TRANSFORMATIONAL LEADERSHIP BEHAVIORS OF DEPARTMENT LEADERS AS A PREDICTOR OF COLLECTIVE TEACHER EFFICACY

Jason Stanton

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TRANSFORMATIONAL LEADERSHIP BEHAVIORS OF DEPARTMENT LEADERS AS A PREDICTOR OF COLLECTIVE TEACHER EFFICACY

presented by

Jason Stanton

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of DOCTOR OF EDUCATION

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David P. Bennardo, Ed.D., Dissertation Committee Chairperson
Paula Lester, Ph.D., Dissertation Committee Member
Laura Seinfeld, Ed.D., Dissertation Committee Chairperson

Long Island University
Brookville, NY
DEDICATION

To my wife Sam. Thank you for all the sacrifices you made as I pursued this degree. The countless nights and weekends you spent entertaining our children so I could complete this massive undertaking, understanding when I could not attend family obligations, and for always supporting me in all the crazy endeavors throughout my life. You are the most selfless person I have ever known, and for that reason I am the luckiest husband in the world.

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Thank you to my family. To my parents for always being supportive of this endeavor and understanding when I could not be on the phone for longer than a few minutes. To the Mirenda family that has taken me in as one of their own and have given of themselves in countless ways to help me complete this journey.
ABSTRACT

Researchers generally credit Albert Bandura for providing the theoretical framework for studying collective teacher efficacy. Research shows that principals using transformational leadership behaviors significantly impact collective teacher efficacy. Policies, such as Every Student Succeeds Act, increasingly put pressure on school districts to improve student achievement or lose funding. Supporting literature and research shows that improving collective teacher efficacy improves student performance regardless of student socioeconomic status. Therefore, a department leader’s ability to increase collective teacher efficacy amongst staff directly influences the student achievement within their school district. This researcher investigated the relationship between transformational leader behaviors of department leaders and collective teacher efficacy. The Multi-Factor Leadership Questionnaire, developed by Bass and Avolio and the Collective Teacher Efficacy Scale short form, developed by Goddard and Hoy were distributed in two counties in New York state to determine if a correlation existed between the perceived department leader’s leadership style and the level of collective efficacy of the teacher. Evidence from the study indicates that transformational leadership behaviors and contingent reward behaviors associated with transactional leadership show statistical significance in improving collective teacher efficacy. This research will help school leaders and policymakers better expend resources fostering collective teacher efficacy. Lastly, it demonstrated the importance of department leaders and leadership behaviors that improve collective teacher efficacy, thereby improving student achievement.

Keywords: transformational leadership, transactional leadership, teacher efficacy, self-efficacy, collective teacher efficacy
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CHAPTER ONE: BACKGROUND AND CONTEXT

This study called for the use and understanding of transformational leadership behaviors in department leaders to improve collective teacher efficacy. Improving collective teacher efficacy has a myriad of positive effects on teacher faculties, the most important being improving student achievement (Goddard et al., 2000). This researcher examined the extent to which the leadership style of a department leader analyzed along the continuum of transactional to transformational leadership, related to the collective teacher efficacy beliefs among their staff.

Chapter One serves as the introductory chapter for this dissertation. This chapter begins with a brief background and problem overview that provides a glimpse into the importance of collective efficacy and the potential importance of a department leader's impact on collective teacher efficacy. The research question and hypotheses are presented, followed by the theoretical frameworks for the variables related to the study; collective teacher efficacy and transformational leadership behaviors. This researcher then gives an overview of the research design and concludes with a discussion of the study's significance and the definition of terms.

Purpose of Study

As the stakes continue to rise in education, both administrators and teachers seek new ways to improve student achievement. Although many teachers feel ill-equipped to deal with today's students in the ever-changing world of education, they also feel more responsibility to raise student achievement than perhaps any other stakeholder. The beliefs that a group of teachers have in themselves and their colleagues to deliver instruction that helps students perform at their best continues to serve as one of the most important factors in determining student success. Finding ways to influence these beliefs is one of the most important aspects of any administrator's job. Student and teacher disengagement during the COVID-19 crisis
continues to impact education, making improving collective teacher efficacy even more important.

The essence of this study was to research the link between department leaders’ perceived behaviors on the continuum of transformational, transactional, and laissez faire leadership and the differences in the collective efficacy ratings among secondary staff. In schools where principals demonstrate transformational leadership behaviors, teachers have higher levels of collective teacher efficacy (Akan, 2013; Cansoy, 2020; Demir, 2008; Donohoo, 2016). By researching this potential link with department leaders, this researcher hopes to develop a set of behaviors for all administrators to model that improves collective teacher efficacy.

John Hattie’s most recent meta-analysis, researched up to 1200 meta-studies and 252 factors that influence student achievement and found that collective teacher efficacy significantly impacts student achievement (Hattie, 2012). Moreover, Hattie’s research cites collective teacher efficacy as the top influencers on student achievement (Waack, 2018). This research serves as perhaps the most comprehensive analysis on specific influences related to student achievement. Moreover, improving collective teacher efficacy leads to improved teacher motivation, retention, and being one of the best predictors of student achievement (Ross & Bruce, 2007).

**Organization of the Study**

This dissertation contains five chapters. Chapter One provides an overview of the problem, theoretical framework, research question, hypotheses, and methods. Chapter Two reviews current literature and research related to the definition and history of collective teacher efficacy, transformational leadership, and previous studies that explored the connection between the two. This chapter also explores the theoretical frameworks in detail. The methodology, research design, and development of the study are discussed in Chapter Three. In addition, this
chapter provides a more detailed discussion of the research question and hypotheses. Chapter Four provides an overview of the data collection and a description of the data. Furthermore, findings for the research question and a summary of the findings are presented. The dissertation concludes with Chapter Five. This final chapter summarizes the study, draws conclusions from the data analysis, then discusses the implications, limitations, and recommendations for future research studies.

**Statement of the Problem**

This study aimed to address the lack of current research documenting a department leader's transformational leadership behavior as perceived by the teachers they supervise and their sense of collective teacher efficacy. Collective teacher efficacy is the belief of a group of teachers that they can positively impact student learning (Donohoo, 2016; Goddard 2001). Research consistently shows that improving collective teacher efficacy raises the level of student achievement regardless of socioeconomic status (Bandura, 1986, 1993, 1997; Donohoo, 2016; Goddard et al., 2000; Hattie, 2012). A review of the literature reveals a correlation between principal's transformational leadership behaviors and collective teacher efficacy, thereby positively impacting students' achievement.

With previous research focusing primarily on principal leadership, it is imperative for school superintendents to understand the connection of teacher efficacy with another key administrator responsible for teacher development. A department leader, in many cases, serves as the instructional leader of their respective department. Focusing on content, teaching methods, and handling department resources. While a principal serves as the primary instructional leader for a school building, the department leader connects the departments across the entire district (Leithwood, 2016). This is especially relevant on the secondary level as the
director oversees the curriculum between multiple buildings. A department leader's leadership behavior will be analyzed on a scale ranging from transactional to transformational. This author predicts that behaviors on this scale correlate to differing levels of collective teacher efficacy.

The implementation of No Child Left Behind and Every Student Succeeds Act decree that schools be held accountable for student achievement. It is important for schools to ensure that the teachers they employ impact students in positive ways. Research indicates the positive relationship between collective efficacy and student achievement (Goddard et al., 2000). Thus, it is essential for school superintendents to understand the leadership behaviors of all their administrators that foster a high sense of collective efficacy among teachers. A superintendent that focuses on hiring and training administrators to exhibit behaviors that positively impact collective teacher efficacy, also impact student achievement indirectly by producing leaders of the highest caliber. The purpose of this study is to analyze the relationship between department leaders' leadership behaviors and the level of collective teacher efficacy among the teachers they supervise.

**Research Question**

To address the purpose of this study, the following research question guided the overall study:

What are the differences in the collective efficacy ratings among secondary staff based on the perception of department leader’s behaviors on the continuum of transformational, transactional, and laissez faire leadership?

**Hypotheses**

To further address the purpose of the study, the following hypotheses were tested:
H₀₁: Leadership styles defined as laissez faire, transactional, and transformational of department leaders produce differing levels of collective teacher efficacy.

H₀₂: There is a statistically significant relationship between collective teacher efficacy and the components of transformational leadership; inspirational behavior, idealized influence, intellectual stimulation, and individual consideration as exhibited by department leaders.

H₀₃: There is no statistically significant relationship between collective teacher efficacy and the various components of transactional leadership, including contingent reward and management by exception active as exhibited by department leaders.

H₀₄: There is no statistically significant relationship between collective teacher efficacy and the various components of laissez faire leadership including management by exception passive as exhibited by department leaders.

Conceptual Framework

The first section of this chapter provided an overview of the problem, introduced the research question, and supplied the hypotheses. This section of the dissertation will furnish the frameworks for the concepts this researcher studied. The basis of the theoretical framework of this study consists of the theories of collective teacher efficacy (Bandura, 1997; Goddard, 2001, 2002; Goddard et al., 2000), transformational leadership (Bass 1985, 1998; Bass & Avolio 1990, 1994, 2000; Burns, 1978), and the relationship between the transformational leadership behaviors of school leaders and collective teacher efficacy (Akan, 2013; Cansoy, 2020; Demir, 2008). Collective teacher efficacy is an outgrowth of teacher self-efficacy, the origin of which comes from the work of Bandura’s (1997) cognitive learning theory. Furthermore, Bandura (1997) explored the connection between the two concepts reviewing much of the research conducted during the early 1990’s. While teacher self-efficacy focuses on an individual’s belief
in their ability to impact student learning, collective teacher efficacy refers to a school faculties belief that they can impact student achievement (Bandura, 1997; Donohoo, 2016; Goddard, 2001).

Research reveals a strong relationship between high levels of collective efficacy and student achievement (Goddard, 2001; Hattie, 2012). Moreover, research shows that principals that demonstrate transformational leadership behaviors impact collective teacher efficacy in positive ways (Stewart, 2006). Despite the wealth of information connecting a principal's impact collective teacher efficacy, little research has been conducted regarding department leaders. Researching the already proven principal's connection with department leaders as a variable would provide a blueprint for department leaders to impact student achievement by increasing collective teacher efficacy.

Tschannen-Moran and Barr (2004) reported that supportive leaders create positive environments that contribute to collective teacher efficacy beliefs. Further research conducted by Ross and Gray (2006) showed that transformational leadership behaviors increased commitment to the school organization and improved levels of collective teacher efficacy. Ling and Joo (2019) found that transformational leadership behaviors significantly influence collective teacher efficacy. In addition, the work of Leithwood and Jantzi (1990, 2005, 2008) showed that positive school culture is a result of principal leadership behaviors. Specifically, principals set the school's overall direction, developing people, redesigning the organization, and improving instructional programs. These behaviors are proven to increase many of the factors that influence collective teacher efficacy and reflect the transformational leadership style. This author will show, using evidence from various studies, that transformational leadership behaviors...
influence collective teacher efficacy and therefore student achievement (Cansoy, 2020; Demir, 2008; Goddard, 2001; Ling & Joo, 2019).

Burns (1978) described the process transformational leaders follow to motivate followers beyond their self-interests. In contrast, the transactional leader recognizes their followers' individual motivations and agrees to fulfill them in exchange for desired behaviors. Bass (1985) proposed a model that defined the behaviors associated with these leadership styles but did not view these leadership styles as exclusive but as a spectrum of behaviors a leader exhibited based on the situations presented. In one situation a leader could exhibit transactional behaviors, while yet another situation would see a leader employ transformational leadership behaviors. Bass and Avolio (1990, 2000) designed the Multifactor Leadership Questionnaire to identify these behaviors and categorize the overall leadership style of a leader.

An in-depth review of the literature will show that school leaders are best served by exhibiting transformational leadership behaviors. These behaviors improve teacher motivation and a staff's overall belief in the organization's abilities to reach students, thereby increasing collective teacher efficacy. Much of the research to this point has focused on the connections between building principal's behaviors and the impact on collective teacher efficacy. The next logical step in this research's development is to study the specific behaviors of department leaders that improve collective teacher efficacy.

**Research Design**

This study consisted of a quantitative study of the relationship between the leadership behaviors of department leaders and their staff's sense of collective teacher efficacy. The researcher surveyed teachers in a middle school and high school located in suburban school districts located in two counties in New York state. Collective teacher efficacy was measured
using the Collective Efficacy Short Form and the teacher’s perception of their department leader’s transformational leadership behaviors was measured by the Multifactor Leadership Questionnaire. In addition, subjects identified basic demographics such as gender, years of service and degree status. The surveys were administered electronically through links sent via electronic mail.

Statistical analyses were then performed using the SPSS to compute the data collected from the MLQ and CE-Scale Short Form surveys. Pearson Product-Moment Correlation Coefficients (PPMC) were used to determine the interrelatedness between the factors tested by two instruments and multiple regression techniques were employed to determine the predictive power of the independent variables to the dependent variables. These techniques were used to answer the overall research question and hypotheses presented.

Limitations of Study

This study was limited by the sample being only districts from two counties in New York State. While these districts provided diversity in terms of various socio-economic needs, size, performance, and have department leaders of various make-up, these results can only be generalized to similar locations. In addition, this quantitative study only collected data from teachers supervised by department leaders defined as a chairperson or department supervisor. This eliminated teachers supervised by other offices, such as building level or other district level personnel and did not include qualitative research methods that could have explored those connections. Furthermore, only secondary teachers were surveyed as department leaders typically spend most of their time at the secondary level.
Significance of Study

As the literature review will show, references for transformational leadership, collective teacher efficacy, and teacher self-efficacy are numerous. This review also demonstrates the limited research relating to the link between department leader leadership behaviors and collective teacher efficacy as much of the research has traditionally focused on school principals. Furthermore, as the demand to improve student achievement increases, improving collective teacher efficacy could serve as a significant tool in an administrator's toolbox to positively affect student outcomes.

This research contributes to the existing body of research connecting transformational leadership behaviors and collective teacher efficacy. Much of this research focuses on the behaviors of principals, while this researcher studied department leaders. The findings of this study provide department leaders with the specific behaviors they can exhibit to increase collective teacher efficacy. In addition, this study helps to supply school superintendents with a framework for their entire administrative team to increase student achievement by improving collective teacher efficacy.

In districts that do not employ department leaders, this study demonstrates the importance of creating such positions. The behaviors identified by this study may also be useful in the interview and training process of administrators. Lastly, the findings of this study help fill a gap in the existing research as little research has been conducted on the leadership behaviors of department leaders and collective teacher efficacy. By studying the results from this study, other district leaders can learn the behaviors that improve collective teacher efficacy.
Definition of Terms

The following terms are defined to inform the reader of the subject matter to be presented in this study:

**Leadership:** Burns (1978) defined leadership as a person that persuades others to act in a way that supports the needs of the leader or organization. This study will focus on expanding this definition as the department leaders' behaviors that impact collective teacher efficacy.

**Transactional Leadership:** A style of leadership that focuses on rewarding followers based on the quality of their output (Burns, 1978). Followers of transactional leaders receive discipline for poorly performing and external rewards for desired outcomes. These followers tend to be motivated purely by individual interests.

**Transformational Leadership:** A style of leadership that focuses on inspiring followers to sacrifice their own interests for the good of the organization, respects and grows the individual talents of followers, behave as role models, and stimulate innovation and creativity among followers (Bass, 1985).

**Efficacy:** Efficacy refers to a person's belief about their capacity to exercise influence over various events that affect their lives (Bandura, 1986).

**Teacher Efficacy:** Teacher efficacy refers to the extent a teacher believes they affect student learning outcomes (Bandura, 1997). This is based upon their own judgment of their abilities.

**General Teaching Efficacy:** A teacher's belief in the general relationship between teaching and learning (Woolfolk & Hoy, 1990). Essentially, a teacher believes if there is teaching there is learning.
Personal Teaching Efficacy: The level of confidence a teacher has in their own ability to facilitate student learning (Gibson & Dembo, 1984).

Collective Teacher Efficacy: Collective teacher efficacy is a group of teachers' belief in their capability to exert the necessary actions that produce an outcome (Bandura, 1997). While a single teacher may believe in their ability to raise student achievement, collective teacher efficacy would be the belief of an entire school faculty's ability to raise student achievement.

Department Leader: Individual who supervises instruction for academic departments across an entire school district (K-12 director/supervisor) or at the building level (chairperson).

Summary

Current federal mandates seek to make schools and school leaders more accountable for student achievement. As previously discussed, high levels of collective teacher efficacy among a school faculty lead to increases in student achievement. School districts are employing department leaders to lead instruction and streamline curriculum more often. A chief function of this position is to enable teachers through division of school resources and enabling the teaching of curriculum through teacher engagement in proven educational strategies. A review of the literature reveals links between transformational leadership characteristics of principals and collective teacher efficacy. There is a lack of research in this area regarding department leaders. This study seeks to fill this gap and identify the specific behaviors along the continuum of transactional to transformational leadership that improve collective teacher efficacy. A review of current literature inquired into the theoretical background of collective teacher efficacy and its development. Furthermore, the literature reveals the relationship between transformational leadership behaviors of administrators and collective teacher efficacy.
CHAPTER TWO: REVIEW OF THE LITERATURE

This chapter explores relevant literature related to leadership styles and collective teacher efficacy. It begins with the historical connections between teacher self-efficacy studies, their importance, and the connection to collective teacher efficacy. The chapter includes a review of relevant studies that helped define collective teacher efficacy and examines its importance. The chapter then moves to the relevant historical studies and concepts of leadership before providing a thorough examination of the transformational leadership style. Finally, the chapter ends with a review of several studies that reveal the impact of transformational leadership behaviors in the educational setting and the connection to collective teacher efficacy.

The chapter is divided into four subsections. The first subsection reviews literature regarding the development of teacher self-efficacy, its importance, and its connection to the development of collective teacher efficacy. The second contains literature related to collective teacher efficacy and its importance in schools. The third subsection contains a literature review of leadership styles, specifically the model of transformational leadership, and reviews studies relevant to the educational setting. Lastly, this author examines studies that made inquiries into the connection between transformational leadership behaviors and collective teacher efficacy.

Teacher Self-Efficacy

Prior to discussing collective efficacy, the literature review will discuss the historical development of teacher self-efficacy. Teacher self-efficacy is a teacher's perception of their teaching ability (Bandura, 1997). Collective teacher efficacy is both an outgrowth and interconnected with this concept. This section also discusses the development of early instruments created to measure self-efficacy that serve as the basis for the one of the instruments this researcher will use to gather evidence. Moreover, the literature review will demonstrate the
importance of self-efficacy and its connection to improving collective teacher efficacy in the school setting. Tschannen-Moran et al. (1998) wrote:

The research suggests that teachers’ sense of efficacy plays a powerful role in schooling. Given the importance of a strong sense of efficacy for optimal motivation in teaching, we do well to examine how efficacy is developed, when it is most malleable, and what factors may lead to its improvement. Assuming that efficacy and student achievement are reciprocally related, it makes sense to consider how efficacy might be strengthened. (p. 23)

**Locus of Control and RAND Study**

The roots of self-efficacy lie in the theories developed by Julian Rotter in the 1960’s. Rotter developed the basis of social learning theory at a time when psychology remained focused on the unconscious motivational theories developed by Freud. The idea of teacher efficacy grew out of Rotter’s locus of control theory and Bandura’s social cognitive theory. The concept of locus of control refers to how much a person believes they have control over the situations that affect their lives. In addition, this notion is divided into internal locus of control and external locus of control. A person with a strong internal locus of control commonly believes that the results they produce are a by-product of their own effort (Mearns, 2014). A person with an external locus of control generally believes that their success or failure is based on external factors such as luck or fate. Therefore, individuals interpret the same outcome differently based on their individual locus of control.

In 1976, The Rand Corporation added two items to a questionnaire examining several reading programs and intervention models based on the work of Julian Rotter. Item 1, “When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and
performance depends on his or her home environment” assessed a teacher’s beliefs in their ability to overcome outside factors when educating students. Item 2 evaluated the teacher's confidence in their ability to impact the most difficult student situations; “If I really try hard, I can get through to even the most difficult or unmotivated students” (Armor et al., 1976). During the Rand Studies, teachers indicated their level of agreement and these two items, that added together determined teacher efficacy (Ashton et al., 1982). Tschannen-Moran et al. (1998) discussed early connections of teacher efficacy to student achievement:

Using the Rand items as measures, correlates of efficacy range from student achievement to teacher stress and the implementation of innovation. Among basic skills teachers at four secondary schools, Ashton and Webb reported that when general teaching efficacy (GTE), as measured by the first Rand item, was added to a regression equation that included the math scores from the previous spring on the Metropolitan Achievement Test, the amount of variance explained in math achievement scores increased by 24%. Personal teaching efficacy (PTE), as measured by the second Rand item, explained an additional 46% of the variance in student achievement in language as measured on the Metropolitan Achievement Test. These findings point to a substantial impact of efficacy on student achievement. They also are perplexing because it is unclear why personal teaching efficacy should affect language achievement, while general teaching efficacy affects math achievement. (p. 4)

Thus, the debate began on the definition of and importance of teacher efficacy in the classroom guided by the principles set forth by the RAND study and Rotter.
Bandura and Teacher Self-Efficacy

In contrast, Albert Bandura identified teacher efficacy as a type of self-efficacy. In general, teacher efficacy deals with perceptions of competency, rather than actual competence. This belief affects how much effort and how long someone will persist if they face difficulty in a particular situation and how they cope with demanding situations (Bandura, 2000). Furthermore, Bandura (1997) discussed various points of data showing locus of control as a weak predictor of behavior in subjects, while demonstrating self-efficacy as a strong predictor. Goddard et al. (2000) summarized the link between the two theories:

The existence of the two separates but intertwined conceptual strands growing from two theoretical perspectives has contributed to some confusion about the nature of teacher efficacy. Some educators have assumed that Rotter's internal locus of control and Bandura's perceived self-efficacy are roughly the same. Bandura clarified the difference between these two concepts. Beliefs about one's capability to produce certain actions (perceived self-efficacy) are not the same as beliefs about whether actions affect outcomes (locus of control). Indeed, perceived self-efficacy and locus of control bear little or no empirical relationship with each other. Further, perceived self-efficacy is a much stronger predictor of behavior than locus of control. Rotter's scheme of internal-external locus of control is concerned primarily with causal beliefs about the relationship between actions and outcomes, not with personal efficacy. One may believe that a particular outcome is internally controllable, that is, caused by the actions of the individual, but still have little confidence that he or she can accomplish the desired actions. (p. 481)
Bandura also expanded on the various ways self-efficacy contributes to a person’s cognitive development and discussed the link between efficacy and performance in students and teachers. Bandura (1993) stated, “Efficacy beliefs influence how people feel, think, motivate themselves, and behave” (p. 118). In addition, efficacy influences cognitive, motivational, and functional processes. Strong perceived self-efficacy directly correlates with the level of goals a person sets for themselves. The stronger the perception, the higher the goals.

When constructing various scenarios cognitively, a person with strong perceived self-efficacy visualizes successful outcomes as opposed to failures. In summary, a person with a high level of perceived self-efficacy shows limited self-doubt when processing or planning for a variety of situations. Bandura (1993) wrote, “Personal accomplishments require not only skills but self-beliefs of efficacy to use them well. Hence, a person with the same knowledge and skills may perform poorly, adequately, or extraordinarily depending on fluctuations in self-efficacy thinking” (p. 119).

People with prominent levels of efficacy that fail while attempting challenging tasks tend to view these failures as part of the learning experience (Bandura, 2000). Wood and Bandura (1989) designed an experiment to test this concept and the conception of a person's ability. The researchers told the subjects that their tasks reflected an acquirable skill or inherent intelligence. They concluded that those who believed the task presented were acquirable skills persevered through the experiment while the other subjects tended to stop the task or perform worse. Positioning one group with high self-efficacy beliefs resulted in better performance.

Furthermore, the extent to which a person perceived they control their environment impacts their self-efficacy and their belief they can modify their environment.
Wood and Bandura (1989) then conducted a second experiment that studied this concept. One of the subject groups operated with the interpretation that their environment could be influenced, while a second group did not. Unsurprisingly, the group that believe they could influence their environment displayed here levels of self-efficacy when facing numerous challenging tasks. While these two experiments demonstrate the importance of self-efficacy on cognitive processes, Bandura (1993) discussed the importance of self-efficacy and motivation:

Self-efficacy beliefs contribute to motivation in several ways: They determine the goals people set for themselves, how much effort they expend, how long they persevere in the face of difficulties, and their resilience to failures. When faced with obstacles and failures, people who harbor self-doubts about their capabilities slacken their efforts or give up quickly. Those who have a strong belief in their capabilities exert greater effort when they fail to master the challenge. Strong perseverance usually pays off in performance accomplishments. (p. 131)

In other words, a person's motivation and outcome expectations are partially impacted by their self-efficacy. Furthermore, elevated levels of self-efficacy decrease avoidance behavior, improves coping skills, and reduces achievement anxiety (Bandura, 1993).

One of the guiding principles in education is to create lifelong learners, improving student self-efficacy serves as one tool to accomplish this feat. High self-efficacy among students correlates with higher motivation and self-regulation, which leads to greater success in self-directed learners (Bandura, 1993, 1997). Bandura (1993) also cited the work of Zimmerman (1990) that observed, “good self-regulators do better academically than poor self-regulators” (p. 136). Furthermore, students that cannot deal successfully with difficulties and stress cannot self-regulate themselves. Bandura (1993) discussed his 1992 study in which student level of
perceived efficacy was compared to their motivation to hand in assignments on time and stick to academic's activities as opposed to leisure activities: “Perceived efficacy promoted academic achievement both directly and by raising their personal goals” (p. 137).

Teacher’s beliefs in their own efficacy impacts their ability to reach students in the classroom. Woolfolk and Hoy (1990) stated, “teachers’ sense of personal efficacy affects their general orientation toward the educational process as well as their specific instructional practices. Those who have a low sense of instructional efficacy favor a custodial orientation that relies heavily on extrinsic inducements” (p. 140). In addition, teachers with high levels of self-efficacy create classrooms with students demonstrating higher levels of self-efficacy (Tschannen-Moran et al., 1998). Teachers with high levels of self-efficacy better prepare students to be self-motivators (intrinsic motivation), while teachers with low levels of self-efficacy lean on extrinsic rewards or punishments to motivate students (Bandura, 1993,1997). Students motivated in this fashion only learn to avoid punishments and move toward rewards rather than completing tasks that help obtain personal fulfillment.

Teachers with low levels of self-efficacy in turn lower the self-efficacy of the students they teach. Bandura (1993) reported, “Students self-doubts become even more severe if the teachers to whom they transfer harbor self-doubts about their capabilities to promote academic attainments” (p. 142). Bandura also touches briefly on the concept of collective teacher efficacy near the end of his analysis, pointing to a connection between high levels of collective teacher efficacy correlating with teacher longevity. In addition, Bandura (1993) remarked, “Staffs collective sense of efficacy that they can promote high levels of academic progress contributes significantly to their schools’ level of academic achievement” (p. 143). Although somewhat brief, Bandura starts the conversation, conceptually, about the connection of collective efficacy
and student achievement. Fostering collective teacher efficacy remains one of the most important aspects of a department leader and more specifically a transformational leader.

**Measuring Self-Efficacy**

Gibson and Dembo (1984) designed a 30-item Likert-type scale to measure teacher efficacy that most researchers use some variation of to test self-efficacy since its creation. Additionally, modified versions of this scale are used to measure collective teacher efficacy substituting questions seeking organizational efficacy beliefs for the individual efficacy questions found in the original instrument. The researchers detailed the purpose of their study to create an instrument to measure the self-efficacy of teachers and investigate the classroom behaviors of teachers with high efficacy as compared to those with low efficacy by conducting classroom observations.

Initially the researchers conducted teacher interviews and detailed consistency between teacher efficacy with several of the factors researched by Bandura to develop questions on a Likert scale to measure efficacy. Upon development of the Teacher Efficacy Scale, 208 elementary school teachers from 13 elementary schools completed the scale at faculty meetings. The two factors tested consisted of teaching efficacy, which was comparable to Bandura's outcome expectancy and personal teaching efficacy represented the teacher's belief of their ability to promote learning despite outside factors (Gibson & Dembo, 1984).

After identifying levels of self-efficacy among the teachers, the researchers conducted classroom observations to study the behavior patterns among four highly efficacious teachers and four low efficacious teachers. Upon observing each teacher for approximately seven- and one-half hours, the researchers reported several differences between each teacher group. Gibson and Dembo (1984) wrote, “The differences between groups on the teacher use of time variables
presented an interesting picture of very different kinds of classroom organizations and use of whole class and small group instruction” (p. 578). Highly efficacious teachers spent more time preparing lessons, checking student seatwork, and conducting whole class instruction. While teachers with low levels of efficacy spent more time in small group instruction with less student monitoring. Furthermore, low efficacious teachers were more likely to give answers if students struggled with questions, as opposed to the highly efficacious teachers who showed more persistence in their questioning (Gibson & Dembo, 1984).

The results of the study concluded the multidimensional nature originally proposed by Bandura. However, the researchers discussed the necessity for more research into the various facets of teacher self-efficacy. Moreover, the link between personal teacher efficacy and teaching efficacy showed only a moderate correlation. The findings also suggested a link between efficacy and classroom behaviors. Lastly, the researchers proposed future studies refine the instrument and explore Bandura’s theories more deeply (Gibson & Dembo, 1984). While not expressly stated, referencing a need to go further with Bandura’s theory also implies an inherent need to explore the concept of collective teacher efficacy.

Megan Tschannen-Moran et al. (1998), examined the theoretical works of Rotter, Rand, and Bandura and introduced a model to streamline the theories. The authors began their research by examining patterns from previously developed instruments. These instruments included the two items from the Rand study, Rose and Meway’s 28-item measure entitled Teacher Locus of Control developed in 1981, the Webb Scale developed in 1984, and various versions of the Gibson and Dembo instrument. Lastly, the authors leaned heavily into the theoretical works of Albert Bandura to further establish an integrated definition of self-efficacy.
Tschannen-Moran et al. (1998) stated, “Self-efficacy has to do with self-perceptions of competence rather than actual level of competence. This is an important distinction because people regularly overestimate or underestimate their actual abilities, and these estimations may have consequences for the courses of action they choose to pursue” (p. 7). Early studies consistently pointed to a link between high teacher efficacy, high student achievement, experimentation in the classroom, and overall positive school cultures (Tschannen-Moran et al., 1998).

**Sources of Self-Efficacy**

To create a universal definition for individual teacher efficacy, Goddard et al. (2000), summarized the basis Tschannen-Moran’s integrated model of teacher efficacy: “the major influences on efficacy beliefs are assumed to be the attributional analysis and interpretation of the four sources of information about efficacy described by Bandura: mastery experience, physiological arousal, vicarious experience, and verbal persuasion” (p. 481). Goddard, et al. (2000), credited Albert Bandura’s social cognitive theory and the groundbreaking work of Tschannen-Moran et al. (1998) with creating this comprehensive definition of teacher efficacy.

As previously stated, Tschannen-Moran et al. (1998) view teacher efficacy as the teacher's evaluation of two factors; the teacher's opinion of their personal capability to teach and considers their own personal weaknesses. This varies from lesson to lesson or even moment to moment in the classroom, depending on the situation. The first factor that impacts teacher efficacy is mastery experiences. If a teacher perceives a teaching experience to be successful, their efficacy increases. For example, a teacher executes what they consider an exceptional lesson and sees a true understanding of content as students complete an exit card as they leave the lesson. In addition, vicarious experiences represent a second factor that impacts teacher
efficacy. Watching other teachers, especially beginning teachers, gives teachers a sense of successful strategies and who can learn in the classroom. Comparisons to other teachers lead the observer to believe they can teach and succeed under similar circumstances (Bandura, 1986).

Verbal persuasion and cognitive processes serve as third and fourth factors that influence teacher efficacy. The most impactful form of verbal persuasion, specific performance feedback for stakeholders, produces the greatest impact when it is focused and constructive. Unspecified or excessively strident feedback consisting of generalizations may lead to lower teacher self-efficacy (Bandura, 1997). Tschannen-Moran et al. (1998) wrote that administrators should, “focus on the positive results of teacher behaviors and talk about it in terms of factors under teachers’ control, such as effort and the planning that has gone into a lesson, teachers will be more likely to make similar attributions” (p. 27). Lastly, teachers reflect on all these factors and their experience in the classroom attributes to their level of self-efficacy. This cognitive processing allows for the teacher to judge their successes and failures based on their own abilities versus outside factors. Tschannen-Moran et al. (1998) remarked,

> In our model, the judgment a teacher makes about his or her capabilities and deficits is self-perception of teaching competence, while the judgment concerning the resources and constraints in a particular teaching context is the analysis of the teaching task. In making judgments of self-efficacy, teachers weigh their self-perceptions of personal teaching competence considering the assumed requirements of the anticipated teaching task. The standards the teacher holds for what constitutes good teaching will influence how these two factors are weighed. (p. 20)

Positively impacting personal teacher efficacy also raises collective teacher efficacy (Tschannen-Moran et al., 1998). A department leader would be hard pressed to create
opportunities for a teacher to reflect on their practice to activate these cognitive experiences.

The evolution of teacher self-efficacy led to the development of collective teacher efficacy. Collective teacher efficacy is one of the most important factors in education as high levels are associated with higher levels of student achievement (Bandura, 1993, 1997; Cybulski et al., 2005; Fancera, 2011). Moreover, higher levels of teacher self-efficacy are associated with higher levels of collective teacher efficacy (Goddard et al., 2004; Guskey & Passaro, 1994; Tschannen-Moran & Barr, 2004).

**Collective Teacher Efficacy**

As the literature review continues to develop, it is important to remember the goal of the research study. This author wishes to show a connection between the transformational leadership styles of department leaders and collective teacher efficacy. The first part of this literature review showed the historical background leading to the development of the concept of teacher self-efficacy and the basis for the instruments used to measure it. The second part of this chapter will now show the development of collective teacher efficacy and its importance in the school setting. Collective teacher efficacy differs from individual teacher efficacy in that collective teacher efficacy refers to expectations of effectiveness of the teaching staff to which someone works with, while personal teacher efficacy refers to expectations about the teacher’s own teaching ability. A Goddard et al. (2000), defined collective teacher efficacy as: “the perceptions of teachers in a school that the efforts of the faculty will have a positive effect on students” (p. 480). In other words, collective efficacy is the shared beliefs of the group in their capability to carry out a measure. Although collective and individual teacher efficacy are similar and connected, they are completely distinct.
Looking at a school organization from a broad perspective, collective teacher efficacy potentially explains the differences in those organizations in their ability to educate students. Bandura (1997) defined collective efficacy as “the performance capability of a social system as a whole” (p. 469). In addition, teachers feel a shared sense of responsibility for student outcomes, face a special set of challenges, and have little control over the work environment. Therefore, improving collective teacher efficacy encourages improvement in student achievement. The previously discussed sources of individual teachers' efficacy, mastery experience, vicarious experience, social persuasion, and emotional learning serve as the foundation for collective teacher efficacy (Bandura, 1997).

**Sources of Collective Teacher Efficacy**

School organizations experience success and failure as a group. If schools succeed, collective efficacy increases. Easy and frequent group successes produce little impact as successes some measure of difficulty to impact collective efficacy. In addition, Huber (1991) surmised that the resiliency of collective efficacy required an organization to experience some sense of overcoming difficulties using purposeful effort. For example, an entire school succeeds in improving student attendance by frequently contacting parents. Teachers also need to hear of the successes of other teachers to promote individual efficacy. These vicarious experiences also positively influence collective teacher efficacy. Social persuasion also solidifies collective teacher efficacy. Unlike the previously mentioned examples, social persuasion requires previous success to be a change agent. Furthermore, high levels of collective efficacy in an organization weathers crises in positive ways. Efficacious organizations interpret emotions correctly and do not overreact, these organizations are better able to manage crisis situations (Bandura, 1997).
Measuring Collective Teacher Efficacy

Goddard et al. (2000) expanded on the previously mentioned works of Bandura, and wrote: “to the extent collective teacher efficacy is positively associated with student achievement, there is strong reason to lead schools in a direction that will systematically develop teacher efficacy; such efforts may indeed be rewarded with continuous growth in not only collective teacher efficacy but also in student achievement” (p. 483). The researchers surmised that the interpretation of the four factors discussed above profoundly impacts any plan that seeks to improve collective teacher efficacy. Teachers analyze and interpret the sources and then in turn assess their own competence. This leads to an overall increase or decrease of collective teacher efficacy. Feedback from administrators and other teachers on the outcome of those experiences and a teacher’s own assessment further improves their self-efficacy, thereby increasing the staff’s overall collective efficacy (Goddard et al., 2000).

Analyzing the teaching tasks and assessing teaching competence is the basis in developing collective teacher efficacy. In other words, analyzing the specifics of the four sources of collective teacher efficacy determines a teacher’s definition of success and thereby improves efficacy collectively. In developing this theory, the researchers developed an instrument (survey), to seek a link between their theory of collective teacher efficacy and student achievement. The researchers developed their measurements based on group orientation based on the Likert scale developed by Gibson and Dembo in 1984. After a preliminary review, basic field tests using responses from six teachers, and pilot studies, the researchers conducted a study using a larger sample and compared their findings with student achievement.

The study’s population consisted of 452 completed teacher surveys collected from 47 different elementary schools in an urban area. The seventh edition of the Metropolitan
Achievement Test provided student test scores, demographic information, and socioeconomic status, and provided 7,016 students as the final sample (Goddard et al., 2000). The surveys were distributed during faculty meetings. Each participant filled out a variety of surveys that were distributed in such a way that the collective efficacy survey was never administered with two participants sitting next to each other. The surveys distributed consisted of questions related to collective efficacy, faculty trust in colleagues, and personal teaching efficacy. Collective teacher efficacy served as the independent variable. The data revealed a moderate correlation between collective efficacy and personal teacher efficacy, trust in colleagues significantly correlated to collective teacher efficacy and no statistically significant correlation existed between environmental press and collective teacher efficacy. Goddard et al. (2000) wrote, “These results provide evidence that the collective teacher efficacy scale employed in this study is valid. In addition, the measure has high internal reliability” (p. 496).

The results of these surveys were then compared to the dependent variable of student achievement consisting of mathematics and reading scores collected from the Metropolitan Achievement Test. Additionally, a multilevel analysis compared these scores to the socioeconomic status of the students and the level of collective teacher efficacy in their school. As previously stated, Bandura (1993) found that collective teacher efficacy has a greater effect on student achievement than socioeconomic status. Furthermore, Bandura (1993) found that high levels of collective teacher efficacy cancel out the negative effects of socioeconomic status. Consistent with these findings, Goddard et al. (2000) reported, “collective teacher efficacy is a significant predictor of student achievement in both mathematics and reading achievement. Indeed, the effect of collective teacher efficacy is greater in magnitude than that of any one of the demographic controls for both achievement variables” (p. 500). The researchers concluded that
both the theoretical model and instrument produced reliable and valid measures of collective efficacy. Lastly, high levels of collective efficacy produced higher achievement scores in mathematics and reading supporting the findings of Bandura’s study conducted in 1993.

**Importance of Collective Teacher Efficacy**

Thus far, this author has defined collective efficacy, discussed its sources, and measurement. The literature review will now discuss the importance of collective teacher efficacy as it relates to student achievement and productive teacher behaviors.

**Student Achievement**

Sandoval et al. (2011) further researched the connection between collective efficacy and student achievement in economically disadvantaged middle schools in Texas. The population consisted of all economically disadvantaged middle schools in Texas that received unacceptable or exemplary ratings two years in a row based on student achievement. The school rating served as the independent variable and collective efficacy served as the dependent variable. Lastly, the researchers measured collective efficacy by providing a twelve item Likert-scale survey to 113 teachers, including 46 from exemplary schools and 67 from unacceptable schools.

Using a one-way analysis of each item on the survey, the researchers found a connection between teacher collective efficacy and student achievement to be statistically significant. Based on the data, collective efficacy of a school influences the achievement level of students. Sandoval et al. (2011) observed, “The collective efficacy of teachers from Exemplary campuses was significantly higher than that of teachers from Academically Unacceptable campuses” (p. 19). This impact occurs regardless of student socioeconomic status, further building on Bandura’s theories. The researchers identified that several schools in the study served similar students but produced different levels of student achievement. Alas, the dependent variable
being identified as collective teacher efficacy levels being higher in higher achieving schools (Sandoval et al., 2011). The researchers did not design the study to find the reasons collective teacher efficacy flourished on the exemplary campuses. A look at the behaviors of department leaders and other school leaders that influence collective efficacy would be a good starting point. Most importantly, the findings showed that school leader behaviors that influence collective efficacy, also improve student achievement.

Donohoo (2018) conducted a literature review to determine the productive behaviors and other consequences that result from high levels of collective efficacy, and their effect on student achievement. From this body of research, the research concluded that enough statistically significant data exists to show that the higher collective teacher efficacy, the higher student achievement regardless of socioeconomic status. The significance of this cannot be underestimated, as socioeconomic status remains one of the largest drivers of student achievement. Furthermore, Donohoo (2018) demonstrated that collective teacher efficacy influences several other positive teacher behaviors.

**Productive Teacher Behaviors**

Donohoo (2018) reviewed relevant published, and peer reviewed studies written post 2000 using various databases. Thirty-four relevant studies that include links to productive behaviors and other positive consequences were analyzed. Donohoo (2018) concluded that principals that focus on producing positive teacher leadership behaviors correlate with their perception of the level of impact they have on students and the school at large. Furthermore, high level of collective teacher efficacy led to greater job satisfaction and teacher longevity (Goddard et al., 2015).
In the studies reviewed, collective efficacy also positively correlated with attitudes toward students. Teachers felt more connected to students, most noteworthy special education students, and the school in which they worked. Also, several studies showed that higher teacher expectations of students created positive outcomes in student achievement, and the inverse was apparent. Furthermore, risk taking in the classroom in relation to instructional practices and positive relationships with parents also connect to collective teacher efficacy (Goddard & Goddard, 2001).

This literature review demonstrated that prominent levels of collective teacher efficacy encourage several positive consequences. Although the researcher provided a comprehensive literature review, extraneous variables were not considered as the focus remained solely on collective teacher efficacy as the driving force behind the positive behaviors discussed. Donohoo (2018) suggested, “If efficacy is going to be fostered in schools as a means of increasing student outcomes, insights into what is known about the relationship between CTE, and leadership styles and practice is needed” (p. 341). The leadership styles of department leaders directly impact collective teacher efficacy as they have the largest opportunities for coaching teachers.

High levels of teacher efficacy also correlate with teacher leadership. Derrington and Angelle (2013) found a strong link between the level of teacher leadership and a school staff’s level of collective efficacy. In their study, collective teacher efficacy served as the dependent variable, while teacher leadership served as the independent variable. Derrington and Angelle (2013) summarized the behavior of a teacher leader as:

Sharing knowledge with colleagues, reflecting on instructional work, engaging in action research, mentoring others, promoting social consciousness, taking risks, nurturing
relationships, encouraging professional growth, standing for and helping others with change, challenging the status quo, focusing on curriculum improvements, and playing a vital role in school reform. (p. 3)

These desirable behaviors among staff help establish a culture of learning and help department leaders distribute leadership amongst many teachers. Furthermore, improving collective teacher efficacy also helps with this type of empowerment (Goddard, 2001).

The researchers sought to determine the extent of teacher leadership and the measure of collective efficacy using two different questionnaires. The distribution of the questionnaires occurred in two different states, one southeastern and one northwestern, resulting in 719 teacher responses (Derrington & Angelle, 2013). The Teacher Leadership Inventory and Teacher Efficacy Belief Scale served as the questionnaires; principals then shared online links with the teachers in their schools. The surveys remained available for thirty days.

The findings of the study confirmed a strong association between the level of teacher leadership and collective teacher efficacy. Derrington and Angelle (2013) stated, “Findings from this study indicate that teachers who believe in the capacity of the faculty as a whole and in the capability of individual teachers create schools where the extent of teacher leadership is greater” (p. 6). In addition, the study supports the positive aspects of improved collective efficacy and teacher leadership on the faculty’s behavior overall. In this study, schools that exhibited high levels of both contained staff that behaved consistently in ways that support school success (Derrington & Angelle, 2013).

For several years, Einar and Sidsel Skaalvik extensively researched the link between self-efficacy, collective teacher efficacy, and a teacher's sense of belonging. Skaalvik and Skaalvik (2019) wrote, “the available research indicates that collective teacher efficacy is also positively
related to teacher motivation and job satisfaction and negatively related to teacher burnout” (p. 1400). Teachers with a lower sense of both efficacies are more likely to reach a state of burnout and leave the profession (Skaalvik & Skaalvik, 2007). Furthermore, the researchers summarized the findings of several studies that report positive correlations between teacher self-efficacy and collective teacher efficacy.

The purpose of the 2019 study was to further explore the link between the two efficacies with a teacher's perceptions of demands and resources they perceived. These resources included student discipline, support from other teachers and administration, and value consonance (Skaalvik & Skaalvik, 2019). These demands and resources included the level of student discipline, support from other teachers and administration, and value consonance (the teacher's perception of their ability to fit into the value system held by the rest of the faculty). The job demands included student discipline, student diversity, and demands of time.

Upon conducting a factor analysis, the researchers sought to establish a link to feelings of belonging and engagement among the teachers. Belongingness was measured as the feeling of acceptance by other teachers and the leadership. Engagement was measured in three dimensions, vigor, dedication, and absorption into their work (Skaalvik & Skaalvik, 2019). Moreover, the researchers also looked to connect the two efficacies to the positive associations between engagement and belonging. A questionnaire containing questions to test self-efficacy, collective teacher efficacy, belonging, engagement, job resources, and job demands was administered. The researchers distributed the questionnaire to 760 teachers in 22 different schools and grades in Norway.

The researchers analyzed the data using confirmatory factor analysis and found a moderate correlation between the two efficacies, but the strongest association found was the
connection between collective efficacy and administrative support. The teachers’ feeling of belonging/engagement positively correlated with job resources and collective teacher efficacy. In contrast, the researchers found no correlation between collective teacher efficacy and job demands. Engagement was also slightly significant to the job demand variables and not for collective teacher efficacy. Most importantly, Skaalvik and Skaalvik (2019) reported that teachers’ self-efficacy beliefs are influenced by collective teacher efficacy beliefs, which serve as mediating factors between the job resources at school and teacher self-efficacy. Thus, increasing collective teacher efficacy leads to a greater feeling of teacher belonging within their school.

Skaalvik and Skaalvik (2019) also theorized that the importance of collective efficacy supports a teacher team in collaboration and improving the aspects of a positive learning culture. This research demonstrated the connection of self-efficacy to collective teacher efficacy. The experiment was well designed as the researchers created and validated their instrument through a pilot study prior to gathering the data analyzed in this study. In addition, the researchers conducted an extensive literature review of the subject matter prior to executing their study. Lastly, the techniques used to analyze the data accurately produced data that allowed for firm conclusions by the researchers.

There seems to be little argument that collective efficacy beliefs are important to the development of positive school culture. Up to this point, the literature review showed the strong relationship between collective teacher efficacy and student achievement. It also provides evidence that department leaders should foster its development with experienced and novice teachers alike. In addition, the research presented in the literature review also suggests that a strong sense of collective teacher efficacy improves teacher’s self-efficacy and vice versa. But
one should not ignore its complexity, Bandura (1997) stated, “perceived collective efficacy is an emergent group-level attribute rather than simply the sum of member’s perceived personal efficacies” (p. 478). Therefore, while the two are connected, they are also mutually exclusive. This mutual relationship helps explain the consistent finding that collective teacher efficacy helps school leaders reach organizational goals more often (Donohoo, 2016, 2018). The confidence caused by increasing collective efficacy, teachers feel empowered to influence instructional decision making within the whole school, allowing for these changes to take place (Demir, 2008). Unfortunately, the question of how to strengthen collective efficacy through the transformational leadership behaviors of department leaders remains an area requiring more research.

Thus, studying the transformational leadership behaviors of department leaders' impact on collective teacher efficacy would be an important step in the evolution of collective efficacy research. Department leaders influence the instructional practices of teachers in a direct fashion. The recent COVID-19 pandemic calls for new ways to educate as well as closing the achievement gaps caused by remote and hybrid learning. Moreover, teachers entering the workforce over the next few years have limited experience in student teaching in person and are entering with less classroom experience than ever before. This author believes that the study of improving collective efficacy to influence group outcomes and improve the function of a school in a positive way, shows promise for increasing student achievement regardless of socioeconomic status. Moreover, transformational leadership behaviors support the development of collective teacher efficacy (Cansoy, 2020; Cybulski et al., 2005; Demir, 2008).
The Development of Transformational Leadership Theory

The Collins English Dictionary (1994) defines leadership as the period during which a person occupies the position of a leader. This simplistic definition omits the characteristics of a leader, more importantly a transformational leader. A transformational leader inspires subordinates to accomplish more than their own self-interests and work for the good of the whole organization (Bass & Avolio, 1993). These leaders accomplish this by orienting their values to the organization's. In other words, a transformational leader motivates followers to accomplish more than they originally intended (Krishnan, 2005). Furthermore, transformational leadership behaviors are necessary in all organizations as they have been shown to enhance the outcomes of the organization and potentially the personal outcomes of each employee (Tucker & Russell, 2004).

Early Leadership Theories

Trait Theories

Prior to the development of transformational leadership, early leadership studies that encompassed much of the early 20th century mostly consisted of research into the trait theories that theorized successful leaders were the result of traits ingrained in their genetic makeup. Fleenor (2006) wrote, “leadership traits are considered to be enduring characteristics that people are born with and that remain relatively stable over time” (p. 830). Most of the research studied the different traits exhibited by leaders and followers, but they discovered very few discriminate traits. In addition, these researchers theorized that these traits would remain constant in any given situation with no variance. Fleenor (2006) summarized the work of John W. Gardner written in 1989 described the traits that make a leader successful as:
Physical vitality and stamina, intelligence and action-oriented judgment, eagerness to accept responsibility, task competence, understanding followers and their needs, skill in dealing with people, need for achievement, capacity to motivate people, courage and resolution, trustworthiness, decisiveness, self-confidence, assertiveness, and adaptability. (p. 831)

While these theories identified some traits of successful leaders, they failed to make a distinction of the behaviors of non-leaders and followers in certain situations. Although, the trait theory of leadership made a slight resurgence in the early 1970’s, the researchers failed to recapture the interest shown in the early 20th century as researchers sought to study specific leadership behaviors that could improve productivity.

**Behavioral Theories**

Essential behavioral leadership theories, related to this author's study, took center stage in the mid-20th century. As trait theory diminished, behavioral and situational leadership theories took center stage. Behavioral studies in the late 30’s and 40’s focused on the results of autocratic, democratic, and laissez-faire leadership styles. Primarily based on the work led by Kurt Lewin in 1938, different groups were subjected to the three different leadership styles and the output of the groups measured. Autocratic leaders made all the decisions for the group and then micromanaged the individuals within the group producing the necessary outcome but not in the necessarily the most productive way. The laissez-faire group leader left all the decision making to the group and produced the worst outcomes to the tasks presented. The democratic leader shared the decision making with the group and produced the quickest and best outcomes. Groton and Alston (2019) wrote, “It was later generalized from this study to corporate settings.
The effective school leader in the twenty-first century will also employ this democratic style of leader behavior to foster a collaborative community of learners” (p. 9).

During the 1950’s both Ohio State and Michigan Universities conducted research into leadership. The Michigan University studies identified three leadership characteristics: task-oriented behavior, relationship-oriented behavior, and participative leadership. The Ohio State studies condensed these behaviors into two characteristics of leadership they deemed critical. Groton and Alston (2019) explained, “Consideration is the degree to which a leader acts in a friendly and supportive manner toward his or her subordinates; initiating structure is the degree to which a leader defines and structures his or her role and the roles of the subordinates toward achieving goals (p. 9). The application of these two concepts led to the basis for the transactional leadership style.

**Situational Leadership Theories**

In contrast to trait and behavioral theories, situational leadership explains a leader's success is based on their ability to respond to situations that match their individual strengths. The situational theory of leadership rose to prominence in the 1960’s and 1970’s. Groton and Alston (2019) stated, “The situational style of leadership maintains that no particular style of leadership or personal qualities of a leader is appropriate for every situation. The theory places a high premium on the administrator’s adaptability and flexibility” (p. 13). This set the basis for the concept of effective leadership is neither genetic as trait theory suggests nor a matter of simply leadership style as the behaviorists theorized. Rather, it is the leader's ability to deal with different situations as they are presented. A department leader may be great at dealing with curriculum development but may lack the skills necessary for dealing with community members upset with a particular teacher in their department. The situational theory set the groundwork for
the idea of the transformational leader employing different tactics in different situations to create the most desirable outcome (Bass, 1985).

Thus far this section of the literature review has taken the reader through the relevant historical approaches related to the development of transformational leadership. The trait theory, behavioral theory, and situational theory have all been reviewed. The chapter now focuses on the development of the transformational leadership style. It will review the developmental history and investigate the leadership styles across the continuum of transactional to transformational leadership. This section concludes with an investigation into the impact of the transformational leadership style in the educational setting.

**Transformational Leadership**

Burns set the basis of the theory of transformational leadership by analyzing political leaders' behaviors. During this time, the focus of leadership study shifted from situational theory to the impact a leader had on an organization's performance. Burns (1978) stated, “Such leadership occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality. Their purposes, which might have started out as separate but related, as is the case of transactional leadership, become more fused” (p. 20). Thus, officially setting forth two styles of leadership, transformational and transactional.

Transaction leaders offer an exchange for a subordinate’s output. In other words, a leader mostly contacts followers simply for the exchange, there is no interest in pursuing a greater purpose, only the exchange. For example, a department leader may give higher evaluation ratings to teachers that follow their directives and lower for those that do not regardless of job performance. In contrast, Burns (1978) explained, “the transforming leader
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looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower. The result is a relationship of mutual stimulation and elevation” (p. 4). Specifically, rather than simply exchanging, both the leader and follower increase each other's motivation to support the common goals of the organization (Burns, 1978). The transformational leader considers both the resources and the relationship leading to an increased commitment toward mutual goals (Bass, 1985). Most importantly, a leader is not born as trait theory explains or made as a behaviorist assumes. A leader acts and changes based on their own motivations and values regarding what is best for the overall goal of the masses (Burns, 1978; Deal & Peterson, 2002).

Continuum of Transformational Leadership

Bernard Bass (1985) refined the concepts of transactional and transformational leadership. Together with Bruce Avolio, they formalized their own theory of both transformational and transactional leadership (Bass & Avolio, 1993, 1994). They concentrated much of their work on large businesses, schools, and military institutions. Unlike Burns' work from 1978, a leader is not simply transactional or transformational. Transformational leadership is viewed as a range of behaviors a leader applies based on the situation that consists of laissez faire leadership, transactional leadership, and transformational leadership (Bass & Avolio, 1994). This model, dubbed the full range leadership model, theorized that an effective leader shows transformational practices more frequently than transactional or laissez-faire (Bass, 1998).

Laissez-faire leadership, sometimes referred to as ineffective leadership, could also be considered non-leadership. Leaders that follow a laissez-faire leadership approach leave followers to follow their own lead, form their own objectives, and plan using the resources given to them by the leader. These leaders also postpone decisions, do not express opinions, or make
decisions on important matters. This type of school leader would best be described as sitting in their office and having as little contact with students and staff as possible. In addition, they do not pay attention to any pressing matters or needs (Hoy & Miskel, 2012). In other words, a laissez-faire department leader lets the school continue along providing little input in the necessary educational improvements for staff or students. In terms of education practice quality, it is the teacher's sole responsibility to monitor and produce a quality educational experience. When discussing the laissez-faire style of leadership, Bass and Avolio (1994) wrote that it “is the avoidance or absence of leadership and is, by definition, the most inactive, as well as the most ineffective according to almost all research on style. As opposed to transactional leadership, laissez-faire represents a non-transaction” (p. 4).

While laissez-faire consists of inaction, transactional leadership consists of a management style of leadership. Transactional leaders believe in external rewards and agreements as motivators to motivate followers into action (Bass, 1985). Transactional leaders base their style on the past, these types of leader's reward employees who exhibit more effort in specified tasks (Oğuz, 2010). In general, transactional leaders employ three different sets of tactics when leading subordinates based on contingent reinforcement. When transactional leaders focus on results, they employ a contingent reward to followers. In other words, the follower receives a reward by completing the work assigned by the leader. In terms of educational practice, rewards would be given to those teachers that produce the least number of student failures on a standardized test.

The second tactic is known as management by exception-passive. Here the leader waits for the follower to commit an error and lies in wait to make the corrections as necessary. There is little guidance in the way of providing goals for the staff to achieve, thus no clear reward. A
department leader that only intervenes when a parent complains about a particular topic a teacher reviews in class would be an example of passive actions. In other words, when mistakes are made, they are identified and corrected.

In contrast, a leader that uses the final tactic known as management by exception-active, actively monitors subordinates as they complete assigned tasks intervening only when necessary. This type of behavior trusts that their workers will meet a basic set of explained outcomes, but they will achieve little more than maintaining the status quo (Bass & Avolio, 1994). For example, a department leader that constantly observes teachers and micromanages their lessons. The leader monitors educational experiences to ensure there are no errors. The latter two transactional leader behaviors carry more negative results among subordinates as they stifle creativity, but all three tactics garner compliance to the leader by appealing to the followers’ individual needs.

**Transformational Leadership Behaviors**

Stewart (2006) conducted an expansive literature review on transformational leadership based on the works of the most influential authors and researchers in the field. Rather than motivating followers by extrinsic motivation, transformational leaders seek to motivate followers to achieve organizational goals over individual goals (Bass, 1985). Followers of transformational leaders view them as role models and want to emulate them and the leader always considers the needs of the follower and the organization ahead of their own. Lastly, transformational leaders exhibit four key behaviors: idealized influence, inspirational motivation, intellectual stimulation, individualized consideration (Bass, 1985).

Idealized influence consists of the behavior’s leaders exhibit that motivate their followers. Stewart (2006) wrote, “Transformational leaders are role models; they are respected and admired
by their followers. Followers identify with leaders, and they want to emulate them. Leaders have a clear vision and sense of purpose, and they are willing to take risks” (p. 12). Also described as charismatic leadership, charismatic leaders instill confidence in others and through this confidence leaders build self-determination within subordinates (Shamir et al., 1993).

Transformational leaders use inspirational motivation when they clearly communicate expectations to the followers and demonstrate their commitment to the organization and a shared vision. Stewart (2006) reported, “Transformational leaders behave in ways that motivate others, generate enthusiasm and challenge people. These leaders clearly communicate expectations, and they demonstrate a commitment to goals and a shared vision” (p. 12). In other words, leaders inspire followers to work for important organizational goals instead of individual goals.

Transformational leaders demonstrate intellectual stimulation by seeking innovation and creativity from their followers to solve problems. Unlike the management by exception tactics of transactional leaders, there is never criticism of an individual's mistakes in public. Moreover, the transformational leader uses rationality and attempts to cultivate such approaches by using mentoring and coaching techniques (Bass, 1985). Lastly, developing original ideas that do not necessarily align with those conceived by the leader are encouraged and nurtured (Hoy & Miskel, 2012).

The leadership component of individualized consideration sees the leader paying attention to the individual needs of their followers. Transformational leaders display behaviors that demonstrate their belief that workers are fundamental to the organization in which they work (Bass, 1998). Stewart (2006) stated, “Transformational leaders pay attention to the needs and the potential for developing others. These leaders establish a supportive climate where individual differences are respected. Interactions with followers are encouraged and the leaders are aware of
individual concerns” (p. 12). Furthermore, Bass and Avolio (1994) remarked, “The leader
delegates tasks as a means of developing followers. Delegated tasks are monitored to see if
followers need additional directions or support. Ideally followers do not feel they are being
checked on” (p. 4). A department leader that consistently practices quick walkthroughs and
practices two-way conversations with teachers based on their individual needs would be an
example of using individualized consideration.

Transformational leaders constantly seek to develop their employees and direct them
toward achieving the organization's common goals. On the school level, this consists of
designing a school experience for the age level of the students (Akan, 2013). Transformational
leader behaviors help staff adapt to new technological and educational developments that
improve the quality of education of the students (Klassen, 2010). Furthermore, transformational
leaders provide for teacher needs and help maintain teacher retention by guiding staff members
to embrace organizational goals (Stewart, 2006). Thus, a department leader must take all these
factors into account when developing their own leadership style and coming to the realization
that transformational leadership yields countless benefits. In the last stage of this section of the
literature review, this author reviews several studies that show the benefits of the
transformational leadership style in the educational setting.

Transformational Leadership in the Educational Setting

Transformational leadership begins with involving staff in a shared decision-making
process. A school administrator makes thousands of decisions a year. Green (2005) discussed
the importance of communication, staff involvement in the decision-making process, and the
successful behaviors exhibited by transformational school leaders and their results. Green
(2005) stated, “Through effective communication, relationships are built, trust is established, and
respect is gained” (p. 85). By using the transformational behaviors described by Bass, Burns, and Leithwood, such as involving the staff in the decision-making process, you limit resistance to change and begin to show transformational leadership qualities.

**Impact on School Culture**

Leithwood and Jantzi (1990) were instrumental in creating a bridge between the work of Burns and Bass in educational leadership. Their seminal study connected the principal’s leadership behaviors, school culture, and empowerment of teachers. The study concluded that strengthening the school culture, employing bureaucratic mechanisms to reinforce cultural change, foster staff development, directly communicating cultural norms/values/beliefs, sharing responsibilities with others, and using symbols to express cultural value impacted teacher empowerment. This study is important to the overall picture of teacher efficacy as increased feelings of empowerment of teacher’s leads to a greater sense of efficacy.

Leithwood and Jantzi (1990) define school culture as a series of meanings shared by the inhabitants of a school. For the study's basis, positive school culture was defined as student centered and based on supportive and positive interactions with all members of that culture. The researchers defined transformational leadership as the ability to enhance individual and collective problem-solving capabilities of the staff. They outlined this concept into three different facets when working with teachers; developing better solutions to problems, increasing motivation and commitment to shared goals regarding those solutions, and contributing to the long-term problem-solving capabilities of teachers. Central to the point, transformational leaders include relevant staff in decision making and have better outcomes (Bass, 1985). This leads to a shared set of goals and principles of the overall school culture. Transformational leaders fostered the problem-solving capacities of teachers by providing opportunities for them to assert
Leithwood and Jantzi (1990) reported:

A transformational leader helps build shared meaning among members of the school staff regarding their purposes and creates high levels of commitment to the accomplishment of these purposes. Such leaders foster norms and beliefs among staff members about the contribution one’s colleagues may make to one’s practices. They also encourage openness to new ideas and practices, whatever their source, and careful assessment of such ideas and practices based on their own merits. Both individual and group reflection on purposes and practices and how they might be continuously improved are stimulated by the leader, including encouragement to periodically identify and assess the basic assumptions on which are founded these purposes and practices. (p. 10)

Transformational leadership of principals served as the dependent variable and collaborative culture as the independent variable. The sample consisted of nine elementary schools and three secondary schools that were selected based on a screening questionnaire and/or nominated by senior school board administrators. Two interviewers were then sent on two-day visits to each school. They conducted semi-structured interviews based on 41 items for principals and 35 for other staff members. The interviews were audio recorded and then transcribed. Five-person teams were created to analyze the interviews. After the teams were trained, they read the transcripts of their interviews twice and then entered them into an item matrix. Each team then wrote a description of the relationship between the two variables based on the matrix created for that school.

Based on the data collected, Leithwood and Jantzi (1990) created six indicators based on the cited work of Judith Light (1982):
Teachers engage in frequent, continues and increasingly concrete and precise talk about teaching practices. Teachers are frequently observed and provided with useful critiques of their teaching. Teacher's plan, design, research, evaluates and prepares teaching materials together. Teachers teach each other the practice of teaching. (p. 331)

To answer the research question regarding a collaborative culture, they found that there were variations among all the schools. The personnel from the lowest performing schools collaborated later in projects and the highest performing schools collaborated from the start of projects. Goals were also clarified from the start in the latter schools. Most importantly the researchers discussed successful strategies used by school administrators to influence school culture. The most frequently appearing in the data collected from the interview were collaborative decision making and leadership influence. Most often appearing were collegial support and organizational adjustments.

Strengthening school cultures often involved school staff in decision making and goal setting as the primary tool. Reducing teacher isolation and aggressive teacher recruitment strategies were used to foster buy in the school goals. Money, planning, committee making structures, staff procedures, and evaluation were all considered bureaucratic mechanisms used by administrators. Extensive staff development with teacher input was key to fostering a positive school culture. In addition, direct and frequent communication from administrators relating to how events/strategies were connected to the overall goals of the school was key to a sense of belonging from the staff. Sharing power and responsibility in committee systems within a school law the most common strategies used to include staff in important decisions (Leithwood & Jantzi, 1990). Lastly, using symbols/rituals to express cultural values served to make goals visible within school cultures.
The conclusion of the study supported the claim that principals have access to transformational strategies and should strive to use them to develop collaborative school cultures. They believe these strategies should be used to help staff members understand their purpose and enhance their capacity to solve problems. Leithwood and Jantzi (1990) wrote:

The potential effects of the six strategies used by school administrators to influence school culture which we identified in this study can be explained from this theoretical perspective. Three of these strategies provide principals and other teachers with opportunities to clarify explicitly the preferred content of relevant schemata from their point of view: using symbols and rituals to express cultural values; direct and frequent communication; and staff development. More interactive versions of these strategies allow for the negotiation of schematic content between principal and teachers or between teachers. Several of the six strategies appear to constrain the range of schematic content available to the teacher rather than to dictate its precise form. This seems to be the case with the use of bureaucratic mechanisms. Finally, sharing power and responsibility may provide a stimulus for developing shared meaning (effecting the strength of the culture) without necessary reference to the meaning itself (the content of the culture). If principals share power with those who hold similar points of view, however, this strategy is more prescriptive of the schematic content possessed by principals. (p. 34)

Furthermore, they provide some insight for future studies focusing on the social interactions of leaders and the impact on the overall school culture. They concluded that in a short span of time (two to three years) school cultures can become much more collaborative with the right leader in place. This study provided clear strategies for a leader to follow to develop
such a school culture and provides further evidence of the positive impact transformational leadership has on school communities.

**Impact on Organizational Citizenship**

Oğuz (2010) specifically studied the impact of leadership styles on the organizational citizenship behaviors of teachers in a relatively small-scale study. Organizational citizenship behaviors were defined as voluntary behaviors of teachers outside their normal responsibilities. For example, a teacher who volunteers to chaperone a dance or provide additional extra help sessions without compensation. Oğuz (2010) citing the work of Mackenzie et al. (1998) wrote, “Organizational citizenship behavior is explicitly defined as “extra-role behavior” and has been shown to have a positive impact on follower performance” (p. 1190). In other words, as the follower's organizational citizenship behavior increases, the follower's overall quality of job performance increases.

The researcher used the work of Bass (1985) to delineate the leadership styles in the study between laissez-faire, transactional, and transformational (Oğuz, 2010). To study the impact of leadership styles on organizational citizenship behaviors, the researchers used two survey instruments to gather data. Oğuz designed a leadership style questionnaire in 2008 based on the Multi-Factor Leadership Questionnaire. The researcher distributed this instrument and the Organizational Citizenship Behavior Scale developed by DiPaola Tarter & Hoy from their 2005 study (Oğuz, 2010). Both survey tools were distributed among 204 randomly selected primary school teachers in the Samsun, Turkey. Upon completion of the surveys, the data were analyzed using correlational analysis techniques.

Oğuz (2010) found positive correlations between a leader's transformational leadership style and organizational citizenship behavior. The researcher also found a smaller yet still
statistically significant correlation between the transactional leadership style and organizational citizenship behavior. Additionally, Oğuz (2010) stated, “Likewise, there is a meaningful and significant correlation between laissez-faire leadership style and transactional leadership style” (p. 1192). More interestingly, the results revealed that teachers with 30 or more years of experience showed more organizational considerations on average with the lowest average appearing in the range of 11 to 20 years of service (Oğuz, 2010).

**Impact on Organizational Health**

The study conducted by Oğuz (2010) in Turkish schools showed statistically significant evidence of transformational leadership behaviors with organizational citizenship behaviors and therefore improved job performance. Korkmaz (2007) studied the impact of various leadership styles on the overall organizational health of Turkish schools. In addition, the overall job satisfaction of teachers, as related to a school administrator's leadership style was also studied. The researcher used the leadership styles set forth by Bass (1985); laissez-faire, transactional, and transformational, to study the behaviors displayed by principals in this study. Several previous studies showed significant correlations between leadership styles and the job satisfaction of teachers, as well as teachers’ desire for leaders displaying transformational leadership behaviors (Korkmaz, 2007). Moreover, Korkmaz (2007), citing the work of Jung, Chow and Wu (2003) and Hater and Bass (1998), clearly explained the benefits of administrators using transformational leadership behaviors in schools:

There are several reasons nourishing the expectation that leadership styles (transformational and transactional leadership) and teachers’ job satisfaction have an impact on the creation of a healthy school environment. Firstly, transformational leaders enhance the quality of in-school relationships by actively participating in the operation of
the individual value system of the staff in their institutions. Further, transformational leaders make certain explanations that could relate the identity of the staff with the common identity of school and thus promote the quality of mutual relationships and internal motivation of the staff. Secondly, transformational leaders encourage their staff by stimulating them intellectually to adopt creative thinking processes and push them to reconsider the solution of old problems through new techniques. (p. 27)

The overarching definition of organizational health refers to a school's ability to adapt and reach its organizational goals. More specifically, Korkmaz (2007) focused on the seven-dimension model developed by Hoy in 1991:

- Institutional integrity refers to a school having a consistent curriculum and being able to cope with destructive efforts by external forces
- Initial structure refers to the attitude of the principal to work to his or her responsibility and to success
- Consideration is the conduct of a principal who is supportive and friendly. The principal is open to suggestions and attentive to the teachers’ welfare
- The principal’s influence is his or her ability to influence his or her superiors
- Resource support refers to a school where adequate class materials and educational tools are available
- Morale is the sense of trust, passion and friendship amongst teachers
- Academic concern refers to the school’s pressure on students for high but achievable expectations. (p. 34)

Previous research found that strong associations in these areas led to strong school performances and a link between leadership styles and schools with weak associations in these
areas (Korkmaz, 2007). In addition, healthy organizations lead to teachers that feel satisfied in the profession. Korkmaz (2007) cited a study conducted by Bailey in 1992 that found, “a significant correlation between teachers’ perception of the administrative style and their level of job satisfaction” (p. 32). Previous research in the Turkish educational system found that teachers wanted to work for transformational leaders and that this leadership style strongly improves teachers job satisfaction (Korkmaz, 2007).

The researcher designed a survey that collected data for three different variables. The first section of the survey was a scaled-down version of the MLQ developed by Bass (1985). This section's purpose was to identify the leadership style of the principal assigned to the staff members as transformational or on the transactional spectrum. The second part of the survey consisted of a culturally modified version of the organizational health inventory developed by Hoy in 1991 (Korkmaz, 2007). The OHI was converted into a Likert scale to match that of the sub section of questions selected from the MLQ. The final sections of the survey consisted of a job satisfaction questionnaire known as the Balci scale developed in 1985. The survey was distributed to 875 teachers working in 46 different high schools in Ankara’s 46 high schools, 630 of these teachers completed the survey (Korkmaz, 2007). The principals involved in the study consisted of 13 female and 33 males varying in years of appointment and coursework related to becoming a principal. The researcher noted this as some principals received no formal training before taking on the role.

Upon organizing the data, the researcher used the Pearson correlation coefficient on all the variables to test for significance (Korkmaz, 2007). The correlational analysis showed a significant relationship between transformational leadership and organizational health. In addition, the less transactional leadership behaviors the leaders exhibited, the stronger the
schools overall organizational health. Secondly, job satisfaction and transformational leadership behaviors were statistically significant. Korkmaz (2007) concluded, “The relations between these variables have shown that the more the teachers perceive their principal as a transformational leader the more their level of job satisfaction increases” (p. 42). To alleviate unintentional outcomes, the researcher used a structural equality analysis technique to structure the cause-and-effect relationship between the leadership behavior variables and job satisfaction and organizational health (Korkmaz, 2007).

The analysis confirmed the negative relationship between transactional leadership and organizational health. Moreover, the more satisfied a person was in their job, the better the organization's health. Korkmaz (2007) stated:

The most striking finding from the path analysis was that the transformational leadership style exhibited by the principal within the school setting strongly affected the teachers’ job satisfaction. The transformational leadership of the principal directly affects the school health and through teachers’ job satisfaction it indirectly affects the school health. (p. 44)

This study showed transformational leadership significantly influences a teacher's job satisfaction which also serves to improve organizational health. Additionally, transformational leadership positively affects organizational health. Staff members that feel more satisfied and work in healthy organizations feel more inclined to produce extra effort with students. Korkmaz (2007) stated, “the ties between the students and teachers will be stronger while the school starts to move faster to achieve its vision. Students’ success will improve in a school which has a healthy relationship with its environment” (p. 47). Lastly, this study solidified the negative impact the transactional leadership style produces in the school environment.
A transformational leader uses data productively, listens to the needs of followers and shareholders, and serves the school community. In the book, *Zen Lessons: The Art of Leadership* by Thomas Cleary (1993) stated; “a leader that serves his followers will be granted (a) long reign” (p. 76). Building a positive community culture takes a long period of time and effort. By taking the time, a transformational leader reduces resistance to new instructional programs, parental problems, and increases the success of the leader obtaining their vision. Moreover, transformational leadership behaviors result in a myriad of positive effects in education, none more important than collective teacher efficacy.

**Transformational Leadership and the Impact on Collective Teacher Efficacy**

The literature review has shown the historical background and importance of transformational leadership and collective teacher efficacy in the educational setting. The literature review will now demonstrate the impact of transformational leadership on collective teacher efficacy in schools and its practical significance. Most importantly, these studies will show the positive influence transformational leadership has on collective teacher efficacy and thereby improve student achievement.

The literature review previously discussed the connection between individual teacher efficacy and collective teacher efficacy. Therefore, improving individual teacher efficacy correlates with improved collective teacher efficacy. As an outgrowth of Leithwood’s research, Kristine Hipp (1996) presented, that showed the association between the principal’s leadership behaviors and teacher efficacy. The study concluded that modeling behavior, inspiring group purpose, and providing contingent rewards impacted teaching efficacy. Some of the qualitative data also pointed to eight different leader behaviors that impacted teacher efficacy. Lastly, the study found differences between general and personal efficacy. The study concluded that
modeling behavior, inspiring group purpose, and providing contingent rewards impacted teaching efficacy. Some of the qualitative data also pointed to eight different leader behaviors that impacted teacher efficacy. Lastly, the study found differences between general and personal efficacy.

The extent to which a teacher believes they affect student performance is the definition used to measure the connection between leadership behaviors and teacher efficacy. The study explored the relationship in select middle schools in Wisconsin that engaged in building level change reforms. Hipp used three hypotheses to guide the study:

1. Are selected leadership behaviors of principals related to teacher’s general teaching efficacy and personal teaching efficacy? 2. In what ways do principals influence a teacher’s sense of efficacy? 3. What constraints limit the influence of principal’s leadership behaviors on teacher’s sense of efficacy? (p. 3)

The researcher used the survey method, telephone interviews, structured interviews with teachers and principals, and researcher observations/field data. The sample originally consisted of sixty-two middle schools. The researcher conducted initial telephone interviews with the principals of each school. The purpose of these interviews was to identify principals and school that met the specific criteria for the study (principals had to be in place for at least two years, the school had to be involved in some sort of significant change, etc. al.) Based on the telephone interviews ten schools were selected for the study, these included ten principals and two hundred and eighty teachers. During phase one of the study teachers responded to a personal data sheet, completed a modified version of Gibson and Dembo’s teacher efficacy scale, and the Nature of Leadership Survey. Principals completed only the Nature of Leadership Survey. During phase two of the study three model schools were chosen based on the data from the survey. The two
highest performing schools and the lowest performing school. In depth scripted interviews were conducted in these schools of both teachers and principals. The interviews conducted included anywhere from 41% to 83% of the teachers in the building. The interviews were recorded and then transcribed for analysis.

The study found a significant relationship with general teacher efficacy and three leadership factors. Modeling behavior, contingent rewards, and inspiring group purpose. This was confirmed using the data from both the survey and interviews. Professional and personal support was not as significant but still an important part of the overall picture of personal teacher efficacy. Most of the constraints limiting influence uncovered in the study came from factors outside of the school’s control. For example, budgetary issues decreased public support for education and principal role overload.

This study provides some implication linking specific behaviors of leaders and teacher efficacy. The first phase of the study (survey methods) this author found to be more evidenced based than the interview method used in phase two. Sitting with both teachers and principals in a scripted interview, while designed correctly, could yield untruthful answers. Furthermore, this study set the framework for further studies into this topic. The sample was small and then even smaller in phase two. Despite this limitation, this study provided a foundation for a blueprint for school leaders to increase teacher efficacy and thereby collective teacher efficacy.

Hipp (1997) followed up the 1996 study with a deeper analysis of the qualitative data and follow-up interviews with three of the principals, further connecting transformational leadership behavior and teacher efficacy. This second study provided further evidence that modeling behavior, inspiring group purpose, and providing contingent rewards impacted teaching efficacy.
Lastly, the qualitative data also pointed to different leader behaviors that impacted teacher efficacy not included in the original study's hypotheses.

Hipp’s (1997) second study’s main purpose was to provide a deeper look into specific leadership behaviors and the impact on teacher efficacy. Secondly, the researcher sought to determine if teacher perceptions of the principal’s impact occur in high and low efficacy schools. The sample consisted of three schools selected from their broader study conducted in 1995. Harmony Middle School, which they previously identify as the school with the highest general teacher efficacy (GTE), Homewood Middle School, the highest scoring personal teacher efficacy school (PTE), and Pleasantview Middle School, the lowest rated school in both areas. These schools were selected after conducting a survey using the Gibson and Dembo’s Teacher Efficacy Scale designed in 1984. Ms. G served as the principal of Harmony, Ms. M served as the principal of Homewood, and Mr. U. served as the principal of Pleasantview. Each of the principals varied in age and experience with Ms. G serving three years as principal, Mr. U serving eight years, and Ms. M serving four years.

Data were gathered using structured interviews, field observations, and notes. The interviews lasted between 25 and 45 minutes and were conducted over a month. The interviews consisted of open-ended questions looking at sources of teacher efficacy and specific principal behaviors that the subjects felt were most important in securing and maintaining efficacy among teachers. The interviews were then transcribed for data analysis. Computer files by question were created and the comments were separated by school. The comments and on-site observation notes were also used to help analyze the data.

Hipp’s (1997) earlier study in 1995 found that not all the transformational leadership factors improved general and personal teacher efficacy. They found that modeling behavior and
providing contingent rewards significantly impacted GTE and PTE, while inspiring group purpose only affected GTE. The interview process in this study sought to elucidate the role of leadership behaviors teachers believed reinforce and maintain their sense of efficacy. The leadership behaviors studied included: models’ behavior, inspire group purpose, recognize teacher efforts and accomplishments, provide personal and professional support, manage student behavior, and promote a sense of community.

The interview data collected supported the preliminary findings that modeling behavior affected both GTE and PTE. The teachers from Homewood stated that Ms. G “willingly admits mistakes” fostered a sense of risk taking and her elimination of study halls due to teacher feedback improved teacher efficacy. In addition, her skilled mediation helps keep the building calm. Harmony teachers found Ms. M to be “honest and direct” and that teachers view her behaviors as student centered improving overall teacher efficacy. In contrast, the teachers in Pleasantview mostly viewed Mr. U’s presence as negative due to his inconsistent behavior toward staff and students.

The finding also correlated the connection between inspires group purpose and GTE. Hipp (1997) wrote, “Teachers in high efficacy schools conveyed that their principals listen, care, facilitate their needs, recognize their efforts and accomplishments, and support them concerning personal matters” (p. 17). At both high efficacy school’s teacher collaboration and shared vision abounds. At Harmony, Ms. M consistently looks at the team perspective when making decisions. In addition, she is viewed as avoiding multiple innovations at any one time. At Homewood, Ms. G. was described as holding “mutually held goals” as the standard.

Managing student behavior yielded mixed results, as did promoting a sense of community. In the high performing efficacy schools both principals were viewed as creating a
positive climate. Harmony had a newly instituted discipline policy. This policy is clearly articulated to students and staff at various times in the school year. Teachers view the administration as proactively mitigating major student offenses. Ms. M is split between two buildings and while she may not always be in the building, the staff at Homewood viewed her presence as always promoting a positive school environment. Lastly, Mr. U was viewed as spending a lot of time dealing with discipline problems, but the subjects found his policies to be inconsistent. One teacher expressed support for his actions, while a different teacher viewed his actions when parents accuse teachers of being unsupportive. All three schools viewed themselves as part of a “family” or school community revealing little connection to teacher efficacy.

The interviews did not provide significant findings connecting recognizing teacher efforts and accomplishments with GTE or PTE. While the comments from all three schools supported the idea of contingent rewards and recognition was important, all three schools did not provide any significant data that this impacted GTE or PTE. In contrast, Ms. M’s split position led some staff members to report that she was less visible and less apt to single out teachers due to the nature of the split. Lastly, Mr. U is viewed as engaging in several ways to show staff appreciation. The principal hosted various breakfasts, gave out special notes, and made announcements on the PA. Some of the teachers interviewed from Pleasantview also viewed his efforts as “favoritism” among staff.

Hipp (1997) stated, “Qualitative data have documented and expanded on preliminary findings. By conducting a more in-depth probe into specific leadership behaviors affecting teacher efficacy in high and low efficacy schools” (p. 21). The findings in both studies concluded that modeling behavior significantly impacts teacher efficacy. In addition,
recognizing teacher efforts and accomplishments did not relate to teacher efficacy and most teachers in all the schools viewed them poorly. Lastly, teachers from the study differed in their perceptions of the principles impact by school. This strengthens the original findings linking the principal’s behavior and teacher efficacy. The high efficacy schools viewed their leaders with respect and student centered. In contrast, staff at Pleasantview viewed Mr. U inconsistently. Some of the subjects viewed his behaviors favorably while others found his behaviors to exhibit “favoritism” amount staff members. This contradictory view subsequently led to some of the teachers feeling devalued.

In contrast, Francisco (2019) focused solely on the link between teacher self-efficacy and transformational leader behaviors. Francisco (2019) defined teacher self-efficacy as, “A teacher’s efficacy belief is a judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated” (p. 623). The main purpose of the study was to determine which behaviors among the continuum of transformational leadership affect teachers’ sense of self-efficacy. The methodology used in this study consisted of using the Multifactor Leadership Questionnaire (MLQ) form created by Bass and Avolio and cross referencing those finding with the Teachers Self-Efficacy Scale 1 created by Tschannen-Moran and Hoy to determine teacher's self-efficacy.

The sample consisted of 260 teachers from five separate public high schools during the 2018-2019 school years in the Plaridel District (SDO – Bulacan) in the Philippines. One school had 54 teachers participating in the study, a second 45 teachers, 74 from a third school, and 58 from a fourth school and a fifth school had 29 participating teachers. Francisco (2019) tabulated the data using the Statistical Packages for Social Sciences. After obtaining approval from the
necessary superintendents and directors, Francisco distributed and collected the surveys from all the participants in the study.

The results of the surveys were categorized by answering the previously mentioned research questions. Francisco (2019) assessed transformational leadership styles in terms of idealized influence were viewed as satisfactory by the responses. In addition, management by exception (active and passive), laissez-faire leadership, inspirational motivation, intellectual stimulation, and individual consideration were also viewed as satisfactory with the data provided. Leadership style by contingent reward, leadership styles in terms of effectiveness, and leadership styles in terms of satisfaction were viewed as very satisfactory based on the responses received.

Francisco (2019) organized the data collected from the Teachers Self-Efficacy Scale 1 into three different categories. The first category measured the level of teachers' self-efficacy in terms of student engagement and resulted in an observed high level of teacher efficacy. Secondly, the level of teacher self-efficacy in terms of instructional strategies was also high. Lastly, the teacher’s level in terms of classroom management also resulted in data pointing to high levels of teacher self-efficacy.

To determine the effect of a school principal’s transformational leadership style on teacher's self-efficacy the data from the MLQ and the Teachers Self-Efficacy Scale 1 was correlated, and a regression analysis was conducted. Francisco (2019) concluded that of the 11 variables of transformational leadership styles he surveyed do not have a significant combined effect on teacher self-efficacy. Individual effectiveness and contingent rewards have the greatest impact on teacher self-efficacy. Several management implications resulted from the completion of this study to improve transformational leadership styles and the impact on teacher self-efficacy. Francisco (2019) wrote:
School principals need to enhance the clarification of roles and requirements from leaders to followers as well as the offering of rewards contingent to completion of work assignments and obligations. Doing these would result in increasing the productivity of teachers. (p. 631)

Francisco (2019) concluded the leadership styles of the principals were “generally satisfactory” and that teacher self-efficacy was high regarding student engagement, instructional strategies, and classroom management. The two variables that provided the best predictors of a teacher’s self-efficacy were contingent rewards and effectiveness. In addition, the other nine variables affected teacher efficacy, but not to the same degree. Furthermore, Francisco (2019) recommended that principals follow strategies such as clarifying teacher roles, offer rewards to teachers upon work completion, and improve their own understanding of strategic planning to improve teacher self-efficacy in their schools.

The literature review has shown the link between transformational leadership behaviors and teacher self-efficacy. As previously stated by increasing teacher self-efficacy, collective teacher efficacy also increases. The literature review will now discuss specific studies that concluded direct correlations between transformational leadership behaviors and collective teacher efficacy.

Cansoy (2020) conducted a study to examine the relationship transformational leadership behaviors and collective teacher efficacy. The study found a significant correlation between transformational leadership behaviors and collective teacher efficacy by using two different surveys. Furthermore, the researcher sought to study the correlations, if any, between transformational leadership behaviors and collective teacher efficacy (Cansoy, 2020).
The population of the study consisted of 293 elementary and middle school teachers from the Uskundar district of Istanbul. The teachers were selected by convenient sampling from random schools: 70% were female, and 30% were male, with 29% from the elementary school and 71% from the middle school. Transformational leadership was measured by the scale created by Akan in 2014 and collective teacher efficacy was measured by the survey developed by Tschannen-Moran and Barr in 2004, both of which were translated to Turkish (Cansoy, 2020). The researcher used these surveys and correlated the data to link transformational leadership behaviors to collective teacher efficacy. The independent variable being the principal’s behaviors and the dependent variable being collective teacher efficacy.

Upon correlating the data, Cansoy found that transformational principals' behavior predicted collective teacher efficacy. Cansoy (2020) wrote, “findings show that school principals' transformational leadership behaviors increase, the teachers' common beliefs that they can enable student learning increase. Also, school principals' transformational leadership behaviors can predict collective teacher efficacy” (p. 98). Once the data were correlated, the researcher found that the school principals’ behaviors and collective teacher efficacy averaged to a level of agreement on the Likert scales. Cansoy (2020) reported:

A positive and significant relationship was revealed between school principals’ transformational leadership behaviors and collective teacher efficacy. This finding shows that there is a medium level relationship between both variables. Based on this finding, it can be stated that as the school principals’ transformational leadership behaviors increase, collective teacher efficacy will increase. (p. 97)

This study confirmed the connection between the transformational leadership behaviors of principals and collective teacher efficacy. Although confirmation occurred the researcher
identified several limitations. Firstly, the sample was significantly small and only consisted of elementary and middle level teachers. The small sample was also selected based on convenience. In addition, collective teacher efficacy was analyzed using a single dimension rather than those two dimensions the instruments originally intended to measure (Cansoy, 2020). That said, the data presented showed a correlation between transformational leadership behaviors and collective teacher efficacy, as well as predicted collective teacher efficacy.

Cansoy (2020) wrote, “school principals can be suggested to put an emphasis on the common objectives of the school, encourage cooperation and take care of the teachers individually. In addition, they should create a positive school climate and a supportive school culture” (p. 99). Although limited in scope, this study shows a significant correlation between transformational leadership behaviors and collective teacher efficacy. The researcher makes a strong argument with the evidence presented of the link between the two. Furthermore, this study presents a need for further research using a larger sample and a study consisting of high school level teachers. This author sees the value of improving collective teacher efficacy as one of the most important responsibilities of educational leaders today. The research in this study concluded that transformational leadership behaviors significantly impact the level of collective teacher efficacy.

Ross and Gray (2006) presented the conclusions of a study that showed the connection between transformational leadership behaviors and teachers' commitment to organizational values. The study examined two different models based on Bandura’s social cognitive theory. The first model hypothesized that transformational leadership contributed to teacher commitment to organizational values only due to collective teacher efficacy. The second model hypothesized
that leadership directly affected the teacher's commitment to organizational values, but indirectly affects their commitment through teacher efficacy.

The first relationship studied the effect of leadership on teacher commitment. Before this study, commitment to the organization was a secondary outcome never studied in isolation. Most studies conducted have found that transformational leadership has positive outcomes on teachers in a variety of ways. Transformational leaders foster growth and strengthen their commitment to organizations, while transactional leaders accomplish these goals without strengthening their commitment (Ross & Gray, 2006).

The second and third relationships study the effects of leadership on agency beliefs and those beliefs on teacher commitment. Ross and Gray (2006) wrote, “Since principals typically have experienced a wider variety of school settings than their teachers and have legitimate authority, principals are well-placed to set feasible goals and interpret achievement data as evidence of success and failure to meet these goals” (p. 183). Transformational leaders that contributed to teacher efficacy include giving feedback, promoting academic emphasis, and emphasizing accomplishments. Most importantly transformational leaders treat failures and successes as learning opportunities (Bass, 1985). Lastly, a principal can influence collective teacher efficacy by persuasion by offering positive messages to the whole staff and addressing low-achieving staff members individually helps move the entire community ever forward (Ross & Gray, 2006).

Ross and Gray (2006) constructed their two models based on different pathways. Model A hypothesized that there is a link between leadership style and collective teacher efficacy. The impact of which affects various school related variables relating to teacher commitment. These variables include a teacher's commitment to the school mission, community, and other members
of the staff. Model B links leadership to collective efficacy but also directly connects it to the teacher commitment variables. The researchers designed a survey to determine if the models proposed connected transformational leadership behaviors and collective teacher efficacy.

The population of the study consisted of elementary teachers from two school districts in Ontario Canada. The researchers received responses from two hundred and eighteen schools but only included those schools that submitted at least five teacher responses. The data were collected using a survey of various items measured on a six-point Likert scale with strongly disagrees and strongly agree on either end. All the items selected came from previous studies, the majority of which came from Goddard et al. (2000) and various studies conducted by Leithwood and Jantzi. Transformational leadership was defined using four of the six measures developed by Leithwood. Ross and Gray (2006) used the following four: “symbolizing good professional practice, providing individualized support, providing intellectual stimulation, and holding high performance expectations” (p. 187). Collective teacher efficacy was measured by fourteen items selected from the two dimensions of collective teacher efficacy developed by Goddard et al. (2000). The researchers measured teacher commitment using three different scales: Commitment to school mission (12 items), Commitment to the school as a professional community (five items), and commitment to school-community partnerships (four items).

The data were analyzed by inputting the raw data into the Statistical Package for the Social Sciences (SPSS). Ross and Gray (2006) upon analyzing Model A wrote, “Transformational leadership contributed to collective teacher efficacy. Teacher efficacy contributed to all three measures of teacher commitment, especially commitment to professional community and commitment to community partnerships” (p. 190). Regarding Model B, the paths also showed statistically significant connections. The result was much smaller particularly
The researchers repeated the analysis and the data found upon the replication on other schools resulted in similar findings, adding validity to the study.

The data fit both models, but the researchers thought that the specific data fit Model B better. Ross and Gray (2006) reported, “The main finding of the study is that collective teacher efficacy is a partial rather than a complete mediator of the effects of transformational leadership on teacher commitment to organizational values” (p. 191). The researchers specified three findings from their study. Ross and Gray (2006) first stated that transformational leadership impacts the school's collective teacher efficacy. Although their study did not identify specific behaviors that principals can use to influence teacher efficacy, they suggest that their main contribution is how that staff interprets their own effectiveness. Secondly, the researchers concluded that collective teacher efficacy is a strong predictor of commitment to community partnerships (Ross & Gray, 2006). The stronger this link, the more willing teachers will be to include parents in school decisions. In addition, high collective teacher efficacy helps to temper negative community feedback. Thirdly, transformational leadership has a direct link to teacher commitment regardless of agency beliefs. The strongest outcome was commitment to the school mission and/or vision (Ross & Gray, 2006). Overall, these findings strengthen the need for department leaders to foster collective teacher efficacy, as it can only help build a better commitment of both the community and teaching staff.

Ling and Joo (2019) used Leithwood’s Dimensions and Definition of Transformational Leadership developed in 2012 as the basis for their research. These dimensions include those found in his instrument, setting directions, developing people, redesigning the organization, and improving the instructional program (Ling & Joo, 2019). In addition, they leaned on the work of
Bandura and Goddard to define the elements of collective teacher efficacy. Most importantly, the researchers concluded that collective teacher efficacy is important to an organization’s sense of purpose and ability to overcome obstacles rather than see them as insurmountable (Ling & Joo, 2019).

The researchers designed a quantitative study consisting of Goddard’s Collective Efficacy Short Form and a questionnaire adapted from Leithwood’s Total School Leadership questionnaire. Leithwood’s four dimensions for transformational leadership served as the independent variable and teachers collective efficacy served as the dependent variable. The questionnaires were distributed to two different secondary schools in Malaysia and 86 secondary teachers participated. Ling and Joo (2019) concluded, “The result indicates that principal’s transformational leadership significantly influences teachers’ collective efficacy as much as 20 percent of variance change” (p. 2). Specifically, the transformational leadership behaviors of developing people and setting direction show the most significance in influencing collective teacher efficacy.

Fancera (2016) studied the relationships between collective teacher efficacy and hypothesized that four independent variables teacher degree status, student attendance, prior academic achievement and school socioeconomic status. Furthermore, the researcher correlated the four independent variables with the level of collective teacher efficacy.

The sample consisted of teachers from 60 different high schools located in New Jersey categorized into eight different socioeconomic groups. One of the issues with this study was that most of the teachers surveyed taught in schools in the middle of the socioeconomic scale. The researcher collected data from each one for the schools consisting of student attendance rate (SAR), prior student test scores in mathematics (PMA), the number of students that qualified for
free lunch (FL), and the number of teachers with advanced degrees (TAD). The collective efficacy scale developed by Goddard (2002) was then sent to all the teachers in online form to all the schools selected in the study. This study's organization was well thought out as it compares student achievement, attendance, and collective teacher efficacy. Using free lunch status to determine socio economic status can be deceptive as families do not always report this status out of embarrassment. Using an anonymous family survey would have provided a better picture of the economic status of the students within the schools.

The data were analyzed using correlation coefficients to determine the relationship between the four independent variables and collective teacher efficacy (dependent variable). A multiple regression analysis was then applied to determine if these variables predicted collective teacher efficacy (Fancera, 2016). Regarding the correlational data used to verify the existence of an association between the student attendance rate and teachers advanced degrees, it showed little correlational association. Conversely, Fancera (2016) found a positive correlation between teacher mastery experiences and test scores in mathematics. Upon further reviewing the regression analysis to determine if the four independent variables predicted collective teacher efficacy, prior mathematical achievement was the only statistically significant predictor of collective teacher efficacy. This relationship signifies that a teachers mastery experience has the greatest impact on collective teacher efficacy (Fancera, 2016). The researcher used effective techniques to analyze the data presented and provide compelling evidence to prove the study’s hypotheses. This study provides further evidence of the connection of the experiences necessary to improve collective teacher efficacy.

Department leaders who wish to increase levels of collective teacher efficacy should focus on prior academic success so that members of their team view their classroom experiences
as matter experiences. By making these connections, teachers' self and collective efficacy belief would increase regardless of the other factors researched in this study (Fancera, 2016). Most importantly, it is the department leader's responsibility to create a culture of reflection, discussions among staff, and data analysis that allows for teachers to have these mastery and vicarious experience.

Demir (2008) hypothesized that there would be a positive direct relationship between transformational leadership behaviors and self-efficacy, collective efficacy, and collaborative cultures in elementary schools. In addition, the research hoped to show an indirect relationship between collaborative school cultures and both forms of efficacy. Lastly, Demir (2008) hoped to show that transformational leadership behaviors and collective teacher efficacy are also influenced by self-efficacy and collaborative cultures.

The sample consisted of 218 teachers from 66 different elementary schools from the Edrine province in Turkey. The study created a survey that combined the works of most of the previously reviewed studies. The survey consisted of thirteen items that measured a principal’s transformational leadership behavior, collaborative culture was measured by seven items, and both self-efficacy and collective efficacy was measured by six items apiece (Demir, 2008). Furthermore, participants rated each item on the survey using a five-point Likert scale based on level of agreement with the statements presented.

Using the data obtained from the study, the researcher conducted both correlational coefficient analysis and factor analysis techniques. The correlational coefficients showed positive associations among transformational leadership behaviors and collective teacher efficacy. In addition, positive correlations existed among self-efficacy and collaborative culture. Demir (2008), upon analyzing the regression analysis, concluded, “Standardized regression
coefficients indicated that the transformational leadership behaviors of principals explained 35% of the variance of collective teacher efficacy, 49% of the variance of self-efficacy, and 58% of the variance of collaborative school culture” (p. 103).

The results of Demir’s study confirmed previous research mentioned by this author, in that transformational leadership behaviors showed a positive relationship with the level of collective teacher efficacy. In addition, transformational leadership behaviors affect collective efficacy indirectly and directly. Demir (2008) wrote, “the direct and indirect influence of transformational leadership behaviors together had a stronger relationship with collective teacher efficacy than the self-efficacy of teachers and collaborative school culture (p. 104). This research demonstrates the contribution of transformational leadership collaborative school culture, self-efficacy, and collective teacher efficacy. Most importantly, Demir’s work specifically showed that a transformational leader should model behaviors with which teachers identify, which in turn empowers them, thereby improving collective teacher efficacy (Demir, 2008).

Akan (2013) found a significant relationship between the different leadership styles defined by the multifactor leadership style scale and collective teacher efficacy while conducting research in Erzurum, Turkey. The study explored the impact of laissez-faire, transactional, and transformational leadership styles as the dependent variable.

The sample consisted of 223 elementary school teachers, 41.7 % were male, and 58.3 % were female (Akan 2013). A Turkish translated versions of the Bass and Avolio (1990) Multifactor leadership style scale and Goddard et al. (2000) collective efficacy scales served as the instruments for this study. The surveys were distributed to the teachers, collected, and analyzed using Multilinear Regression Analysis techniques.
The research concluded there was a statistically significant relationship between the school administrator's leadership styles and collective teacher efficacy (Akan, 2013). In particular, the transformational and laissez-faire leadership styles significantly predicted collective efficacy levels, while the transactional leadership style did not show statistical significance. While this study was limited to elementary school teachers, the results are undeniable as the presence of transformational leadership behaviors were linked with higher levels of collective efficacy. As the role of the department leader grows, the position includes more contact with elementary school teachers than ever before. Curricular changes and technological educational changes, such as one to one electronic device allocation at all educational levels, show the continued need for transformational leadership behaviors of these department leaders.

**Chapter Synthesis**

The research presented in the literature review demonstrates that transformational leadership behaviors contribute to collective teacher efficacy. The school leader's role offers various opportunities to improve collective and personal teacher efficacy. The literature review shows that two specific behaviors school leaders should implement include modeling behavior (Idealized Influence) and inspiring group purpose (Inspirational Motivation). School leaders should model behaviors for their staff such as cooperation and risk taking to facilitate those behaviors in their classroom teachers. In addition, school leaders should create a shared vision that is student centered and contributes to inspiring group purpose. School leaders must understand these interdisciplinary concepts and foster them in their teachers to improve student achievement. Thus, these successful aspects demonstrated by school leaders create a framework for successful behaviors department leaders should seek to exhibit.
In the future, this author stresses the importance of school leaders to prioritize both individual teacher efficacy and collective teacher efficacy. Over the next five years more than 270,000 primary and secondary education teachers are expected to leave the workforce per year (Torpey, 2018). Goddard et al. (2000) wrote, “It is not enough to hire and retain the brightest teachers, they must also believe they can successfully meet the challenges of the task at hand” (p. 502). School leaders need to find ways to attract and keep new teachers in the workforce, one of the most potent tools is improving teacher efficacy. More specifically, department leaders spend more time working with teachers on instructional practices, studying transformational leader behaviors that improve collective efficacy would help improve multiple facets of education.
CHAPTER THREE: METHODOLOGY

This quantitative study explored the connection between the transformational leadership behaviors of department leaders and collective teacher efficacy. The objective was to unearth those behaviors that showed statistical relationships to an academic department's sense of collective teacher efficacy. This, the third chapter, explains the research methods and procedures used in this study. The chapter begins with a review of the research questions and hypothesis and then discusses the sample that participated in the research study. The Collective Teacher Efficacy Scale Short Form and Multifactor Leadership Questionnaire served as the instruments of this study, making it quantitative. This section ends with a discussion of the data analysis techniques that led to the conclusions of this study discussed in Chapter Five. Most importantly, this study contributes to the current body of research and literature, by providing further information about the relationship between transformational leadership behaviors of department leaders and collective teacher efficacy.

Research Question

The literature review provided much research showing the connection between collective teacher efficacy positively influences student achievement regardless of socioeconomic status (Bandura, 1997). The ever-widening wealth gap in the United States is also causing an educational gap among students. One solution to improve student achievement among these students is to improve collective teacher efficacy. Furthermore, one innovative way to improve collective teacher efficacy may be school leaders exhibiting transformational leadership behaviors.

Most of the literature studying the topic of improving collective teacher efficacy has focused on the transformational leadership behaviors of principals. While principals manage the
day-to-day activities of a school, traditionally department leaders serve as the instructional leaders in school districts that employ them. The data gathered in this study will help to guide leaders with the information they need to address low levels of collective efficacy in their schools and student achievement regardless of social economic status.

This study sought to study the connection between collective teacher efficacy and the transformational leadership behaviors of department leaders as perceived by secondary staff members in suburban school districts located in New York. Transformational leadership behaviors served as the independent variable, while collective teacher efficacy was the dependent variable. The study addressed the following research question:

What are the differences in the collective efficacy ratings among secondary staff based on the perception of department leader’s behaviors on the continuum of transformational, transactional, and laissez faire leadership?

**Hypotheses**

To further address the purpose of the study, the following hypotheses were tested:

**H_01:** Leadership styles defined as laissez faire, transactional, and transformational of department leaders produce differing levels of collective teacher efficacy.

**H_02:** There is a statistically significant relationship between collective teacher efficacy and the components of transformational leadership; inspirational behavior, idealized influence, intellectual stimulation, and individual consideration as exhibited by department leaders.

**H_03:** There is no statistically significant relationship between collective teacher efficacy and the various components of transactional leadership, including contingent reward and management by exception active as exhibited by department leaders.
H₀ₐ: There is no statistically significant relationship between collective teacher efficacy and the various components of laissez faire leadership including management by exception passive as exhibited by department leaders.

**Research Design**

The design process began with extensive research of the two variables, transformational leadership and collective teacher efficacy. Upon reviewing several studies that proposed the connectivity of the variables, the researcher conceived the current study based on the definition of transformational leadership proposed by Bernard Bass in his book *Leadership and Performance Beyond Expectations* in 1985. Transformational Leadership behaviors were measured by the Multifactor Leadership Questionnaire, also developed in part by Bass. Collective teacher efficacy was measured by the Collective Teacher Efficacy Scale Short Form developed by Goddard and Hoy in 2003. The researcher contacted all necessary parties via electronic mail and obtained permission to use the instruments in the study. The study's design is correlational, trying to show an association between the two variables collective teacher efficacy and the leadership behaviors of department directors. The two variables were measured, but not manipulated.

Upon receiving approval by Long Island University, this study was submitted to the Institutional Review Board. Upon approval of the Review Board, consent was obtained from the Superintendents of school districts in Nassau and Suffolk counties in New York State. Electronic email was sent requesting permission to conduct the study within the school districts.

The researcher clearly communicated the purpose of the study, research questions, and the confidentiality of all the participants. The confidentiality of the data was discussed as no department or school was singled out in the analysis or in any way named. This information
helped reduce any fear that a particular school would be identified as low collective efficacy or that a department leader would be identified as an ineffective leader. Lastly, as part of this communication, only teachers that have a department leader (ie: chairperson, K-12 director) were asked to complete the survey. Teachers supervised by assistant principals, principals, or other district office positions were asked not to complete the survey.

Electronic links were sent consisting of electronic versions of the Collective Teacher Efficacy Scale Short Form and the Multifactor Leadership Questionnaire with an introductory email from the researcher that also contains the confidentiality information. Administering electronic surveys allowed the teachers to respond at a convenient time during the timeframe specified by the researcher.

**Population of Study**

Thus far, this author has discussed the core research question, hypotheses, and research design. The population, sample, and setting will now be identified and discussed. The study's population was secondary school teachers in suburban school districts in Nassau and Suffolk counties in New York State. This population contains 127 different high schools and middle schools, each school consisting of nearly one hundred or more teachers per building. In addition, the population are certified New York State teachers licensed by the New York State Education Department. To obtain initial certification, teachers must earn a four-year content area degree with at minimum a minor in secondary education (7-12). This educational experience also consists of at least one year of student teaching at the middle and high school level. In addition, prospective teachers must pass several licensing exams related to teaching techniques, and their specific content area. Furthermore, several mandatory workshops based on the social emotional well-being of students must be attended prior to obtaining initial certification. Within three years
of obtaining a position, New York teachers must obtain a master's degree to obtain a professional teacher certification. Once obtained, teachers must participate in at least 100 hours (about four days) of professional development every five years to remain actively certified.

**Sample and Setting**

This study’s participants were randomly selected teachers from Nassau and Suffolk counties in New York. The school districts selected represent a microcosm of suburban New York and the population is also representative of the typical teacher population in suburban schools within the state. The school districts participating in this study are suburban districts in New York which serve several different communities. The schools selected encompass varying degrees of wealth and student economic needs. The New York State Education Department categorizes schools in this fashion to compare districts with similar resources and student populations. This researcher attempted to balance responses equally from different school districts to demonstrate a complete cross section of the measurements from schools across Nassau and Suffolk County.

The study was conducted over a six-week period during the winter of 2023. The participants of this study consisted of 90 randomly selected teacher survey responses. No identifying factors were collected from the participants. Upon collection of the data a random number was assigned to the participant automatically. Each survey collected was then randomized a second time using the random sample functionality in SPSS to maintain complete anonymity. Sample demographic characteristics were determined by individual surveys. Participants identified their gender, years of service, and degree status. Lastly, teachers that are supervised by principals, assistant principals, or central office staff not considered under the
definition of department leader provided by this researcher, were asked not to complete the surveys.

Sample demographic data were determined by information received from each participant. There was a total of 90 teachers surveyed, of which 57.8% were male and 42.2% were female. The total number of female participants was 38, while 52 participants were male. Further demographic data on the sample is provided in Chapter Four.

**Instrumentation**

The balance of Chapter Three will now focus on a detailed review of the instrumentation, data collection, and data analysis techniques used after acquiring the data. The researcher administered two instruments to obtain information regarding the teachers' perceptions of their department leaders' leadership behavior and their sense of collective teacher efficacy. The Collective Teacher Efficacy Short Form (CE-Scale Short Form) developed by Goddard in 2002 based on the previous research conducted with Hoy and Hoy in developing the 21-item original scale in 2000. The CE-Scale Short Form was used to obtain data about the teacher's sense of collective teacher efficacy. The Multifactor Leadership Questionnaire (MLQ-5X) developed by Bass and Avolio (2000) was used to gather data about the teacher's perception of their department leader's leadership behaviors. This instrument was used to determine the range of leadership behaviors along the continuum of laissez-faire (non-leadership), transactional, and transformational leadership. Lastly, participants completed the following demographic information: gender, years of experience teaching in the school district, and highest degree earned.
Multi Factor Leadership Questionnaire

The Multifactor Leadership Questionnaire (MLQ-5X) is a standardized instrument to assess transformational and transactional leadership behavior (Avolio & Bass 2004). The instrument provides forty-five items that a user self-scores on a five-point Likert scale (Avolio & Bass, 2004; Avolio et al., 1991). Transformational, transactional, and laissez faire behaviors serve as the behavioral categories that these items assess. The Multifactor Leadership Questionnaire then provides a summary of how often leaders exhibit specific behaviors; these behaviors are measured along a scale of leadership performance indicators based on this continuum.

The first of the transformational scales is inspirational motivation. The leader’s ability to articulate the overall vision of the organization is the central factor of this transformational leadership subscale. In addition, by constantly providing a positive outlook about this vision, the leader influences followers towards its attainment. Idealized influence attributes refer to the leader's ability to inspire job satisfaction and a sense of achievement among followers. The leaders' use of attributes such as expressing high values and their perceived power are the tools related to this subscale. Idealized influence behavior, a separate, third subscale, emphasizes leadership behaviors that depict a shared sense of values and mission. Most importantly a leader shows consideration for the ethical consequences of decisions. The next subscale, a leader exhibits intellectual stimulation by challenging followers' beliefs and provides opportunities that allows them to solve problems using new techniques. Moreover, the leader stresses the importance of reasoning during problem solving through their own individual actions. The last subscale, individualized consideration assesses the leader's ability to help followers develop their own individual strengths. First, the leader identifies that individuals have individual strengths
and secondly considers individual needs of their followers when making their own decisions that affect the organization.

The transactional leadership scales contain three subscales. The first subscale of transactional leadership, contingent reward, the leader provides rewards for clearly defined tasks. The followers perform the task by making the necessary effort to accomplish said task. In the active management by exception subscale, the leader corrects problems when they arise. The leader's behaviors reflect simply monitoring and intervention of follower tasks. In contrast, the third subscale, management by exception passive, a leader intervenes only after the errors occur or the final product does not meet their standards. The most important difference between these subscales is that here, there is no corrective action as the follower is in the process of performing the task. The leader intervenes only after errors have been detected or if standards have not been met.

An even more passive approach is the laissez-faire approach is the final subscale and reveals a further passive approach to leadership defined as an almost complete lack of leadership. Most literature uses the terms laissez-faire leadership and non-leadership interchangeably. The leader gives no feedback to followers, delays in taking actions, and relinquishes their overall responsibility to lead. Combined, these sub-scales form the full range of leadership, a model developed by Avolio and Bass (2004) to explain leadership behaviors. Furthermore, a leader can exhibit leadership behaviors from all these sub-scales over time, but the Multifactor Leadership Questionnaire identifies those behaviors the leader exhibits most frequently to determine their overall leadership style.

Several internal and external tests have determined that the Multifactor Leadership Questionnaire is a valid and reliable instrument. Several test and retest reliability experiments
revealed high and significant results (Avolio & Bass, 2004; Bass & Avolio, 1990, 2000). In addition, the Multifactor Leadership Questionnaire showed high levels of convergent validity and construct validity across the subscales previously presented (Bass & Avolio, 2000).

**Collective Teacher Efficacy Scale Short Form**

The Collective Teacher Efficacy Short Form (CE-Scale Short Form) was developed by Goddard to measure a school faculty's ability to influence students' ability to learn. This survey is called the CE-Scale Short Form as it contains a 12-item Likert scale consisting of a six-item scale from strongly disagree to strongly agree. The original survey developed by Goddard et al. (2000) contained a 21 item Likert scale. Roger Goddard (2002) stated, “the 12-item scale is more theoretically pure than an earlier 21-itm scale to which the 12-item scale is compared” (p. 97). Developing a shorter scale allows the instrument to solve one of the reliability issues with the original study conducted in 2000. When reviewing the results from the original survey, many of the questions were answered based on an individual's analysis of efficacy rather than that of the groups. The new scale is considered more focused on that of the group sense of efficacy by eliminating the nine questions that led to answers based on responses from an individual's sense of efficacy.

In developing this new scale, Goddard (2002) sampled an elementary school in a large school district in the Midwest. The researcher administered the original 21-item instrument to 47 schools, 452 teachers. Each item contained in the survey correlated as group competence or task analysis. These factors could be viewed as positive or negative. Goddard (2002) wrote:

> The scale included items reflecting GC and TA, and within each of these categories, both positively and negatively worded items appeared. The result was a scale with four types
of items but an unbalanced representation across the types (7 GC+, 6 GC−, 4 TA+, and 4 TA−). (p. 104)

After conducting a factor analysis, the researcher selected twelve items to create a more balanced scale of collective teacher efficacy.

The items in the original scale and the new short form were correlated using the Pearson Product-Moment Correlation (Goddard, 2002). Each item in the 21-point scale was correlated as group competence or task analysis positive or negative. Additionally, through factor analysis, each item received a structure coefficient. The researcher then took the highest three ranked items in each of the four categories (GC+, GC−, TA+, and TA−) and created the 12-item collective efficacy short form. Goddard (2002) stated, “Indeed, when the scale was balanced across 12 items rather than unbalanced across 21, the salient factor structure coefficients were higher, and a single factor explained more of the total item variation for the 12-item scale” (p. 106). The CE-Scale Short Form showed predictive validity, upon comparing the two instruments, the results showed a high correlation. Although the CE-Scale Short Form is shorter, the statistical analysis shows that it is a stronger predictor of collective efficacy (Goddard, 2002).

Data Collection

The researcher used the online survey tool Transform, monitored by the company Mind Garden, to deliver the research instruments electronically over a six-week period. An introductory email was sent inviting each participant to volunteer in the study. In addition, the email contained a link to electronic versions of the two instruments. The researcher also sent two reminder emails to the participants, one after the first week and the second with one day remaining in the collection period.
Participation in this study was completely voluntary. Due to the anonymous collection of data and the lack of identifiable indicators the subjects will remain completely anonymous. In addition, no subjects were harmed or placed under undue stress as they could stop answering survey questions at any point. Data will be stored in a locked file as per IRB standards and will be destroyed in three years.

Data Analysis

The same data analysis methods were used for all sections of the instruments to answer the research question and determine the accuracy of the hypotheses. Upon collecting 107 surveys, 17 were incomplete and unusable, 90 surveys were inputted into the SPSS software to compute the statistical analysis. Mean comparison tables were generated based on the demographic data collected to determine connections, if any, existed between the demographic factors and collective teacher efficacy as measured by the CE-Scale Short Form. Furthermore, t-tests were used to establish differences in collective teacher efficacy levels based on gender and the teacher’s perception of the transformational leadership behaviors of their department leader.

Statistical analyses were then performed using the SPSS Version 29.0 to compute the data collected from the MLQ and CE-Scale Short Form surveys. Means and standard deviations were calculated for the total scores determined by these instruments using their subscales. These subscales included inspirational motivation, idealized influence attributes, idealized influence behaviors, and intellectual stimulation for the MLQ. In addition, the full range of the leadership continuum was also analyzed: contingent reward, management by exception active, management by exception passive, laissez faire, and transformational (Bass & Avolio, 2000). The subscales of the CE-Scale Short Form consisted of group competence and task analysis (Goddard, 2002).
The data were then analyzed using the Pearson Product-Moment Correlation Coefficient (PPMC). This technique indicates the degree of the relationship between two variables (Lester et al., 2014). In this study, the Pearson $r$ reflects the strength of the relationship between the factors tested by the two instruments. Thus, the data measures the extent of the relationship that exists between collective teacher efficacy and the continuum of the leadership behaviors of department leaders, be it laissez faire, transactional, or transformational. Lastly, multiple regression analysis techniques were employed to determine the predictive ability of the variables associated with the continuum of transformational leadership and collective teacher efficacy.

**Validity and Reliability of the Study**

This researcher used several techniques to ensure the validity and reliability of this quantitative study because internal validity is paramount when conducting any quantitative study. This researcher showed that both variables are related in a correlational fashion, thereby concluding the aforementioned causation and a relationship condition exist. Secondly, proving a cause-and-effect relationship, namely that transformational leadership behaviors cause higher levels of collective teacher efficacy provides a temporal antecedence condition. Lastly, the researcher provided evidence that the relationship between the variables is not related to confounding variables therefore providing lack of an alternative explanation condition.

External validity was ensured by providing evidence that these results can be generalized across population and setting. Through statistical analysis and inference of the data collected, a proven connection between transformational leadership behaviors of department leaders and collective teacher efficacy can be generalized in secondary teachers in New York state suburbs. In addition, schools of similar makeup would also provide a similar outcome providing ecological validity. This researcher also accurately measured the data to ensure construct
validity. Furthermore, the study concluded that the two variables are both related and use statistical analysis to provide an estimated strength of said relationship.

**Ethical Procedures**

This researcher designed a quantitative study that both protected and informed participants. Ethical and moral guidelines provided by the Institutional Review Board (IRB) were carefully followed. The researcher used an informed consent document as part of the surveys distributed and in the letter of introduction given to participants and superintendents. This letter also provided the study’s objectives, description of procedures, and that no identifiable information would be used. The participants were also made aware that participation was voluntary and could drop out at any time without recourse.

The survey instruments were designed to reduce collection of identifiable information. All data were safeguarded to protect confidentiality and will be stored securely for a three-year period as per IRB standards. Upon said passage of time, the researcher will permanently destroy and delete the data files. Lastly, throughout the data process, no identifiable data was generated.

**Limitations of Study**

This study was limited by the sample population and size. The sample only compromises school districts from two counties in New York State. Although these districts provide a cross section of students of varying performance and socioeconomic need, the lack of comparative data among several districts from several different counties in New York limits the study. The generalizability of these results would be limited to similar suburban districts in New York. In addition, many school districts that do not employ department leaders assign the necessary departmental leadership responsibilities to other central office leaders or building leaders. This study did not collect information from teachers supervised by these variations. Mostly,
departmental leadership responsibilities are secondary to the other responsibilities of those offices. This researcher did not seek to include this data, as the focus of this study centered only on the department leaders perceived behavior as the independent variable.

The findings of this study were limited in scope. The researcher only surveyed secondary teachers, so the findings are limited to educators serving secondary students. This factor negated data from the elementary school teachers. Department leaders spend most of their time with secondary teachers, but as the need for instructional oversight increases at the elementary level, department leader interactions with elementary teachers are also increasing. Furthermore, as new elementary standards in subject areas change, department leaders are commonly tasked with their introduction into the elementary curriculum.

**Summary and Benefits of Study**

To summarize, this correlational study was designed to analyze the relationship between a department leader's leadership behavior as perceived by teachers along the full range of leadership continuum and collective teacher efficacy. The researcher used the CE-Scale Short Form to assess the participants' collective teacher efficacy. The MLQ survey was used to identify the leadership behaviors exhibited by department leaders on the previously discussed subscales. The instruments were sent to participants electronically via email over a six-week period. The data were analyzed using the Pearson Product-Moment Correlation Coefficient (PPMC) components of the SPSS software to determine the relationship between the variables. Correlational data, means, regression analyses and standard deviations will be presented with written explanations of their relationships in Chapter Four.

This research seeks to fill a gap in the research related to the connections of transformational leadership behaviors and collective teacher efficacy. As the literature review
demonstrated, much of the research conducted up to this point has focused on the transformational leadership behaviors of principals, while this study focused on the transformational leadership behaviors of department leaders. In districts that do not employ department leaders, this study argues that their addition would help improve collective teacher efficacy.

School superintendents would benefit from this research as it would help guide them in determining the type of administrative behaviors to seek when hiring candidates. Moreover, superintendents constantly seek new ways to improve student achievement. Improving collective teacher efficacy improves student achievement (Bandura, 1997; Donohoo, 2016; Goddard, 2001; Hattie, 2012). This study helps to show the benefits of transformational leadership among department leaders, while other studies echo similar benefits for principals. Thus, a complete framework for an administrative team that would benefit student achievement by improving collective teacher efficacy exists to guide the practices of professional development for administrators. This study showed the connection between transformational leadership behaviors and collective teacher efficacy. Other district leaders can benefit from this study by duplicating transformational leadership behaviors discussed in this study.
CHAPTER FOUR: FINDINGS AND RESULTS

Throughout the first three chapters of this dissertation, this author provided the historical background of this research, its practical significance, and the importance of improving collective teacher efficacy. Schools with high degrees of collective teacher efficacy manage limited resources better, take on more leadership roles within the school, and are better able to find solutions for difficult educational problems (Cybulski et al., 2005; Derrington & Angelle, 2013; Donohoo, 2018). Additionally, students show higher levels of achievement when taught in schools with high levels of collective teacher efficacy (Bandura, 1997, 2000; Ross & Gray, 2006). This researcher proposed that the transformational leadership behaviors of department leaders impact the collective teacher efficacy of their departments. Transformational leadership behaviors positively impact collective teacher efficacy (Cansoy, 2020; Da’as, 2020; Demir, 2008; Goddard et al., 2000).

Collective teacher efficacy served as the dependent variable and the perception of the department leaders leadership behaviors as determined by the continuum of laissez faire, transactional, and transformational served as the independent variable. Prior to this study most of the research conducted focused on school principals. These studies report that transformational leadership styles in both business and education affect organizational culture, job satisfaction, individual teacher efficacy, and collective teacher efficacy (Leithwood & Jantzi, 2000, 2005; Lund, 2003; Perera et al. 2021; Tsai, 2011; Tschannen-Moran et al., 1998).

This chapter begins with a summary of the setting and population, reacquaints the reader with the procedures conducted by the researcher, and reports on the findings. To address the research question and the hypotheses, statistical analyses were conducted using SPSS, Version 29.0. Pearson Product-Moment Correlation Coefficient and multiple linear regressions were
performed and evaluated for statistical significance. After discussing the findings, this chapter concludes by directly answering the research question and analyzing the hypotheses using the data collected in this study.

It is important to recall the guiding research question and the hypotheses that ushered this study. As the data are analyzed, continually referencing these inquiries provides a frame of reference for the reader.

**Research Question**

What are the differences in the collective efficacy ratings among secondary staff based on the perception of department leader’s behaviors on the continuum of transformational, transactional, and laissez faire leadership?

**Hypotheses**

- **H₀₁**: Leadership styles defined as laissez faire, transactional, and transformational of department leaders produce differing levels of collective teacher efficacy.
- **H₀₂**: There is a statistically significant relationship between collective teacher efficacy and the components of transformational leadership; inspirational behavior, idealized influence, intellectual stimulation, and individual consideration as exhibited by department leaders.
- **H₀₃**: There is no statistically significant relationship between collective teacher efficacy and the various components of transactional leadership, including contingent reward and management by exception active as exhibited by department leaders.
- **H₀₄**: There is no statistically significant relationship between collective teacher efficacy and the various components of laissez faire leadership including management by exception passive as exhibited by department leaders.
Preliminary Data Analysis

The sample consisted of 90 secondary education schoolteachers that were supervised by department leaders in Nassau and Suffolk counties, located in the state of New York. The first step of the data analysis was to evaluate the collected survey information from the Multifactor Leadership Questionnaire and the Collective Efficacy Short-Form for incomplete responses. Of the 107 questionnaires that were reviewed, 90 were fully completed and analyzed for this study. Seventeen were incomplete and not included.

As discussed in Chapter Three, these instruments are well known and tested extensively for internal and external validity. Therefore, the data obtained from these instruments was considered reliable. Regardless, this researcher conducted Cronbach’s alpha tests to ensure internal consistency on both instruments. The Collective Teacher Efficacy Short-Form produced Cronbach’s alpha of .95. Both the general competence and task analysis scale consisted of six items each and produced a Cronbach’s alpha of .9 respectively. Therefore, the instrument demonstrated a high level of internal consistency. The Multifactor Leadership Questionnaire produced Cronbach’s alpha of .94. The subscales of transformational leadership (α = .98), transactional leadership (α = .7), and laissez-faire leadership (α = .9) were found to be highly reliable. Therefore, the instrument demonstrated a high level of internal consistency.

Demographics of the Sample

Participants in the study were asked to identify their gender from a choice of male, female or other. The sample consisted of 52 males (57.2%) and 38 females (42.2%). No respondents identified as other. In addition, participants identified their years of experience. Among the participants, 22.2% reported 1 to 5 years of experience; 20.0% reported 6 to 10 years of experience; 12.2% detailed 11 to 15 years of experience; 18.9% reported 16 to 20 years of
experience; and 26.7% indicated more than 20 years of experience. Lastly, when asked about their degree status, the majority (80%) of respondents indicated that they had a master's degree. One participant (1.1%) identified they received a doctorate degree and 17 (18.9%) identified only obtaining a bachelor’s degree.

The following tables identify the demographic data of the sample. It was important to include the breakdown of gender, years of experience, and degree status to underscore the nuances within the sample.

**Demographic Frequency Tables**

**Table 4.1**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>52</td>
<td>57.8</td>
<td>57.8</td>
<td>57.8</td>
</tr>
<tr>
<td>Male</td>
<td>52</td>
<td>57.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>38</td>
<td>42.2</td>
<td>42.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The gender breakdown of this study consisted of 52 males and 38 females. The male to female gender ratio was 57.8% to 42.2%. No participants identified “other” as their gender, so other is not included in any analyses.
The fewest survey responses were among teachers with 11 to 15 years of experience. However, the survey responses provided a reasonable representation of early career, middle career, and senior teachers within the sample. The largest response rates were among teachers with 20 or more years of experience.

The sample of this study consisted primarily of teachers with master’s degrees as is the norm among educators in New York State, as a master’s degree is required to remain certified.
beyond five years of service. This is also consistent with the information provided in Table 4.2, as 70 of the participants identified they had been in service for more than five years.

**Presentation of Findings**

A series of data analysis techniques were used to determine the correlation between the differences in the collective efficacy ratings among secondary staff based on the perception of department leader’s behaviors on the continuum of transformational, transactional, and laissez-faire leadership. More specifically, descriptive analyses, Pearson Correlations, and multiple regression analyses were used to determine the validity of the four hypotheses and ultimately provide evidence to answer the guiding research question for this study.

The Multi Factor Leadership Questionnaire was used to measure various leadership behaviors associated with transformational, transactional, and laissez-faire leadership. The information gleaned from this instrument provided the data necessary to answer the hypotheses associated with the research question. Collective teacher efficacy was measured by the Collective Teacher Efficacy Short-Form to determine the collective teacher efficacy level as reported by the respondents. The twelve questions included in the survey provide a maximum possible score of 72. This measure is referred to throughout the data analysis section when this researcher presents the study’s findings.

This study included one research question and four hypotheses designed to further understand the extent to which collective efficacy ratings differed based on secondary staff members perception of their department leaders' behaviors along the continuum of transformational, transactional, and laissez-faire leadership. The analysis of the data from each of the four hypotheses provided the necessary data to answer this guiding research question. The results for each hypothesis are presented below.
H₀₁: Leadership styles defined as laissez faire, transactional, and transformational of department leaders produce differing levels of collective teacher efficacy.

Multiple regression analysis techniques were used to determine the correlation between the continuum of leadership behaviors including transformational, transactional, and laissez-faire leadership against the dependent variable collective teacher efficacy. As exemplified in Table 4.4, these independent variables explained 66.7% of the variability of collective teacher efficacy.

Table 4.4

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.824⁹</td>
<td>.678</td>
<td>.667</td>
<td>7.679</td>
</tr>
</tbody>
</table>

⁹: Predictors: (Constant), Transformational, Transactional, Laissez_Faire_Total

b: Dependent Variable: Collective_Efficacy

\( R^2 \) for the overall model was 67.8% with an adjusted \( R^2 \) of 66.7%. This demonstrates a large size effect and reasonably good fit for the regression model (Johnson & Christensen, 2020).
Table 4.5

ANOVA Regression Model Predicting Collective Efficacy from Leadership Styles

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>10698.504</td>
<td>3</td>
<td>3566.168</td>
<td>60.475</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Residual</td>
<td>5071.319</td>
<td>86</td>
<td>58.969</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15769.822</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Collective_Efficacy

b. Predictors: (Constant), Transformational, Transactional, Laissez_Faire_Total

The statistical significance of the overall model was analyzed using the ANOVA analysis technique. Transformational, transactional, and laissez-faire leadership statistically significantly predicted the collective efficacy as reported by the secondary teachers, $F (3, 86) = 60.475, p < .001$. This shows that the model of analysis exhibited statistical significance and how well the independent variables predict the dependent variable.

Table 4.6

Multiple Regression Coefficient for Predicting Collective Efficacy from Leadership Styles

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>37.56</td>
<td>4.646</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transactional</td>
<td>2.079</td>
<td>3.24</td>
<td>.109</td>
<td>1.571</td>
<td>.120</td>
</tr>
<tr>
<td>Laissez_Faire_Total</td>
<td>-3.303</td>
<td>1.283</td>
<td>-.260</td>
<td>-2.574</td>
<td>.012</td>
</tr>
<tr>
<td>Transformational</td>
<td>6.445</td>
<td>1.255</td>
<td>.545</td>
<td>5.136</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
A multiple regression analysis was run to predict the level of collective teacher efficacy of secondary teachers that perceive their department leaders’ behavior as transformational, transactional, or laissez-faire. This revealed that stronger perceptions of transformational leadership related to greater collective teacher efficacy. Stronger perceptions of laissez-faire leadership behavior led to lower levels of collective teacher efficacy, and no statistically significant relationship with transactional leadership subscale and collective teacher efficacy.

There was no evidence of multicollinearity, as assessed by tolerance values greater than 0.1. The multiple regression model statistically significantly predicted collective teacher efficacy, $F(3, 86) = 60.475, p < .001$, adj. $R^2 = .67$. Regression coefficients and standard errors can be found in Table 4.6 above.

**Figure 4.1**

*Test of Normality of Residuals Analysis*
As shown in Figure 4.1, a histogram analysis further indicated that residuals were normal. Residual graphs showed no issues with non-linearity or heteroscedasticity. Regarding multicollinearity, the largest VIF score was 3.0, well below a threshold value of 10 (Johnson & Christensen, 2020). No issues with multicollinearity existed.

Figure 4.2

Scatterplot of Predicted Values by Residual Values

As shown in Figure 4.2, an analysis of a scatterplot revealed no problematic patterns in the data presented in Table 4.6.

H02: There is a statistically significant relationship between collective teacher efficacy and the components of transformational leadership; inspirational behavior, idealized influence, intellectual stimulation, and individual consideration as exhibited by department leaders.

The bulk of the statements presented in the Multifactor Leadership Questionnaire identified the behaviors associated with transformational leadership behavior. Four statements
for each behavior were located throughout the questionnaire randomly. These behaviors included idealized influence attributes, idealized influence behaviors, individual consideration, inspirational motivation, and intellectual stimulation. The maximum score of collective teacher efficacy is 72 points, of which the two subscales, group competence and task analysis statements are valued at 36 points each. Table 4.7 demonstrates the central tendency of the responses, while the subsequent analyses provide a correlational analysis of each transformational leadership behavior and the overall transformational leadership rating with the overall collective teacher efficacy rating.

**Table 4.7**

<table>
<thead>
<tr>
<th>Descriptive Statistics: Collective Teacher Efficacy and Transformational Leadership Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>Collective_Efficacy</td>
</tr>
<tr>
<td>Group_Competence</td>
</tr>
<tr>
<td>Task_Analysis</td>
</tr>
<tr>
<td>Idealized_Influence_Behavior</td>
</tr>
<tr>
<td>Idealized_Influence_Attributes</td>
</tr>
<tr>
<td>Individual_Personal</td>
</tr>
<tr>
<td>Inspirational_Motivation</td>
</tr>
<tr>
<td>Intellectual_Stimulation</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
</tr>
</tbody>
</table>

Descriptive statistics were undertaken to elucidate the central tendency results for collective efficacy and the behaviors associated with transformational leadership. The analyses were conducted on a sample size of 90. The mean values of 2.43 and 2.49 for the two variables that make up idealized influence are consistent with the behaviors department leaders would demonstrate within that subscale.
A Pearson’s product-moment correlation was performed to assess the relationship between collective teacher efficacy and the variables that make up transformational leadership. There was a statistically significant, strong positive correlation between collective efficacy and transformational leadership behaviors. Overall, greater levels of collective efficacy are related to more transformational leadership behaviors. Idealized influence attributes demonstrated the strongest positive correlation \( r (88) = .83, p < .001 \). Inspirational motivation exhibited the next highest strong positive correlation, \( r (88) = .78, p < .001 \). In addition, individual consideration behavior demonstrated the smallest, but still significant strong positive correlation, \( r (88) = .73, p < .001 \). The remaining behaviors associated with transformational leadership; idealized
influence behavior \((r (88) = .76, p < .001)\) and intellectual stimulation \((r (88) = .76, p < .00)\) also demonstrated similar statistically significant, strong positive correlations.

Table 4.9

<table>
<thead>
<tr>
<th>Pearson Correlations Among Collective Teacher Efficacy and Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transformational Leadership Ratings</strong></td>
</tr>
<tr>
<td>Collective_Efficacy</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Transformational</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

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

A Pearson’s product-moment correlation was run to assess the relationship between collective teacher efficacy and the transformational leadership ratings among the sample. There was a statistically significant, strong positive correlation between collective teacher efficacy and transformational leadership behaviors, \(r (88) = .8, p < .001\). Thus, the more the participants perceived their department director as demonstrating transformational leadership behaviors they reported greater levels of collective teacher efficacy.
Figure 4.3

Graphical Representation of the Relationship between Collective Teacher Efficacy and Transformational Leadership Behaviors

As shown in Table 4.9 there is a statistically significant relationship whereas transformational leadership behaviors increased, the level of collective teacher efficacy rose.

H₀₃: There is no statistically significant relationship between collective teacher efficacy and the various components of transactional leadership, including contingent reward and management by exception active as exhibited by department leaders.

The Multifactor Leadership Questionnaire identified two different behaviors associated with transactional leadership. Four statements for each behavior were located throughout the questionnaire randomly. These behaviors consisted of contingent reward and management by exception active. Table 4.10 demonstrates the central tendency of the responses, including the
mean and standard deviation. Subsequent tables and figures provide a correlational analysis of each transactional leadership behavior and the overall transactional leadership rating with the overall collective teacher efficacy rating.

Table 4.10

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collective Efficacy</td>
<td>55.16</td>
<td>13.311</td>
<td>90</td>
</tr>
<tr>
<td>Contingent Reward</td>
<td>2.668</td>
<td>0.9898</td>
<td>90</td>
</tr>
<tr>
<td>MBEA</td>
<td>1.824</td>
<td>0.8836</td>
<td>90</td>
</tr>
</tbody>
</table>

Descriptive statistics were analyzed to demonstrate the central tendency results for collective efficacy and the behaviors associated with transactional leadership. The analyses were conducted on a sample size of 90.
A Pearson’s product-moment correlation was performed to assess the relationship between collective teacher efficacy and the variables that compose transactional leadership. There was a statistically significant, strong positive correlation between collective efficacy and contingent reward behaviors, $r (88) = .76, p < .001$. There was no relationship between collective efficacy and management by exception active, $r (88) = -.13, p = .24$. Overall, levels of collective efficacy are increased by contingent reward behaviors and not affected by management by exception active behaviors.
A Pearson’s product-moment correlation was conducted to assess the relationship between collective teacher efficacy and the transactional leadership ratings among the sample. There was a statistically significant, moderate positive correlation between collective teacher efficacy and transactional leadership behaviors, \( r(88) = .46, p < .001 \). Therefore, the more the participants perceived their department director as demonstrating transactional leadership behaviors they reported higher levels of collective teacher efficacy. As previously demonstrated in Table 4.11, this can be attributed to the demonstration of contingent reward behaviors and not management by exception active behaviors.
As shown in Table 4.12 there is a statistically significant relationship whereas transactional leadership behaviors increased, the level of collective teacher efficacy rose. As shown in Table 4.11, this relationship is due primarily to department leaders demonstrating contingent reward behaviors and not management by exception active behaviors. In comparison to Figure 1, this relationship was weaker as compared to department leaders that demonstrate transformational leadership behaviors.

H₀₄: There is no statistically significant relationship between collective teacher efficacy and the various components of laissez faire leadership including management by exception passive as exhibited by department leaders.
Two behaviors are identified by the Multifactor Leadership Questionnaire associated with laissez-faire leadership. Four statements for each behavior were located throughout the questionnaire randomly. These behaviors consisted of management by exception passive and laissez-faire behaviors (non-leadership). To demonstrate the central tendency and variation, the mean and standard deviation were analyzed and are summarized in Table 4.13. Subsequent tables and figures provide a correlational analysis of each component of laissez-faire leadership behavior and the overall laissez-faire leadership rating with the overall rating of collective teacher efficacy.

**Table 4.13**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collective_Efficacy</td>
<td>55.16</td>
<td>13.311</td>
<td>90</td>
</tr>
<tr>
<td>Laissez_Faire_Behavior</td>
<td>.921</td>
<td>1.0831</td>
<td>90</td>
</tr>
<tr>
<td>MBEP</td>
<td>1.080</td>
<td>1.1494</td>
<td>90</td>
</tr>
</tbody>
</table>

Descriptive statistics were analyzed to demonstrate the central tendency results for collective efficacy and the behaviors associated with laissez-faire leadership. The analyses were conducted on a sample size of 90. These behaviors recorded the lowest means in any of the behaviors associated with the continuum of transformational leadership.
Table 4.14

*Pearson Correlations Among Collective Teacher Efficacy and Laissez-Faire Leadership Behaviors*

<table>
<thead>
<tr>
<th></th>
<th>Collective_Efficacy</th>
<th>Laissez_Faire_Behavior</th>
<th>MBEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collective_Efficacy</td>
<td>Pearson Correlation</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Laissez_Faire_Behavior</td>
<td>Pearson Correlation</td>
<td>-0.708***</td>
<td>--</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>MBEP</td>
<td>Pearson Correlation</td>
<td>-0.675***</td>
<td>0.774***</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td></td>
<td>&lt;.001</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>90</td>
<td>90</td>
</tr>
</tbody>
</table>

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

A Pearson’s product-moment correlation was conducted to assess the relationship between collective teacher efficacy and the laissez-faire leadership ratings among the sample. There was a statistically significant, strong negative correlation between collective teacher efficacy and the behaviors associated with laissez-faire leadership, $r(88) = -.70, p < .001$. In addition, there was a strong negative correlation between collective teacher efficacy and management by exception passive behaviors, $r(88) = -.67, p < .001$. Therefore, the more the participants perceived their department director as demonstrating laissez-faire leadership behaviors they reported lower levels of collective teacher efficacy.
A Pearson’s product-moment correlation was performed to assess the relationship between collective teacher efficacy and the laissez-faire leadership ratings among the sample. There was a statistically significant, strong negative correlation between collective teacher efficacy and laissez-faire leadership behaviors, $r(88) = -0.73$, $p < .001$. Therefore, the more the participants perceived their department director as demonstrating laissez-faire leadership behaviors they reported lower levels of collective teacher efficacy.
Figure 4.5

*Graphical Representation of the Relationship between Collective Teacher Efficacy and Laissez-Faire Leadership Behaviors*

As shown in Table 4.15 there is a statistically significant negative relationship whereas laissez-faire leadership behaviors increased, the level of collective teacher efficacy declined. In comparison to Figure 1 and 2, there was a positive relationship with regards to department leaders that demonstrate transformational leadership behaviors, or the transactional leader behavior contingent reward related to increased collective efficacy.

**Summary**

This chapter presented the findings for the guiding research question and hypotheses of this study. Quantitative data from two different instruments, the Multifactor Leadership Questionnaire and the Collective Efficacy Short-Form was presented to determine the
significance and strength of the relationships between teachers’ perceptions of their department leaders’ behavior and their sense of collective teacher efficacy. Six statistically significant positive relationships were identified by this research; all five variables associated with transformational leadership and the transactional leadership behavior of contingent reward with the reported level of collective teacher efficacy. A statistically significant negative relationship was identified by this research between both variables associated with laissez-faire leadership and the level of collective teacher efficacy reported by the participants. Demographic questions were included in the surveys to identify basic descriptive information about the respondents. Greater perceptions of transformational leadership behaviors led to greater levels of collective teacher efficacy. In contrast, greater perceptions of laissez-faire leadership led to lower levels of collective teacher efficacy. Chapter Five presents an overview of the study, a summary of findings, conclusions, and recommendations for future studies.
CHAPTER FIVE: DISCUSSION AND CONCLUSION

This chapter provides an overview of the relationships between the leadership behaviors of department leaders and their faculties sense of collective teacher efficacy. This author will summarize the purpose of the study, discuss the results, implications, conclusions, and recommendations for future research. The discussion of these topics stems from the teacher responses on the Collective Teacher Efficacy Short-Form developed by Goodard and Hoy in 2002, and the Multi-factor Leadership Questionnaire originally conceived by Bass and Avolio in 1990 and the overall conclusions are stated.

Summary of Purpose

The goal of this study was to analyze the collective teacher efficacy levels of secondary teachers based on their perception of their department leaders' behaviors along the continuum of laissez-faire, transactional, and transformational leadership. More specifically, emphasis was placed on the distinct behaviors that define each part of the continuum and how they influence the level of collective teacher efficacy among department members. This researcher sought to create a blueprint for the behaviors a department leader could exhibit to positively impact collective teacher efficacy.

Researchers have proposed that collective teacher efficacy positively impacts student achievement regardless of socioeconomic status (Bandura, 1986, 1997; Hattie, 2012). High levels of collective teacher efficacy are also associated with numerous positive behaviors among educators such as exhibiting leadership behaviors, experimenting with new teaching techniques, collaborative teacher cultures, and an overall feeling of teacher belongingness (Coladarci, 1997; Cybulski, 2005; Goddard, 2001). Furthermore, teachers feel a shared sense of responsibility for student outcomes, face a special set of challenges, and have little control over the work
environment. Therefore, improving collective teacher efficacy encourages improvement in student achievement (Bandura, 1997).

Leaders that exhibit transformational leadership behaviors influence followers in a myriad of positive ways. A transformational leader inspires subordinates to accomplish more than their own self-interests and work for the good of the whole organization (Bass & Avolio, 1993). These leaders accomplish this by orienting their values to the organization's. In other words, a transformational leader motivates followers to accomplish more than they originally intended (Krishnan, 2005). Furthermore, transformational leadership behaviors are necessary in all organizations as they have been shown to enhance the outcomes of the organization and potentially the personal outcomes of each employee (Tucker & Russell, 2004).

Prior to this study, most of the research that studied leadership styles and their impact on collective teacher efficacy focuses on school principals. These studies showed that transformational leaders inspired followers toward a common vision and in many cases improved student achievement (Bass, 1997; Derrington & Angelle, 2013). Furthermore, researchers have found a significant correlation between transformational leadership behaviors and collective teacher efficacy (Cansoy, 2020; Ling & Joo, 2019; Fancera, 2016; Ross & Gray, 2006). This researcher focused on conducting a quantitative study to explore this connection using department leaders instead of school principals.

**Research Question**

What are the differences in the collective efficacy ratings among secondary staff based on the perception of department leader’s behaviors on the continuum of transformational, transactional, and laissez faire leadership?
Hypotheses

\( H_{01} \): Leadership styles defined as laissez faire, transactional, and transformational of department leaders produce differing levels of collective teacher efficacy.

\( H_{02} \): There is a statistically significant relationship between collective teacher efficacy and the components of transformational leadership; inspirational behavior, idealized influence, intellectual stimulation, and individual consideration as exhibited by department leaders.

\( H_{03} \): There is no statistically significant relationship between collective teacher efficacy and the various components of transactional leadership, including contingent reward and management by exception active as exhibited by department leaders.

\( H_{04} \): There is no statistically significant relationship between collective teacher efficacy and the various components of laissez faire leadership including management by exception passive as exhibited by department leaders.

Summary of Procedures

Data from 90 secondary teachers (Grades 7-12) located in public school districts in Long Island, New York was analyzed in this study. These school districts consisted of a broad spectrum of teachers and student population. This researcher employed two survey instruments, one that measured department leader leadership style and a second that measured collective teacher efficacy. The Multifactor Leadership Questionnaire was completed by the teachers and analyzed by the researcher to determine the teacher's perception of the leadership style of their department leader. This questionnaire consists of 45 questions that are self-scored using a five-point scale to measure a leader's behavior along the continuum of laissez-faire, transactional, and transformational. The theoretical framework and questionnaire are based on the work of Bernard Bass in 1985 and further expanded upon by Avolio and Bass in 1990.
The study employed a separate instrument to measure collective teacher efficacy. The Collective Teacher Efficacy Short Form (CE-Scale Short Form) was used to measure the collective teacher efficacy level of each participant. The short scale was based on the original work of Gibson and Dembo (1984) and the previous long form developed by Goddard et al. (2000). The shorter version consists of 12, self-scoring items, on a six-point scale. Lastly, basic demographic information was collected from each participant consisting of: gender, years of service, and degree status.

Electronic emails to teachers included a description of the research, their rights as a participant, and an assurance of anonymity were sent to potential participants. Links to the instruments, including the demographic questionnaire were included. Participants were told to complete the questionnaire or close the browser if they did not wish to participate. The researcher set the data collection window at six-weeks for participating school districts and 90 completed surveys were collected. This number exceeds the minimum recommendation of 30 to 50 participants (Johnson & Christensen, 2020).

The data analysis for this study consisted of Pearson Correlations used to determine which independent variables showed the highest correlations. This technique is used to measure the strength of the linear relationship between two variables (Lester et al., 2014). These independent variables consisted of the leadership behaviors along the continuum of transformational leadership. Transformational leadership behaviors consisted of intellectual stimulation, idealized influence, inspirational motivation, and individual consideration. Contingent reward and management by exception active represented transactional behaviors. Laissez-faire leadership behaviors consisted of management by exception passive behaviors.
Collective teacher efficacy was determined by mean calculations of each of the 12 questions on Collective Efficacy Short-Form.

Several multiple regression analyses examined the relationships more closely. A significant relationship was determined if the value was less than .05. These analyses were performed using the Statistical Package for the Social Silences version 29 software. In addition, several comparison tables were used to examine the collective teacher efficacy among the demographic variables. This information included gender, years of experience, and degree status. These variables were entered into the SPSS and several frequency tables were developed for informational purposes only. These demographic variables were used only to demonstrate that a cross section was taken while conducting this study.

**Summary of Demographic Data**

For this study, demographic questions were asked of each respondent to identify their gender, years of experience, and degree status. The sample consisted of 52 males (57.2%) and 38 females (42.2%). No respondents identified as other. A total of 72 (80%) of participants identified as having obtained a master's degree. Lastly the sample contained an even distribution of respondents when reporting their years of experience with the lowest percentage (12.2%) identifying as having 11 to 15 years of experience.

**Discussion of Major Findings and Themes**

This section of the chapter discusses the major findings of the study. Additionally, this researcher will interpret these findings and demonstrate their connection to the guiding research question and hypotheses. This study addressed the following research question: “What are the differences in the collective efficacy ratings among secondary staff based on the perception of department leaders' behaviors based on the continuum of transformational, transactional, and
laissez faire leadership?” The major findings of this study suggest that departments directors that are perceived by their staff as more transformational than transactional or laissez-faire lead departments with higher levels of collective teacher efficacy. From the teacher's perspective in this study, department leaders showed behaviors associated with idealized influence behavior and attributes, intellectual stimulation, individual consideration, inspirational motivation, and contingent reward reported higher levels of collective efficacy. As such, collective teacher efficacy was significantly influenced by these behaviors positively. In contrast, management by exception active and passive, as well as laissez-faire behaviors may influence collective teacher efficacy negatively. Furthermore, this study found that teachers that perceived their directors as exhibiting more transformational leadership style behaviors had higher levels of collective teacher efficacy.

**Major Themes and Findings**

**Behaviors that Positively Influenced Collective Teacher Efficacy**

A multiple regression analysis revealed a statistically significant strong positive relationship between the transformational leadership subscale and collective teacher efficacy. Prior research has proven the impact on school culture and various positive behaviors associated with high levels of collective teacher efficacy (Coladarci, 1997; Cybulski, 2005; Donohoo, 2018; Goddard, 2001). Thus, a department leader must recognize and understand their own ability to impact collective teacher efficacy through the exhibition of specific behaviors related to transformational leadership. Transformational leadership is the process leaders use to change their employee's awareness away from individual goals to the organization's (Bass, 1985). Furthermore, transformational leaders are proactive and seek to influence their followers to achieve goals greater than expectations and optimization the development of each employee
based on their individual strengths (Bass & Avolio, 1994; Shamir et al., 1993; Stewart, 2006). The data provided by this study provides a framework for department directors to positively influence collective teacher efficacy through transformational leadership behaviors.

The transformational leadership behaviors with the most significant effect on collective teacher efficacy were idealized influence attributes and inspirational motivation. Idealized influence attributes demonstrated the strongest positive correlation \( r(88) = .83, p < .001 \). Inspirational motivation exhibited the next highest strong positive correlation, \( r(88) = .78, p < .001 \). This data provides department leaders with clear evidence that behaviors associated with these subscales are essential for improving collective teacher efficacy.

Department leaders that instill pride in others, go beyond their own self-interest, and act in ways that build others illustrate behaviors associated with idealized influence attributes. Specifically, department leaders that defend their teachers with irate parents and work with central office administration to utilize their staff in innovative ways to retain hardworking employees provide examples of these behaviors in an educational environment. Department leaders would be remiss to not seek opportunities to demonstrate these behaviors and improve collective efficacy among their teachers. Thus, a department leader must be a role model and a pristine example of moral integrity by maintaining high ethical standards.

Department leaders interested in increasing collective teacher efficacy must also prioritize the power of transformational leadership behavior inspirational motivation. As previously discussed, it is inspirational motivation that demonstrated the next highest correlation with collective teacher efficacy among respondents. This means that a department leader must develop techniques for communicating a compelling vision of the future. Department leaders can influence their followers by speaking optimistically of the future and of what needs to be
accomplished (Bass, 1985). Data from this study demonstrated that by expressing confidence that the goals set for their departments will be reached, their teacher's sense of collective efficacy will improve.

The transformational leadership behaviors that showed promise with a significant effect on collective teacher efficacy was idealized influence behavior and intellectual stimulation. These behaviors demonstrated similar statistically significant, strong positive correlations; idealized influence behavior \((r(88) = .76, p < .001)\) and intellectual stimulation \((r(88) = .76, p < .00)\). This data illustrates the value department leaders should place on exhibiting behaviors associated with these subscales.

Idealized influence behavior is demonstrated by leaders that specify a strong sense of purpose among their followers by communicating the importance of the organization's values and beliefs (Bass, 1985). Department leaders that emphasize the importance of having this collective sense of purpose will improve collective efficacy ratings among the teachers they supervise. A department leader that consistently discusses their school districts vision and mission statement communicates these values and beliefs, by creating a shared sense of purpose among their teachers. Thus, these department leaders exhibit behaviors consistent with this study's findings to improve collective teacher efficacy.

Department leaders stimulate their teacher's effort to be innovative by creating opportunities for them to questions their assumptions of education and providing chances for teachers to look at problems from different angles (Akan, 2013). Department leaders that understand the significance of intellectual stimulation empower their followers to be a part of the problem-solving process rather than simply providing directives to solve issues quickly. A department leader that encourages new classroom strategies to reach multiple learning styles
without fear of a low evaluation score fosters an environment of intellectual stimulation. This will ultimately increase collective teacher efficacy. Therefore, it is important for a department leader to understand that by stimulating the minds of their followers they will feel a greater sense of effectiveness as a faculty.

As department leaders examine the impact of transformational leadership behaviors on collective teacher efficacy, they must be mindful of the behavior that demonstrated the smallest, but still significant strong positive relationship, \( r(88) = .73, p < .001 \), individual consideration. Department leaders show individual consideration by treating their teachers as individuals rather than members of a group. They identify the different needs and abilities of their followers to help develop their individual strengths to better serve the overall organizational mission (Shamir et al., 1993). Most importantly, a department leader must consider creating a supportive environment that allows teachers to develop their individual strengths without fear of reprisal.

This study produced interesting results in the area of transactional leadership. When examined through a multi regression analysis, no significant relationship was uncovered. However, upon conducting Pearson Correlation analyses, there was a statistically significant, strong positive relationship between collective efficacy and contingent reward behaviors, \( r(88) = .76, p < .001 \). In contrast, the other behavior associated with transactional leadership, management by exception active, did not reveal a relationship between the independent and dependent variables.

It is important that department leaders who are interested in transactional exchanges do not overlook the behaviors associated with contingent reward. This style of leadership defines standards and promotes performance that achieves them by recognizing when goals are achieved (Bass, 1985). While on the surface the behaviors associated with this style of leadership appear
less noble than those associated with transformational leadership. Department leaders must remember that most teachers are not completely motivated by transactional behaviors, the teachers are still dependent upon them to survive, such as earning a weekly paycheck. Although, exchange of services for compensation remains a critical component of transactional leadership in any profession, this study demonstrates it should be used in tandem with those associated with transformational leadership when supervising school faculty.

**Behaviors that Demonstrated No Relationship with Collective Teacher Efficacy**

Department leaders that recognize the importance of understanding the continuum of transformational leadership behaviors to build collective teacher efficacy, should identify that there exists no relationship in exhibiting management by exception active behaviors. A multiple regression analysis of the data provided by the respondents demonstrated no statistically significant relationship with the transactional leadership subscale and collective teacher efficacy. Upon further analysis, using the Pearson Correlation technique, specifically identified that there was no relationship between collective efficacy and behaviors associated with management by exception active, \( r (88) = -0.13, p = .24 \).

Data from this study suggests that department leaders focus their attention on mistakes, complaints, and failures will not impact collective teacher efficacy. Moreover, excessively keeping track of these items and constantly directing the attention of their faculty to meeting standards associated with them, also will not improve a department's sense of collective efficacy. This means that department leaders should focus their energies on the behaviors associated with transformational leadership and the behaviors associated with contingent reward as defined by the transactional leadership style to improve levels of collective teacher efficacy among the teachers in their departments.
Behaviors that Negatively Influenced Collective Teacher Efficacy

As department leaders examine the impact of the full range of leadership continuum, they must remain aware of those behaviors that negatively impact collective teacher efficacy. Data from this study suggested that management by exception passive and active, and laissez-faire leadership behaviors negatively affect the level of collective teacher efficacy among school staff members. Specifically, the behaviors associated with the laissez-faire leadership style on the continuum of transformational leadership demonstrated the highest negative effect on collective teacher efficacy.

A multiple regression analysis revealed that the behaviors associated with laissez-faire leadership showed a statistically negative relationship with collective teacher efficacy. Moreover, when Pearson Correlations were examined among those same behaviors, there was a statistically significant, strong negative correlation between collective teacher efficacy and the behaviors associated with laissez-faire leadership, \( r(88) = -0.73, p < .001 \). Department leaders that completely avoid getting involved when important issues arise, avoid making decisions, and are viewed as absent when needed negatively impact collective teacher efficacy. Department leaders that completely avoid taking responsibility for their followers and are perceived as conducting themselves in this manner have the severest negative impact on collective teacher efficacy. Thus, these leaders dramatically decrease a faculty's belief in their ability to reach all students and help them achieve.

This study also found that behaviors associated with the management by exception passive style also negatively impact collective teacher efficacy. Although these behaviors are not perceived as an abandonment of their leadership responsibilities, the management by exception passive style as perceived by secondary educators demonstrated lower levels of
collective teacher efficacy. This behavior, which involves department leader intervention only after problems become serious, although showed no correlation when a multiple regression analysis was conducted, it revealed a strong negative relationship between collective teacher efficacy and management by exception passive behaviors when this researcher completed an independent Pearson Correlation among the variables, $r(88) = -0.67$, $p < .001$. This means collective teacher efficacy will decrease if department leaders wait until things go wrong or show that a problem must become chronic before acting. Department leaders should be actively involved in decision making and should never wait for a crisis before making decisions. While this style may result in a longer career as a department leader may avoid controversial decisions, ultimately, this study demonstrates that this will result in lower levels of collective efficacy among the faculty members they supervise.

**Connections to Earlier Research**

The literature review, which created the foundation for this study, was largely based on the principle that transformational leadership behaviors positively impacted collective teacher efficacy. Most of the research studied the relationship between the transformational leadership behaviors of school principals and collective teacher efficacy. This researcher concluded that department leaders that exhibit transformational leadership behaviors and the transactional leadership behavior contingent reward positively influence collective teacher efficacy. Moreover, the conclusions of this study echo the findings of the studies previously discussed throughout this dissertation.

Ling and Joo (2019) found that the transformational leadership behaviors of developing people and setting direction show the most significance in influencing collective teacher efficacy. This can also be considered inspirational motivation and individual consideration on
the continuum of transformational leadership behaviors. Cansoy (2020) also found a significant correlation between transformational leadership behaviors, specifically idealized influence and collective teacher efficacy. Moreover, principals that emphasized individual consideration had a positive impact on collective teacher efficacy (Cansoy, 2020).

Similarly, this researcher's study found that a department director that exhibited individual consideration and idealized influence positively impacted collective teacher efficacy. Idealized influence attribute demonstrated the strongest effect in a department directors' repertoire to influence collective teacher efficacy positively. Furthermore, although the lowest among transformational leadership behaviors, it still displayed a high level of relationship to improving collective teacher efficacy.

Congruent to this researchers’ findings, Demir’s (2008) work specifically showed that a transformational leader should model behaviors with which teachers identify, which in turn improves collective teacher efficacy. Specifically, department directors that act in ways that build respect for their employees and instill pride in them for being associated with the director would have a significant impact on the collective teacher efficacy of the teacher. Furthermore, going beyond their own self-interest for the good of the group would allow for an improved sense of collective teacher efficacy.

Akan (2013) found a significant relationship between the different leadership styles defined by the multifactor leadership style scale and collective teacher efficacy. In particular, the transformational and laissez-faire leadership styles significantly predicted collective efficacy levels, while the transactional leadership style did not show statistical significance. This researcher found similar results as the multiple regression analysis of the transformational, transactional, and laissez faire leadership yielded similar results. As previously discussed, Akan
(2013) sample was limited to elementary teachers and principals, while this study was conducted with secondary educators and department leaders. Both results provide indisputable evidence that the presence of transformational leadership behaviors were associated with higher levels of collective teacher efficacy.

This study's literature review showed the historical development of the transformational leadership model. Burns (1970) first coined the terms transactional and transformational leadership. Unlike leaders that use the transformational leadership model to motivate followers to put the organization's needs above their own, the transactional style uses a system of exchanges to motivate subordinates to complete tasks (Bass, 1985). Transactional leadership behavior of contingent reward showed a statistically significant positive relationship but management by exception active exhibited no statistical significance when comparing to collective teacher efficacy levels. Overall, the transactional leadership style did not show statistical significance, this could be attributed to the overall correlations of the two behaviors associated with it being so incongruent. This was not surprising, as much of the writings on transformational leadership discuss that transformational leaders exhibit transactional behaviors when necessary to improve individual performance goals (Bass, 1985). The conclusions of this research show that most department leaders associated with the participants in this study have grown beyond the use of behaviors associated with laissez-faire and transactional leadership.

**Implications**

The findings of this study revealed several implications and benefits for school leaders and school district to consider. This study's purpose was to inform department directors of the relationship between their leadership style and the collective efficacy of their secondary teachers. With the current school improvement reforms and legislation passed in New York state to close
achievement gaps, it continues to remain an essential part of any school administrators' job to improve student achievement. Department leaders are at the forefront of these efforts, as they serve as the instructional leaders for their respective academic disciplines. Understanding that higher levels of collective efficacy among school faculties correlates with higher student achievement, department leaders should seek ways to ensure teachers within their departments have a high sense of collective teacher efficacy.

Research shows that transformational leadership behaviors have a positive relationship with improving organizational health, enhance organizational outcomes, and better motivates followers to common goals, thereby indirectly improving student achievement (Bass & Avolio, 1993; Da’as, 2020; Krishnan, 2005; Tucker & Russell, 2004). Delving deeper into the research, it further reveals that collective teacher efficacy has a positive effect on student achievement (Bandura, 1993,1997; Dussault et al. 2008; Goddard et al., 2000). The literature review also demonstrated that leadership styles affect the collective efficacy of school faculty members, as well as self-efficacy, which indirectly affects collective teacher efficacy (Cansoy, 2020; Demir, 2008; Francisco, 2019; Hipp, 1997; Tschannen-Moran et al., 1998). Thus, it is important for department leaders to understand the leadership behaviors that positively and negatively affect collective teacher efficacy and thereby student achievement. As previously stated, many quantitative studies have been conducted to study the connection between transformational leadership behaviors and collective teacher efficacy. However, this research focused on school principals, creating a gap in the research. This study fills that gap by focusing on the transformational leadership behaviors of department directors as a predictor of collective teacher efficacy and served to inform administrators at all levels of the behaviors connected to improving collective teacher efficacy.
The findings of this study revealed a statistically significant relationship between transformational leadership behaviors of department leaders and higher levels of collective teacher efficacy among their teaching staff. Therefore, this study recommends that department leaders model behaviors associated with the transformational leadership style. More specifically, the highest mean scores on the continuum of transformational leadership, idealized influence attributes and inspirational motivation, should be a focal point of department leaders. In addition, it would be important for school superintendents to ensure their district supports the specific behaviors of idealized influence behaviors and individual consideration as the relationships within those areas were weaker. More specifically, other studies showed that idealized influence is significantly related to collective teacher efficacy levels (Cansoy, 2020).

This study serves as a guide for future department leaders and provides evidence of the importance of understanding the continuum of the transformational leadership style in improving collective teacher efficacy. In addition, this study shows the importance of department leaders to consider the way their leadership is perceived by their staff. This study shows that this perception has a significant impact on collective teacher efficacy. Faculty should complete surveys, such as the instruments used in this study, regularly. Department leaders should analyze the data and change their behaviors accordingly to ensure that the collective teacher efficacy level of their staff remains high. Furthermore, teachers must understand these components and accurately evaluate school leaders in an honest manner to ensure that these behaviors are exhibited and understood by their department leader.

The connection of transformational leadership behaviors to improved collective efficacy highlights the need for department directors to understand the behaviors associated with the full continuum of leadership behaviors and their impact on the staff members they supervise. This
study also illustrates the possible inclusion of this material in administrative certification programs and professional development programs. Lastly, doctoral programs should examine the continuum with great depth to better prepare future upper administrators of the significance of these behaviors.

Superintendents must understand the importance of the continuum of transformational leadership and provide both training and environments that encourage the associated behaviors. This understanding must be reflected in the hiring practices of the district. District leaders and boards of education must steer clear of hiring department leaders that exhibit laissez-faire and management by exception passive behaviors. It is of the upmost importance that department leaders exhibit the behaviors associated with transformational leadership behaviors and those transactional leadership behaviors that positively influence collective teacher efficacy and thereby student achievement.

Identifying collective teacher efficacy as a potential solution to student achievement gaps would allow legislators to include solutions in educational mandates. Tying in the importance of collective efficacy in legislation, such as ESSA (Every Student Succeeds Act) and No Child Left Behind, would create a solutions-based approach to educational practices. Moreover, stressing the use of transformational leadership behaviors among administrators would further improve collective teacher efficacy and thereby student achievement.

**Strengths of Study**

This study includes statistically reliable questionnaire statements for both instruments. The Collective Teacher Efficacy Short-Form produced Cronbach’s alpha of .95 and The Multifactor Leadership Questionnaire produced Cronbach’s alpha of .94. This study fills a gap in the research in the continued study of transformational leadership and the impact on collective
teacher efficacy. Prior to this study, the bulk of the research revolved around a school's principal, while this study expanded these concepts to department leaders. Future researchers should consider further studying these connections with other central office administrators such as Superintendents. Lastly, exploring how the behaviors of each level of administration in a single school district may better reveal which administrators have the greatest impact on collective teacher efficacy.

**Limitations of Study**

When conducting this study, several potential limitations presented themselves. Whenever research conducts quantitative research, as opposed to using qualitative techniques, a researcher cannot see a complete picture of the topic (Johnson & Christensen, 2020). For example, conducting interviews allows for detailed explanations of the perceptions of the subjects. In quantitative research, this is substituted by looking for the statistical significance between the variables. While both forms of research are valid ways for analyzing data, a mixed method approach could have yielded a better understanding of the correlational relationship between transformational leadership behaviors of the department leaders and collective teacher efficacy.

The study did not control factors such as gender of the director, detailed demographics of the teachers, teacher tenure, or years the director served in the district. Although the exclusion of this data is acceptable in the broad sense, it certainly limited some aspects of the study. The surveys measured the transformational leadership behaviors of department leaders and the impact on collective teacher efficacy. Therefore, the results should not be generalized for other administrators, such as principals or student deans.
The scope of the study serves as another limiting factor. Only secondary teachers were surveyed, therefore elementary teachers were negated from the data collecting. This study was designed to study only the secondary teachers, as department leaders spend most of their time overseeing the curriculum and instructional practices of those teachers. It was not possible to survey the entire population of the schools involved, as the participants volunteered to complete the surveys. The results could have been impacted by participants that represent the extreme when relating their opinions of their director's transformational leadership behaviors. Regardless of these limitations, this study successfully contributes to the existing body of research by examining the relationship between transformational leadership behaviors of department leaders and collective efficacy. A concept, that up to this point, has only been studied in school principals.

**Recommendations for Future Research**

This researcher would make several recommendations for future research related to studying the link between transformational leadership behaviors and collective teacher efficacy. As previously discussed, this study was limited to secondary teachers, future researchers could replicate the study at the elementary level with department leaders becoming more involved at that level. In addition, the distribution of the surveys on a conference day to all staff would mitigate distorted data by only including volunteers. This type of distribution would expand the population and provide an improved data set.

Future researchers should also consider conducting the study with more teachers and varying the demographics and locales. This study was conducted among teachers in a suburb of New York City. It would be beneficial to study the link between transformational leadership behaviors of department leaders and collective teacher efficacy among rural and urban areas in
different areas of the United States. In addition, replicating the study among other suburban
districts with varying levels of socioeconomic status among students would also benefit the body
of research representing collective teacher efficacy. Moreover, identifying specific districts
would allow for a review of student achievement data as well as potentially employing
transformational leadership behavior training among administrators to explore the impact on
collective teacher efficacy.

Like Hipp (1997), this researcher should also consider expanding this study by
conducting interviews with teachers and department leaders to further explore the specific
transformational leadership behaviors that have the greatest impact on collective teacher
efficacy. Combining the data from this quantitative study and these qualitative techniques would
provide a more detailed understanding of the overall results. In addition, adding questions that
measure personal teacher efficacy, such as those developed by Gibson and Dembo (1984), may
reveal a link between transformational leadership behaviors and personal teacher efficacy. A
researcher could also review student achievement results from standardized tests within the
district of study, this would allow for a comparison between personal teacher efficacy, collective
teacher efficacy, student achievement, and transformational leadership behavior. Analyzing all
these variables would allow for a better understanding of the ways transformational leadership
behaviors indirectly influence student achievement. Lastly, identifying novice department
leadership from experienced leadership as well as department leaders from chairpeople would
offer further insight into the perceptions of transformational leadership.

**Conclusion**

This study researched the transformational leadership behaviors of department leaders
that impact the collective teacher efficacy of their respective department teachers. Thus, the
relationship between transformational and transactional leadership behaviors of those department leaders and collective efficacy among secondary teachers in suburban school districts located in the greater New York City area were studied. The findings indicated that teachers that perceive leadership behaviors as demonstrating transformational leadership characteristics more often than laissez faire or transactional, show higher levels of collective teacher efficacy. This shows that participants felt more confident in their ability as a school faculty to take on difficult tasks in pursuing teaching students.

The data analysis shows that greater perceptions of transformational leadership behaviors led to greater levels of collective teacher efficacy. Moreover, the transactional leadership behaviors of contingent reward produced a similar impact on collective teacher efficacy. In contrast, greater perceptions of laissez-faire leadership led to lower levels of collective teacher efficacy.

High levels of collective teacher efficacy have been linked to greater levels of student achievement (Bandura, 1997; Cybulski et.al, 2005; Goddard, 2001; Hattie, 2012). Several studies suggest that a principal's leadership style affects the collective teacher efficacy level of their school faculty (Cansoy, 2020; Demir, 2008; Francisco, 2019). Through the data analyzed in this study, a department leaders leadership style affects collective teacher efficacy. Thus, the finding of this study supports the previous findings of similar studies that analyzed the behavior of principals. Educational leaders can use the suggestions in this quantitative study to guide their behaviors and promote higher levels of collective teacher efficacy among their staff to positively impact student achievement in their schools. Furthermore, it is recommended that future studies be conducted to investigate the relationship between a teachers' perception of their department
leaders' behavior along the continuum of transformational leadership and their sense of collective teacher efficacy.
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### RESEARCH PARTICIPANT INFORMED CONSENT FORM

**Study Title:** Transformational Leadership Behaviors of Department Leaders as a Predictor of Collective Teacher Efficacy

**Faculty Investigator:** Dr. David Bennardo, LIU Post College of Education, Information, & Technology, 720 Northern Blvd, Greenvale, NY 11548, [David.Bennardo@my.liu.edu](mailto:David.Bennardo@my.liu.edu) (631) 334-9636

**Student Investigator:** Jason Stanton, LIU Post College of Education, Information, & Technology, 720 Northern Blvd, Greenvale, NY 11548, [jason.stanton@my.liu.edu](mailto:jason.stanton@my.liu.edu) (516) 316-2677

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You are being asked to join a research study. Participation in this study is voluntary. Even if you decide to join now, you can change your mind later. You choose whether to participate and your participation will not affect your employment status. Leaving the study early or not participating will not affect a teachers’ employment status.

### 2. Why is this research being done?

- The purpose of this study is to explore a possible link between the leadership behaviors of department leaders and their staff’s sense of collective teacher efficacy. By researching this potential link with department leaders, I hope to develop a set of behaviors for all administrators to model that may help to improve collective teacher efficacy. Improving collective teacher efficacy has a myriad of positive effects on teacher faculties, the most important being improving student achievement.
- In order to participate you must be a secondary teacher (grades 7-12) who is supervised by a Department Chair/Director/Supervisor.
- We anticipate that about 400 people will take part in this study.
3. What will happen if you join this study?
If you agree to be in this study, we will ask you to do the following things:
Complete two online surveys where you will read statements and select the option that most closely represents your response. Additionally, you will be asked to provide non-identifying demographic information. This should take approximately 20 minutes to complete.

4. What are the risks or discomforts of the study?

- The risks associated with participation in this study are no greater than those encountered in daily life, and you do not have to answer any questions you do not want to answer. You may get tired or bored when we are asking you questions, or you are completing questionnaires. You do not have to answer any question you do not want to answer.
- Although your IP Address will not be stored in the survey results, there is always the possibility of tampering with an outside source when using the Internet for collecting information. While the confidentiality of your responses will be protected once the data is downloaded from the Internet, there is always the possibility of hacking or other security breaches that could threaten the confidentiality of your responses.
- Information collected from this study will not be shared with anyone outside the approved research team, and the exclusion includes the superintendents and district leaders in participating school districts.
- Data will be stored for three years as per IRB procedures offline and in a locked file cabinet, after which time the data will be destroyed.
- Leaving the study early will not affect participating teachers' employment.

5. Are there benefits to being in the study?
There is no direct benefit to you from being in this study, however, this study may benefit society if the results lead to a better understanding of a possible link between the leadership behaviors of department leaders and their staff’s sense of collective teacher efficacy.

6. What are your options if you do not want to be in the study?
Your participation in this study is entirely voluntary. You choose whether to participate. You choose whether to participate and your participation will not affect your employment status. If you decide not to participate, there are no penalties, and you will not lose any benefits to which you would otherwise be entitled. If you do not join, your employment at your current school will not be affected. Leaving the study early will not affect participating teachers' employment.

7. Will it cost you anything to be in this study?
There is no cost for being included in this study.
8. Will you be paid if you join this study?
You will not be paid for being included in this study.

9. Can you leave the study early?
You can agree to be in the study now and change your mind later. Simply stop answering questions and close the survey without clicking SUBMIT. Participation in this study is voluntary. Leaving the study early or not participating will not affect a teachers’ employment status.

10. What other things should you know about this research study?

What is the Institutional Review Board (IRB) and how does it protect you?
This study has been reviewed by an Institutional Review Board (IRB), a group of people that reviews human research studies. The IRB can help you if you have questions about your rights as a research participant or if you have other questions, concerns or complaints about this research study. You may contact the IRB at OSP@liu.edu.

What should you do if you have questions about the study?
Contact the student investigator Jason Stanton at (516) 316-2677, jason.stanton@my.liu.edu or the faculty investigator Dr. David Bennardo at 631-334-9636, David.Bennardo@my.liu.edu. If you wish, you may contact the principal investigator by letter. The address is on page one of this consent form. You can also contact the department chair Dr. Tonie McDonald at 516-229-2267, Tonie.McDonald@liu.edu. If you cannot reach the investigators or wish to talk to someone else, you may contact the IRB at OSP@liu.edu.

You can ask questions about this research study now or at any time during the study.
If you have questions about your rights as a research participant or feel that you have not been treated fairly, please call the Institutional Review Board at Long Island University at OSP@liu.edu.

11. What does your agreement on this consent form mean?
By marking the “Agree to Participate” box below, you are indicating that you have fully read the above text and have had the opportunity to review and print the consent form and ask questions about the purposes and procedures of this study. If you choose not to participate, please choose the “Decline to Participate” box below or simply close the browser.

☐ I agree to participate
☐ I decline to participate
_______________ Date
Appendix B

Recruitment Email for Participants

Transformational Leadership Behaviors of Department Leaders as a Predictor of Collective Teacher Efficacy

To whom it may concern:

I am a doctoral candidate at Long Island University, and I plan on studying the possible link between department leaders' perceived behaviors on the continuum of transformational, transactional, and laissez faire leadership and the differences in the collective efficacy ratings among secondary staff. This is a research study being conducted for a doctoral dissertation.

I have been a K-12 department leader on Long Island for the past five years after working as both an assistant principal and social studies teacher for almost twenty years prior. Improving collective teacher efficacy has a myriad of positive effects on teacher faculties, the most important being improving student achievement. By researching this potential link with department leaders, I hope to develop a set of behaviors for all administrators to model that improves collective teacher efficacy.

I am seeking participation from secondary teachers who are supervised by K-12 department leaders or department chairpersons.

I am writing to ask for the help in distributing the attached invitation for teachers to participate in my online, voluntary, anonymous questionnaires. The survey takes only about 20 minutes and does not ask for any information that could identify specific individuals, their school, or their district. Only teachers who are supervised by a department head are the focus of my study and more details about my study are provided in the introduction on the first page of the attached invitation for the teachers. As a superintendent in an authoritative position, it is important to ensure that teachers do not feel coerced or influenced to participate in this study. Please share that if teachers do not participate or complete this survey, it will not affect their terms of employment. Please share that if teachers do participate in this study, it will not affect their terms of employment.

Thank you very much for your consideration and for helping me with my dissertation. I have shared a script below that may be used to disseminate the information to your teachers. If you have any questions about this research or the procedures, you may contact Jason Stanton, at Jason.Stanton@my.liu.edu or my faculty supervisor, Dr. David Bennardo, at David.Bennardo@my.liu.edu.

Thank you for your consideration and support in this worthwhile research.

Jason Stanton
I have been asked to share a questionnaire to support the dissertation study of Jason Stanton, a doctoral candidate at Long Island University. The study addresses the link between department leaders' perceived behaviors on the continuum of transformational, transactional, and laissez faire leadership and the differences in the collective efficacy ratings among secondary staff. The researcher is seeking participation from secondary teachers who are supervised by K-12 department leaders or department chairpeople. The attached email invitation provides the full details of this study as well as email links to the questionnaires and takes about 20 minutes to complete.

The questionnaires do not ask for any information that could identify specific individuals, their school, or their district. Additionally, the anonymous survey does not collect the IP address of respondents. If you choose to participate, not to participate, or decide not to complete the survey after starting, it will not affect your employment status. Again, more details about the study are provided in the introduction provided in the attached invitation.
Appendix C

Research Subjects Demographic Information

1. Gender: ___ Male  ___ Female  ___ Other

2. Years of Teaching Experience: ___ 1-5  ___ 6-10  ___ 11-15  ___ 16-20  ___ 20+

3. Highest Degree Earned: ___ Doctorate  ___ Master’s Degree  ___ Bachelor’s Degree
Appendix D

Collective Efficacy Short Form

**Directions:** Please indicate your level of agreement with each of the following statements about your school from **strongly disagree** to **strongly agree**. Your answers are confidential.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teachers in the school are able to get through to the most difficult students.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. Teachers here are confident they will be able to motivate their students.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. If a child doesn’t want to learn teachers here give up.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4. Teachers here don’t have the skills needed to produce meaningful student learning.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Teachers in this school believe that every child can learn.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6. These students come to school ready to learn.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7. Home life provides so many advantages that students here are bound to learn.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8. Students here just aren’t motivated to learn.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>9. Teachers in this school do not have the skills to deal with student disciplinary problems.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10. The opportunities in this community help ensure that these students will learn.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11. Learning is more difficult at this school because students are worried about their safety.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12. Drug and alcohol abuse in the community make learning difficult for students here.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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Appendix E

Instrument Permission

Request to Use CTE Short Form for Doctoral Study

Jason Stanton <jason.stanton@my.liu.edu>
To: dr.goddard@gmail.com

Mon, Oct 3, 2022 at 5:55 PM
Good Evening Dr. Goddard,

Your work in collective teacher efficacy has been amazingly helpful to me in my twenty years as an educator. More importantly, your work has been instrumental in influencing me to enroll in a doctoral program.

I am currently a doctoral student at Long Island University. I am planning on studying the correlation between the transformational leadership behaviors of department supervisors and collective teacher efficacy. I hope to use the collective teacher efficacy short form that was developed by you to determine the collective teacher efficacy piece. I would then use the Multidimension Leadership Questionnaire to determine the transformational leadership behaviors that affect the levels of collective teacher efficacy. I plan on studying secondary schools, as department supervisors tend to have a direct relationship with teachers at that level. Much of the research on these connections has focused on principals and I hope this research shows the benefits of such positions in a school district.

Thank you in advance for your consideration and I look forward to hearing back from you.

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Request to Use CTE Short Form for Doctoral Study

Roger Goddard <dr.goddard@gmail.com>
To: Jason Stanton <jason.stanton@my.liu.edu>

Mon, Oct 3, 2022 at 6:31 PM
Hi Jason,

You have my permission to use the scale for your dissertation research. I am happy to learn of your interests and wish you the best in successfully completing your program.

Sincerely,

Roger Goddard
(Doctoral Level Student)
To Whom It May Concern,

The above-named person has made a license purchase from Mind Garden, Inc. and has permission to administer the following copyrighted instrument up to that quantity purchased:

**Multifactor Leadership Questionnaire**

The three sample items only from this instrument as specified below may be included in your thesis or dissertation. Any other use must receive prior written permission from Mind Garden. The entire instrument may not be included or reproduced at any time in any other published material. Please understand that disclosing more than we have authorized will compromise the integrity and value of the test.

**Citation of the instrument must include the applicable copyright statement listed below. Sample Items:**

As a leader....

I talk optimistically about the future.
I spend time teaching and coaching.
I avoid making decisions.

The person I am rating....

Talks optimistically about the future.
Spends time teaching and coaching.
Avoids making decisions

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Sincerely,

Robert Most
Mind Garden, Inc.
www.mindgarden.com