providing individual

support to those at senior levels and to principals, is fostering the conditions necessary for deeper levels of individualized consideration organization wide.

Idealized Influence. Although the primary statistical analysis for this study—a Spearman's rank-order method—failed to find a statistically significant relationship between any of the other components of transformational leadership (i.e., idealized influence-attributed, idealized influence-behavioral, and inspirational motivation) a secondary analysis using Pearson's product-moment method validated the findings on intellectual stimulation and individualized consideration; this analysis also found an additional statistically significant relationship between CTE and idealized influence-behavioral ($r = .405$, $p = .018$). This finding aligned with Dussault et al.'s (2008) findings on principal leadership which combined both idealized influence components into a single nondifferentiated concept. Idealized influence is charisma, the emotional factor in leadership. The attributed subcomponent refers to followers' assumptions about a leader while the behavioral subcomponent refers to the observed actions of the leader. One plausible explanation for the finding regarding idealized influence-behavioral is that teachers in a district who observe charismatic behavioral traits in a superintendent may feel a greater sense of connection and trust in the overall organizational leadership and direction.

Relationship With Components of Transactional Leadership

The transactional leadership component of management by exception-passive was the only area of transactional leadership that showed a statistically significant relationship to the construct CTE scale. The relationship was positive ($r_s = .342$) and statistically significant ($p = .048$). This was a curious finding as management by exception both

active and passive refers to a negative leadership behavior of corrective action (Bass, 1985; Bass & Avolio, 1993). These behaviors focus on negative reinforcement over positive reinforcement. Although some research suggested the transactional behavior or contingent reward, using positive reinforcement in the form of praise or remuneration, can positively amplify transformational practices, contingent reward did not show a statistically significant relationship in this study. One possible explanation for the significance of management by exception-passive is this behavior is geared toward nondirected negative reinforcement. Perhaps superintendent actions such as terminations or some aspects of strategic planning and goal setting are seen as management by exception-passive, and given the distance to leadership, these can be seen as positive reinforcing actions for teachers as opposed to negative actions.

Relationship With Laissez-Faire Leadership

The final component on the full transformational leadership spectrum is laissez-faire leadership or the absence of leadership. This component, unlike management by exception-passive, is not simply a passive leadership model, but rather a complete absence of leadership. It is intuitive that this set of behaviors was negatively correlated at a statistically significant level with the CTE construct (r_s = -.345, p = .046). Without leadership direction in some form, followers feel less of a sense of relationship and connection to the organization.

Additional Discussion

The broad nature of the data collected on superintendent use of transformational leadership allowed for additional findings not specifically in response to one of the four primary research questions. These findings add to the broader understanding of the use of

transformational leadership in education and the potential impact it has on school districts. As it relates to superintendent use of transformational leadership, the findings of this study presented some notable distinctions on the differences in usage by male and female superintendents. Further, the Oregon Statewide Educator Survey (OSES) measured areas of teacher belief regarding organizational activity beyond those used for understanding CTE. This area of analysis can be additionally informative regarding the impact that transformational leadership has on school districts.

Gender Distinctions in Exhibited Leadership

This study found a notable and statistically significant difference in the use of transformational leadership by male and female superintendents. Table 11 summarizes the findings as they relate to the gender distinctions in the use of transformational leadership and the subcomponents of transformational leadership. The study found no statistically significant differences in the use of transactional leadership or laissez-faire leadership.

Table 11

Summary of t-Test Results for Gender Differences in Transformational Leadership Behaviors

Leadership behaviors	Male *M* (*SD*)	Female *M* (*SD*)	*t* test *M*	*p*
5 I's of TL	3.23 (0.30)	3.46 (0.30)	-0.23**	.003
Transformational leadership				
Idealized influence-attributed	2.99 (0.47)	3.21 (0.65)	-0.22	.094
Idealized influence-behavioral	3.47 (0.30)	3.65 (0.36)	-0.17*	.029
Inspirational motivation	3.35 (0.38)	3.62 (0.37)	-0.27**	.005
Intellectual stimulation	3.09 (0.43)	3.44 (0.38)	-0.35**	.001
Individualized consideration	3.21 (0.43)	3.37 (0.46)	-0.16	.153

Note. Male, $n = 57$. Female, $n = 23$. M = mean difference. p = two-tailed test of significance. *$p < .05$. **$p < .01$.

These findings are notable given the other findings in this study regarding the positive impact that transformational leadership can have on one of the leading strategies for impacting student achievement. Nationally, public education leadership is overwhelmingly men, with the vast majority of superintendent identifying as male (Maranto et al., 2018; Tarbutton, 2019). Even the responses to this research have been overwhelmingly men (i.e., 57 male superintendents and 23 female superintendents).

The gender distinctions found in this study aligned with those found in other studies that reviewed the ways in which gender impacts the use of transformational, transactional, and laissez-faire leadership (Eagly et al., 2003; Eagly & Johannesen-Schmidt, 2001). These studies indicated women are more inclined to use transformational

leadership and men to align more with transactional and laissez-faire leadership. As Eagly et al. (2003) noted, “Female leaders are somewhat more likely than their male counterparts to have a repertoire of the leadership behaviors that are particularly effective under contemporary conditions” (p. 587). This finding is aligned with further research on gender distinction in leadership behaviors (Garrett-Staib & Burkman, 2015; Martin, 2015; Saint-Michel, 2018).

Notable Relationship to Additional Components of OSES

Although the primary analysis for this study focused on a subset of questions from the OSES for understanding leadership impact on CTE, the OSES contained a number of other areas of focus. These additional areas allowed for further findings on the impact of transformational leadership on teacher beliefs in education. The study found transformational leadership overall (i.e., the five I’s of transformational leadership) and the subcomponents of intellectual stimulation and individualized consideration had a statistically significant impact on teacher responses in the areas of instructional practices, behavior management, and time, workload, and staffing. Table 12 summarizes these specific findings.

Table 12

Summary of Statistically Significant Correlations Between Transformational Leadership and OSES Categories

Transformational leadership components	Survey categories: r_s (p)		
	Instructional practices	Behavior management	Time, workload, staffing
Five I's of TL	.413 (.015)	.403 (.018)	.399 (.019)
Intellectual stimulation	.359 (.037)	.438 (.010)	.429 (.011)
Individualized consideration	.475 (.005)	.450 (.008)	.515 (.002)

These findings are perhaps intuitive given this study found overall transformational leadership and the subcomponents of intellectual stimulation and individualized consideration as positively correlated with the constructed CTE scale. The OSES contained six subareas of focus: equitable access; professional development; leadership; instructional practices; behavior management; and time, workload, and staffing. The study found no significant relationship with the areas of equitable access, professional development, and leadership. Of the three areas in which a relationship was found, behavior management can possibly be explained as following directly with the findings on CTE given this area of the survey contained five questions, with 3 of those 5 found in the constructed CTE scale. Four of 11 instructional practices questions and 1 of 5 time, workload, and staffing questions were contained in the constructed scale. As such the relationship found in these areas may deserve further discussion.

Instructional practices are likely seen as a core value for teachers and central to their job in educating students. As noted in the discussion of transformational leadership impact on CTE, intellectual stimulation and individualized consideration have been

shown to be key to impacting innovation and creativity as well as creating the conditions for success. The correlation with time, workload, and staffing, however, may pose a more nuanced understanding of the role of a superintendent. This area of focus in the OSES is decidedly more operationally focused with questions on teacher beliefs regarding adequate staffing (i.e., licensed and nonlicensed), substitute teacher coverage, collaboration time, and other noninstructional time. It is possible teachers consider these areas teachers to be more in the control of the district (as opposed to the principal) and, thus, attributed to the superintendent. Regardless, it is notable that superintendent leadership that positively impacts CTE has additional positive impacts on teacher beliefs in other areas of focus.

Implications

This study built on existing research around the impact of transformational leadership on followers and the impact that principals' transformational leadership has on teachers in a school. Prior research has shown principals' transformational leadership has a positive impact on CTE (Donohoo, 2017; Donohoo et al., 2018; Dussault et al., 2008; Leithwood et al., 2010; Windlinger et al., 2020). And CTE has one of the most significant impacts on student achievement (Hattie, 2009). This research, however, indicated the positive impact of transformational leadership is limited to use by building principals, but can be extended to school district superintendents.

Although much of the previous research on superintendent behaviors has focused on more traditional operational roles (Björk & Kowalski, 2005; Waters & Marzano, 2006), this study implies these efforts have been a detour from more effective strategies for superintendents to impact student achievement. In their seminal discussion of the role

of the superintendent, Björk and Kowalski (2005) described the evolution of the superintendency as five clearly conceptualized roles. The superintendency, they outlined, evolved from teacher–scholar to business executive to democratic leader to applied social scientist to communicator. Furthermore, they described the contemporary superintendent as fulfilling all five roles depending on the circumstances. This research would clearly require the addition of a sixth role typology, that of the transformational leader.

The overriding goal for school districts is to positively impact student achievement; as such, perhaps the greatest implication of this research is on the potential for superintendents to tangibly have a tool available to them for positively impacting students through the impact they have on teachers. Thus, superintendents should focus more on leadership behaviors aligned with transformational leadership and the subcomponents of intellectual stimulation and individualized consideration. Superintendents should seek out support for developing the skills of a transformational leader. In addition, those that hire and evaluate superintendents should take this research into consideration and build into their processes ways to screen for effective transformational leadership behaviors.

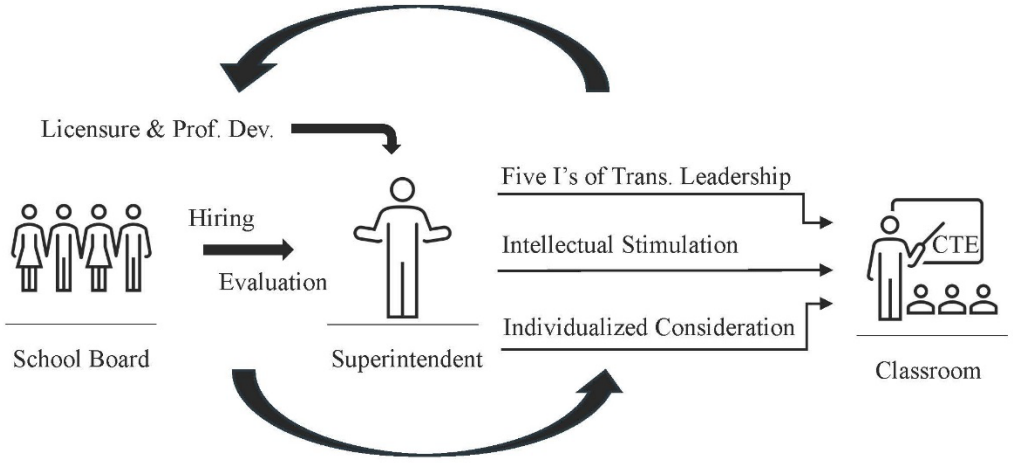
These implications present a clear case for recommendations to the system of licensure, hiring, evaluation, and professional development of superintendents. Clear changes can be made to embed transformational leadership throughout. In addition, the implications show a need for ongoing and additional research into transformational leadership in education so that a deeper understanding can be developed around the ways that it can impact educators and how it is implemented by various superintendents.

Recommendations

The findings from this study on superintendent leadership behaviors lead to several recommendations for education from licensure to hiring to professional development. The findings from this study indicate superintendents who exhibit higher levels of transformational leadership overall, and specifically in the areas of intellectual stimulation and individualized consideration, foster greater levels of collective efficacy among teachers. Therefore, the system of support for superintendents, from licensure training to hiring to professional development should be tailored to fostering the development of these behaviors. Figure 1 presents what this framework of support tailored to improving the transformational leadership behaviors of superintendents would look like.

Figure 1

Framework of Supports for Development of Transformational Leadership Behaviors in Superintendents for Positively Impacting CTE



Licensure

Most states require some form of administrative license for superintendents (Education Commission of the States, 2018). Some of these are more generic to overall administration, many are designed for instructional leadership and primarily focused on principalships, and a few focus on the superintendency as a distinct role. In designing these licenses, state licensing agencies and legislatures should strive to include a requirement that licensure candidates understand transformational leadership and the impact it can have on followers. In many cases, this process starts with licensure degree programs at institutions of higher education. In the absence of state requirements, institutions of higher education should work to incorporate courses on transformational leadership theory and how to incorporate transformational leadership behaviors into practice.

Hiring and Evaluation

Superintendents are hired and evaluated by district school boards. The findings from this study clearly indicated boards should incorporate components of transformational leadership into hiring applications as well as evaluation metrics. A board could consider using the MLQ 5x in screening superintendent candidates during the hiring process. If a board were to do this, they could rank candidates based on their responses and further rank prioritizing the components of intellectual stimulation and individualized consideration. Beyond the use of the MLQ, understanding these two priority components could lead to better candidate interviews.

The fact that a statistically significant difference in the use of transformational leadership behaviors between male and female superintendents is present poses a bigger

challenge for school districts, and specifically school boards. The fact that boards are far more likely to hire a male superintendent than a female superintendent suggests deeper biases in the leadership development, recruitment, and hiring practices of education systems.

Women have dominated the workforce in education (i.e., approximately 75% of the teaching force are women); however, they have been significantly underrepresented in the superintendency (i.e., about 21% nationally; Tarbutton, 2019). Several studies have pointed to personal choice as a limiting factor (Maranto et al., 2018; Robinson et al., 2017; Superville, 2017); yet, as research has shown, personal choice and ambition are often impacted by second-generation gender bias (Fisk & Overton, 2019; Madsen & Andrade, 2018). Second-generation gender bias is unconscious bias that alters the behaviors of leaders and participants in the system, thereby limiting promotional opportunities from an early stage (Fisk & Overton, 2019; Ibarra et al., 2013; Madsen & Andrade, 2018). It is not just the unconscious bias of those hiring or evaluating women in the organization, but also the unconscious bias of women that they will not be provided with an equal opportunity for advancement thereby suppressing ambition (Fisk & Overton, 2019).

A delay in beginning a leadership trajectory is also a significant barrier for women in education with women often “topping out” in positions of instructional leadership such as principals or curriculum directors (Maranto et al., 2018; Robinson et al., 2017). As well, Waters and Marzano (2006) noted districts tend to focus on operational needs in their hiring and evaluation. Topics such as budgeting and strategic planning generally dominate superintendent priorities over instructional leadership; thus,

as women advance in education with a focus on instruction, they are often passed up for greater leadership roles in favor of male counterparts that are perceived to have expertise in these operational areas.

If research shows female leaders are far more likely to exhibit greater levels of the very behaviors that impact student achievement indirectly, then boards should strive to overhaul recruitment and hiring processes to ensure the candidate pool they are presented with provides adequate opportunity for the hiring of more female superintendents. Boards should seek ways to mitigate the second-generation gender bias that exists in evaluating educators of leadership opportunity at lower levels in the system to place women employees on a leadership trajectory earlier. In addition, boards should limit their hiring focus from traditional operational needs and instead focus on instructional needs as a way of increasing the female occupant pool.

For superintendent evaluation, a board should consider augmenting any current evaluation practices with a method that effectively evaluates a superintendent's use of transformational leadership. In addition to the MLQ self-rater form, a board could use the rater form to allow followers (i.e., other administrators, principals, and teachers) to evaluate the leader's use of transformational leadership. And again, an emphasis can be placed on the subcomponents of intellectual stimulation and individualized consideration.

Professional Development

The last recommendation for a change in practice, similar to the first, is a call for modifications to leadership professional development for superintendents. Most administrative licenses require a certain amount of continuing education, and for those states where this is not a requirement, superintendents should be encouraged by boards to

obtain ongoing professional development. Similar to the recommendation for licensure education, this continuing education or professional development should prioritize learning about transformational leadership and how to implement it in practice. State associations that represent superintendents and other administrators should emphasize transformational leadership at their respective annual conferences as a path to impacting student achievement. In addition, specific learning on intellectual stimulation and individualized consideration should be incorporated.

Limitations

Several limitations to this study are worth discussing. The two primary limitations were related to the type of data collected for the purposes of analyzing the independent and dependent variables. The MLQ 5x was used to understand superintendent use of transformational leadership. This is a self-rater form that attempts to discern superintendent leadership behaviors from their ratings on a Likert scale to a series of statements. Although the form has been widely used and has been found to be a reliable instrument for measurement (Antonakis et al., 2003; Avolio et al., 1999; Avolio & Bass, 2004), it is possible that self-rating of behavior could fail to align with follower perception of actual behaviors.

The next limitation was related to the instrument and scale used to approximate CTE. Although Goddard (2002) developed an effective instrument for measuring CTE, the current study did not have the resources available to administer the instrument to all teachers in the 79 school districts for which a superintendent responded to the MLQ. The use of a series of questions from the OSES as a proxy for measuring CTE posed a significant limitation, which is discussed further in calls for future research.

There were two other limitations of note related to the final collected data set. This study was conducted solely within the state of Oregon. As such, applicability could be limited based on unique conditions, circumstances, and structures in Oregon that could influence the results differently than they would in another state. In addition, although superintendent response to the MLQ was robust and near 50% of all superintendents in Oregon, teacher responses to the OSES were limited and overlapped with superintendent responses in only 34 school districts. This could limit applicability based on the use of only the districts that responded. Notably, the two largest school districts in Oregon were among districts that did not respond to the OSES.

Suggestions for Future Research

Several suggestions for future research arise both from the findings of this study and from the limitations presented. The findings presented lead to a call for further research in gender distinctions of superintendent leadership and robust qualitative research on the impact of superintendent transformational leadership and the impact on followers. The limitations indicate a need for research into the perceptions of followers of superintendent transformational leadership as well as the development of a validated CTE scale using existing statewide survey data.

The findings related to gender and use of transformational leadership hint at a deeper challenge for school districts given the gender disparity of district leadership. Although the implications suggest school boards should seek greater reform to their superintendent hiring practices to eliminate biases that have led to this gender disparity, further research into understanding the reasons for the difference in usage of transformational leadership could benefit ongoing professional development practices.

This study has made it clear that superintendents' transformational leadership practices can have a positive impact on educator beliefs; however, a deeper level of qualitative understanding can prove useful to practitioners in operationalizing these findings. A qualitative study that seeks to understand the reasons for the impact on educators from the individual behaviors would add to the overall understanding of superintendent use of transformational leadership. This qualitative research should focus on both superintendent use of transformational leadership and educator perceptions of superintendent use of transformational leadership.

Two other quantitative studies would add significantly to this research. A key limitation of this study was that transformational leadership behaviors of superintendents are self-identified. A quantitative study of superintendent use of transformational leadership using the MLQ rater form where principals, other administrators, and/or teachers evaluate the superintendent' use of transformational leadership could serve to validate the findings of this study. Such a study, combined with the use of the MLQ self-rater form, would also add to the understanding of whether superintendents are accurate in their self-assessment of leadership behaviors.

And lastly, the limitation regarding the constructed CTE scale for this study presents an opportunity to develop a validated CTE metric through further quantitative study. Given the logistical challenge of surveying all teachers in a large school system or, as this study did, an entire state educator population, research using a research-based CTE survey instrument combined with the results of existing statewide educator data (e.g., the OSES) to create a valid constructed CTE scale from existing publicly available data would unlock the potential for robust and regular research similar to this study.

Conclusion

Increasing student achievement is the goal and mission of every school district in the country, and because each district is led by a superintendent, understanding what leadership model and behaviors the superintendent can employ is critical to further fostering success in education. The history of social science research in education has been focused generally on all areas of the system other than district leadership. A canon of research around how to impact students and student achievement exists, but very little research has been conducted on how school district superintendents can effectively do the same. This study sought to add to the limited research that does exist and hopefully spur further study into how school district superintendents can impact teachers and students in their care.

As the theoretical construct for this study, CTE—the concept that all teachers in a school believe they can impact students and their colleagues are equally motivated and effective in impacting kids—has the greatest impact on student achievement. As such, superintendents should focus on having maximum impact on CTE. Furthermore, the leadership behaviors of transformational leadership are those behaviors that can positively impact collective efficacy. The research connecting superintendent leadership to CTE, however, was a missing link in the operating theory. This study filled that gap with clear findings that superintendent leadership behaviors do positively impact CTE. In addition, the subcomponents of transformational leadership of intellectual stimulation and individualized consideration also have a statistically significant relationship to CTE.

In addition to the findings explicitly answering the key research questions, there were findings related to gender differences in the use of transformational leadership

behaviors that trigger additional questions for district and board practices, such as recruitment, hiring, and professional development. Overall, the findings in this study have significant implications for practice overall and indicate that leadership development through educator licensure programs, professional associations, and districts should focus on training leaders on the concepts of transformational leadership and how best to operationalize this leadership style. Unlike other popular leadership theories and models, transformational leadership describes behaviors that impact followers regardless of how they are described by leaders. Research on transformational leadership is clear that it can positively impact organizations and followers in an organization. This study adds to that research by specifically finding that transformational leadership by superintendents positively impacts teachers and the key concept of CTE.

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APPENDIX A

MULTIFACTOR LEADERSHIP QUESTIONNAIRE

Multifactor Leadership Questionnaire

Leader Form

My Name: _____ Date: _____

Organization ID #: _____ Leader ID #: _____

This questionnaire is to describe your leadership style as you perceive it. Please answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.**

Forty-five descriptive statements are listed on the following pages. Judge how frequently each **statement fits you. The word "others" may** mean your peers, clients, direct reports, supervisors, and/or all of these individuals.

Use the following rating scale:

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

1.	I provide others with assistance in exchange for their efforts	0	1	2	3	4
2.	I re-examine critical assumptions to question whether they are appropriate	0	1	2	3	4
3.	I fail to interfere until problems become serious	0	1	2	3	4
4.	I focus attention on irregularities, mistakes, exceptions, and deviations from standards	0	1	2	3	4
5.	I avoid getting involved when important issues arise	0	1	2	3	4
6.	I talk about my most important values and beliefs	0	1	2	3	4
7.	I am absent when needed	0	1	2	3	4
8.	I seek differing perspectives when solving problems	0	1	2	3	4
9.	I talk optimistically about the future	0	1	2	3	4
10.	I instill pride in others for being associated with me	0	1	2	3	4
11.	I discuss in specific terms who is responsible for achieving performance targets	0	1	2	3	4
12.	I wait for things to go wrong before taking action	0	1	2	3	4
13.	I talk enthusiastically about what needs to be accomplished	0	1	2	3	4
14.	I specify the importance of having a strong sense of purpose	0	1	2	3	4
15.	I spend time teaching and coaching	0	1	2	3	4

Continued ➔

Not at all	Once in a while	Sometimes	Fairly often	Frequently, If not always
0	1	2	3	4

16. I make clear what one can expect to receive when performance goals are achieved 0 1 2 3 4
17. I show that I am a firm believer in "If it ain't broke, don't fix it." 0 1 2 3 4
18. I go beyond self-interest for the good of the group 0 1 2 3 4
19. I treat others as individuals rather than just as a member of a group 0 1 2 3 4
20. I demonstrate that problems must become chronic before I take action 0 1 2 3 4
21. I act in ways that build others' respect for me 0 1 2 3 4
22. I concentrate my full attention on dealing with mistakes, complaints, and failures 0 1 2 3 4
23. I consider the moral and ethical consequences of decisions 0 1 2 3 4
24. I keep track of all mistakes 0 1 2 3 4
25. I display a sense of power and confidence 0 1 2 3 4
26. I articulate a compelling vision of the future 0 1 2 3 4
27. I direct my attention toward failures to meet standards 0 1 2 3 4
28. I avoid making decisions 0 1 2 3 4
29. I consider an individual as having different needs, abilities, and aspirations from others 0 1 2 3 4
30. I get others to look at problems from many different angles 0 1 2 3 4
31. I help others to develop their strengths 0 1 2 3 4
32. I suggest new ways of looking at how to complete assignments 0 1 2 3 4
33. I delay responding to urgent questions 0 1 2 3 4
34. I emphasize the importance of having a collective sense of mission 0 1 2 3 4
35. I express satisfaction when others meet expectations 0 1 2 3 4
36. I express confidence that goals will be achieved 0 1 2 3 4
37. I am effective in meeting others' job-related needs 0 1 2 3 4
38. I use methods of leadership that are satisfying 0 1 2 3 4
39. I get others to do more than they expected to do 0 1 2 3 4
40. I am effective in representing others to higher authority 0 1 2 3 4
41. I work with others in a satisfactory way 0 1 2 3 4
42. I heighten others' desire to succeed 0 1 2 3 4
43. I am effective in meeting organizational requirements 0 1 2 3 4
44. I increase others' willingness to try harder 0 1 2 3 4
45. I lead a group that is effective 0 1 2 3 4

APPENDIX B

MULTIFACTOR LEADERSHIP QUESTIONNAIRE

Equitable Access

Please rate how strongly you agree or disagree with the following statements about equity in your school.

1. At this school, students of all races, ethnicities, religions, socioeconomic, and cultural backgrounds are supported to meet learning standards.
2. This school emphasizes showing respect for all students' cultural beliefs and practices.
3. At this school, all staff are treated equitably, regardless of their gender.
4. At this school, all staff are treated equitably, regardless of their race, ethnicity, cultural background, or religion.
5. This school provides benefits, resources, or services to help staff with social, emotional, or mental health needs.

Professional Development

Please rate how strongly you agree or disagree with statements about professional development in your school. Please note for the items below: "Teachers" means a majority of teachers in the school Professional development includes all opportunities, formal and informal, where adults learn from one another including graduate courses, in service, workshops, conferences, professional learning communities and other meetings focused on improving teaching and learning.

1. Professional development improves teachers' abilities to improve student learning and proficiency.
2. An appropriate amount of time is provided for professional development.
3. Professional development opportunities are aligned with the school's improvement plan.
4. Professional development is culturally responsive to meet the needs of individual teachers.
5. Professional development deepens teachers' content knowledge and cultural proficiency.

6. This school provides effective resources and training for teaching students with Individualized Education Programs (IEPs) across different languages and cultures.
7. Teachers are encouraged to reflect on their own practice.
8. In this school, follow up is provided from professional development.
9. Professional development provides ongoing opportunities for teachers to work with colleagues to refine teaching practices.
10. Professional development is evaluated by participants and results are shared.
11. Professional development enhances teachers' ability to implement instructional strategies that meet diverse learning needs of students.

Leadership

Please rate how strongly you agree or disagree with the following statements about school leadership in your school. Please note for the items below: "Teachers" means a majority of teachers in your school. School leadership is an individual, group of individuals or team within the school that focuses on managing a complex operation. This may include scheduling; ensuring a safe school environment; reporting on students' academic, social and behavioral performance; using resources to provide the textbooks and instructional materials necessary for teaching and learning; overseeing the care and maintenance of the physical plant; or developing and implementing the school budget.

1. The school leadership consistently supports teachers.
2. The faculty and leadership have a shared vision.
3. Teachers are held to high professional standards for delivering culturally relevant instruction.
4. Teachers in this school receive feedback about their teaching on an ongoing basis.
5. The procedures for teacher evaluation are consistent.

Please rate how strongly you agree or disagree with the following statements about teacher leadership in your school. For the following items, "teachers" means a majority of teachers in your school.

1. Teachers are encouraged to participate in school leadership roles.

2. Teachers are trusted to make sound professional decisions about instruction.
3. The faculty has an effective process for making group decisions to solve problems.
4. Teachers are effective leaders in this school.
6. Teachers have agency in using curricula and pedagogy that reflects the school and district's culturally responsive vision for educating students.
7. There is an atmosphere of trust and mutual respect in this school.
8. Teachers feel comfortable raising issues and concerns that are important to them, their students, and their families.

Instructional Practices

Please rate how strongly you agree or disagree with the following statements about instructional practices and support in your school. For the following items, "teachers" means a majority of teachers in your school.

1. Provided supports (i.e. instructional coaching, professional learning communities, etc.) translate to improvements in instructional practices by teachers.
2. Teachers are encouraged to try new things to improve culturally responsive and proficient instruction.
3. This school provides instructional materials and curricular resources that reflect students' cultural background, ethnicity and identity.
4. Teachers use assessment data to inform their instruction.
5. Teachers have agency to make decisions about instructional delivery (i.e. pacing, materials and pedagogy) based on students' needs.
6. Teachers have knowledge of the content covered and instructional methods used by other teachers at this school.
7. Teachers receive coaching in the implementation of culturally responsive and equitable instruction.
9. Teachers lead inclusive practices aligned to state standards in core instruction.
10. Teachers believe every student can accelerate in their learning.
11. Teachers believe what is taught will make a difference in students' lives.
12. Teachers hold every student to high expectations.

Behavior Management

Please rate how strongly you agree or disagree with the following statements about managing student behavior in your school. For the following items, "teachers" means a majority of teachers in your school.

1. The school has supports (i.e. resources, personnel, etc.) in place to support positive student behavior regardless of students' cultural background, ethnicity, and identity.
2. School administrators consistently apply rules for student conduct across student groups.
3. Teachers consistently apply rules for student conduct across student groups.
4. This school provides the materials, resources, and training necessary for me to support students' mental health, physical health, and nutrition.
5. This school provides quality counseling or other services to help students with social or emotional needs.

Time, Workload, and Staffing Levels

Please rate how strongly you agree or disagree with the following statements about the staffing in your school.

1. My school has a sufficient number of licensed staff provided by the district to meet the educational needs of our students.
2. My school has a sufficient number of nonlicensed staff to operate efficiently and effectively.
3. My school has a sufficient number of substitutes available to cover staff absences.

Please rate how strongly you agree or disagree with the following statements about the use of time in your school. For the following items, "teachers" means a majority of teachers in your school.

1. Teachers have time available to collaborate with colleagues.
2. The noninstructional time provided for teachers in my school is sufficient.

Overall

1. Overall, my school is a good place to work and learn.