UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

PRINCIPAL TRANSFORMATIONAL LEADERSHIP BEHAVIORS AND TEACHER MOTIVATION

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF EDUCATION

By

MELISSA K. AMON
Norman, Oklahoma
2018

PRINCIPAL TRANSFORMATIONAL LEADERSHIP BEHAVIORS AND TEACHER MOTIVATION

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL LEADERSHIP AND POLICY STUDIES

BY

Dr. Patrick Forsyth, Chair

Dr. Curt Adams

Dr. Beverly Edwards

Dr. Libby Ethridge

Dr. Gregg Garn

Dedication

This dissertation is dedicated to the memory of my parents, Robert and Shirley Hall. Thank you both for always believing in me and loving me unconditionally. You taught me the value of hard work and the importance of an education. I have no doubt that without you as my parents, I would not have had the tenacity to stick with this process to the end. I am sorry that you aren't here with me on Earth to celebrate this success, but I know that you are celebrating together in Heaven. I am forever grateful for all you have given me and I miss you every day.

Acknowledgements

I would like to express my sincere gratitude to all of those who have supported me throughout this dissertation process. I have relied on so many for encouragement and have found it in so many places. For that, I am eternally grateful.

First, I would like to thank my dissertation committee members Dr. Patrick Forsyth, Dr. Curt Adams, Dr. Beverly Edwards, Dr. Gregg Garn, and Dr. Libby Ethridge for their time and guidance. A very special thank you goes to my advisor and committee chairman, Dr. Patrick Forsyth. His constant support and willingness to help me through the most difficult parts of this process are greatly appreciated. I would also like to thank Dr. Tim Ford for his assistance with the quantitative sections of my dissertation. I am thankful for his patience with my constant and often repetitive questions.

I would be remiss to not thank my colleagues at Cushing Public Schools. Many of you have provided me with encouraging words and moral support throughout this process. That encouragement is appreciated and helped me through those times when I did not think I would see the end.

Finally, I want to thank my family for their love and support. My husband Don has been my biggest cheerleader and understands better than most this difficult process. I appreciate your keeping me on track even though you beat me in the end. To Zach and Zane, I hope you both know how much you mean to me and that I am so very proud of you both. To my mother and father-in-law, Don and Joan. Thank you for loving me like your own and always encouraging me to keep going to reach this goal. I love you all.

Table of Contents

List of Tables

List of Figures

Abstract

While a vast amount of research exists on both teacher motivation and principal leadership styles, there is very little research that examines these topics together. Principals play a key role in the motivation of teachers, however, exactly how principals influence teacher motivation is not clear. The purpose of this research was to examine principal transformational leadership behavior to determine its effect on teacher motivation dimensions such as collective teacher efficacy and organizational citizenship behaviors. This study relies on Ryan and Deci's (2000) Self Determination Theory, arguing that if principals were able to meet teacher needs of autonomy, competence, and relatedness through transformational leadership behavior, then high levels of collective teacher efficacy and organizational citizenship behavior would indicate greater motivation. Survey data were gathered from principals, faculty, parents, and students from 73 schools in a large urban district as part of a larger study. Participation in the study was voluntary. Findings do suggest that principal behavior and actions play a role in the motivation of teachers. While transformational leadership behaviors do have a part to play in increasing outcomes of teacher motivation, they alone do not appear to be enough. Increasing teacher motivation, requires principals to address the psychological needs of teachers by fostering enabling school structures and establishing effective professional learning communities.

Chapter 1: Introduction

Approximately one-quarter of the total effects of all school factors can be attributed to the effects of leadership (Leithwood & Riehl, 2003). Fullan (2002) argued that school success depends on the quality of the principal. Principals play an essential role in modeling appropriate behaviors, establishing a clear set of goals, and creating an instructional purpose (Schnuck, Pintrich, & Meece, 2008). Fives and Alexander (2004) found that, "in any school environment, the administration holds a great deal of power over teachers and can deeply affect their sense of motivation and commitment" (p. 344). These findings illustrate the importance of the principal in the school. The quality of principal leadership can greatly affect many facets of school success.

Much of the success of school reform has to do with the quality of local school leadership especially at the building level (Leithwood & Jantzi, 2006). School leaders are called on to manage day-to-day operations, while also being savvy enough to lead their staff through profound changes (Kurt, Duyar, and Çalik, 2012). To be successful, schools and teachers need more than just a manager, they need a leader who inspires them to go beyond what is expected, has a strong vision for the future, an ability to support and nurture their psychological needs, and nurtures in them a stronger sense of efficacy. Barnett and McCormick (2003) found that, "research in the school setting has consistently supported the notion that effective schools must have leaders who create and articulate a vision for the school" (p. 55). Transformational leaders provide both the vision and the support to lead change effectively. Leithwood (1992) described transformational leadership as, "a restructuring of the system in order for the mission and vision of people to be redefined and their responsibilities refreshed so that goals can

be reached" (Eres, 2011, Introduction para 2). Judge and Piccolo (2004) found that, "transformational leaders offer a purpose that transcends short-term goals and focuses on higher order intrinsic needs" (p. 755). Barnett, McCormick, and Conners (2001) argue that, "transformational leadership is well suited to the challenges of current school restructuring" (p. 24).

Transformational leaders create a shared vision and communicate that vision to teachers effectively. Through this shared vision, principals are able to create a school culture in which change can occur (Nielson & Daniels, 2012). In addition to creating a climate for change, transformational leadership behaviors have been found to be motivational, to nurture principal/teacher relationships, and to increase teacher collective efficacy (Gagné & Deci, 2005; Sheldon, Turban, Brown, Barrick, and Judge, 2003; Geijsel, Sleegers, Leithwood & Jantzi, 2003; Holstad, Korek, Rigotti, and Mohr, 2014; Leithwood & Jantzi, 2005; Eres, 2011; Thoonen, Sleegers, Oort, Peetsma, & Geijsel, 2011; Eyal & Roth, 2011; Kurt et al., 2012; Northouse, 2012; and Barnett & McCormick, 2003; Fives & Alexander, 2004). Geijsel et al. (2003) state that, "transformational forms of school leadership have direct effects on teachers' commitment to school reform and the extra effort they devote to such reforms" (p. 229). The practice of transformational leadership provides an efficient way for principals to both lead and motivate their staff toward higher levels of performance.

Research Problem

The research problem addressed by this study was the lack of research evidence on how principal transformational leadership behaviors effect teacher motivation.

Researchers have found a strong relationship between transformational leadership and teacher motivation (Geijsel et al., 2003; Leithwood & Jantzi, 2005; Eres, 2011; Barnett & McCormick, 2002; and Barnett & McCormick, 2003); however, there is a poor understanding of the processes that make transformational leaders effective (Sheldon et al., 2003; Yukl, 1999). Adams and Forsyth (2014) make the argument that, "school leaders know that climate matters for performance, but much of the climate literature lacks evidence and explanation for how high expectations may enhance teaching effectiveness and school achievement" (p. 6). Northouse (2011), states that "there is a need to understand how transformational leaders affect followers psychologically" (p. 204). Eres (2011) continues this argument by saying that, "when looking at transformational leadership from a theoretical point of view; it can be stated that it expresses the 'what' but is insufficient in explaining the 'how'" (Introduction, para 7). Yukl (1999) states that, "the underlying influence process for transformational leadership is still vague, and they have not been studied in a systematic way" (p. 287).

Hoy (2008) argues that, "even though there are thousands of publications about motivation, few have addressed the motivation of teachers, with the exception of writing about teachers' sense of efficacy or teachers' job satisfaction" (p. 492). Researchers know that teacher efficacy is important (Brison & Stiner, 2007; Tschannen-Moran & Woolfolk-Hoy, 2001; Walumba, Wang, Lawler, & Shi, 2004), however, there is little research that focuses on the root causes of teacher efficacy. Fives and Alexander (2004) state that, "while many studies have demonstrated the important role that teacher efficacy has on teacher practices, few researchers have investigated the factors that influence teacher efficacy" (p. 341). School leaders need to understand the

effect their behavior and leadership style have on teacher motivation. By examining principal transformational leadership behaviors through the lens of self-determination theory, principals can gain a better understanding of how to use their leadership style to motivate teachers and to avoid the opposite effect as well. Although there is a tremendous amount of research on both transformational leadership and self-determination/psychological needs theory, there has been little research that examines transformational leadership through the lens of self-determination/psychological needs theory.

Research Purpose

The purpose of this research was to explore in greater detail the relationship between transformational leadership behavior and teacher motivation. This research explored the importance of principal leadership style in creating and fostering an environment in which teachers were able to become more intrinsically motivated. Specifically, it explored if principal transformational leadership behaviors might serve to meet the psychological needs of teachers with the consequence of internalizing teacher motivation. These hypotheses provided the focus for this inquiry:

H1: Principal Support for Teacher Psychological Needs mediates the effect of Principal Transformational Leadership on Organizational Citizenship Behavior.

H2: Principal Support for Teacher Psychological Needs mediates the effect of Principal Transformational Leadership on Collective Teacher Efficacy.

Chapter 2: Review of Literature

Transformational Leadership

The conceptualization and study of transformational leadership began in non-educational contexts such as the military and business worlds. Burns (1978) claimed that, "leadership must be aligned with a collective purpose and effective leaders must be judged by their ability to make social changes" (Stewart, 2006, p. 8). Burns ideas connecting leadership and social change began the study of a new leadership style that viewed leaders as change makers rather than just managers or directors giving rise to the concept of transformational leadership. Transformational leaders enact change through an understanding of and attention to psychological needs that drive human behavior. Instead of simply controlling followers with tangible rewards, such as money, or punishments, such as loss of position or power; transformational leaders seek to inspire loyalty, motivation, and innovation in their followers through relationships.

Burns' (1978) work was the beginning of the study of transformational leadership which has now become a focus for researchers in a variety of fields including educational and non-educational contexts. Bass (1985) added to the conceptualization of transformational leadership by defining the four dimensions of transformational leadership: idealized influence (i.e. engaging in role modeling that earns the respect and admiration of followers; setting and articulating high expectations about mission and goals), inspirational motivation (i.e. providing a vision to followers that they can believe in and follow), intellectual stimulation (i.e. encouraging followers to be independent thinkers and challenge the status quo), and individual consideration

(considering followers' individual needs). These four dimensions of transformational leadership demonstrate the paradigm shift in the concept of leadership that transformational leadership is the first leadership style to use intrinsic types of motivation rather than extrinsic or more punishment oriented methods of getting followers to produce desired results.

In his study of general characteristics of leadership, Northouse (2012) states that, "transformational leadership is a part of the 'New Leadership' paradigm (Bryman, 1992), giving more attention to the charismatic and affective elements of leadership" (p. 185). The reliance of transformational leaders on influence through relationships leads researchers to examine these leader/follower relationships to determine how transformational leaders exact change in their organizations. Walumba, Wang, Lawler, and Shi (2004) found that, "by showing respect and confidence in their followers, transformational leaders are able to bring a high degree of trust and loyalty on the part of the followers" resulting in a relationship where followers identify with the leader's vision (p. 516-517). The strong relationship forged between transformational leaders and their followers results in followers feeling, "trust, admiration, loyalty, and respect toward the leader" (Yukl, 1999, p. 286).

The relationships created by transformational leaders enable them to construct an environment where followers feel connected to both the leader and their vision for the organization. Transformational leadership has been shown to be an effective method of initiating significant change in non-school organizations (Northouse, 2012). The supportive and encouraging nature of transformational leadership creates a climate in which employees feel, "empowered and encouraged to freely discuss and try new

things" (Northouse, 2012, p. 200). This climate allows transformational leaders to create and enact change, moving the organization toward their vision. Bennis and Nanus (1985), state that transformational leaders have, "an image of an attractive, realistic, and believable future" (p. 89). Transformational leaders in all disciplines have a clear vision of the future state of their organizations (Northouse, 2012). The influence of transformational leadership extends beyond individual benefits and reflects a relationship in which leaders and followers engage with each other through a shared purpose in ways that transform and elevate their motivation (Simola, Barling, & Turner, 2010).

Although researchers (Bass & Avolio, 1994; Bono & Judge, 2003; Northouse, 2012; Simola et al., 2010) have found transformational leadership to be very effective in creating a culture where employees are motivated, energized, and inspired; transformational leadership is not without its critics. Yukl (1999) reasoned that, "although transformational leadership has been found to be widely relevant, there may be situations where it is unnecessary or has negative consequences" (p. 301). Kark, Shamir, and Chen (2003) argue that strong leadership can lead to the weakening of followers and an eventual dependence on the leader for recognition and support. Yukl (1999) points out that transformational leadership behaviors may be biased toward some stakeholders at the expense of others, and it may be exploitive, creating unnecessary emotional involvement that increases employee stress. Northouse (2012) argues that transformational leadership lacks conceptual clarity because it covers such a wide range of activities and characteristics.

While transformational leadership does encompass a wide range of leadership behaviors from the very specific to the very broad, the overarching idea is one of, "improving the performance and developing followers to their fullest potential" (Northouse, 2012, p. 191). The idea of improving performance and developing followers is one that can easily translate from a non-school to a school context. The current push for school improvement and reform is challenging school leaders to find a way to press for teacher improvement and development while preserving teaching motivation and innovation. Transformational leadership provides a framework through building relationships that allows principals to affect, "employee attitude, effort, and in-role performance, including job satisfaction, organizational commitment, and organizational citizenship behavior" (Nguni, Sleegers, & Denessen, 2006, p. 146).

The transformational approach to leadership focuses on emotions and values shared between principals and teachers that help develop capacity and increase personal commitment (Leithwood & Jantzi, 2005). Transformational leadership goes beyond the simple managerial tasks of day-to-day operations and focuses more on restructuring the school by improving social conditions (Stewart, 2006). Holstad et al. (2014) argue that by providing social support, "transformational leaders may be able to reduce follower emotional strain" (p. 269). Improving social conditions of the school in turn creates an environment in which teacher psychological needs of autonomy, competence, and relatedness can be met, ultimately resulting in improved teacher motivation. Teacher motivation, satisfaction, and retention must be carefully balanced against the push for teacher improvement and development.

Transformational school leaders understand the importance and power of relationships in motivating teachers and building effective schools (Tschannen-Moran & Hoy, 1998; Bryk & Schneider, 2002). Research (Barnett & McCormick, 2003; Brien, Haas, & Savoie, 2012; Collie, Shapka, & Perry, 2012; Marks & Printy, 2003; Nguni et al., 2006; Ross & Gray, 2006) has shown the importance of relationships in the school context. Barnett and McCormick (2003) point out that, "principals need to be aware that leadership in schools is mainly characterized by relationships with individuals" (p. 70). It is through the building of these relationships that principals can, "establish his/her leadership and encourage teachers to apply their abilities, skills, and efforts toward shared purposes" (McCormick, 2003, p. 70). Relationship-centered leadership has been recognized by researchers (Barnett, McCormick, & Conners, 2001; Barnett & McCormick, 2002) as important to fostering teacher commitment, gaining teacher buy-in to change, and developing teacher support of principal vision.

The emphasis placed on relationships by transformational leadership sets it apart from other forms of leadership. Principals who understand the importance of teacher psychological needs and use this knowledge to support and encourage teachers in improving their practice create a climate in which teacher efficacy and organizational citizenship behaviors thrive. Leithwood (1992) claims that transformational leadership is, "based on a radically different form of power that is 'consensual' and 'facilitative' in nature" (p. 9). He argues that principals create this type of power when, "teachers are helped to find greater meaning in their work, to meet higher-level needs through their work, and to develop enhanced instructional capacities" (Leithwood, 1992, p. 9). Ross and Gray (2006) claim that, "the essence of transformational leadership is dedication to

fostering the growth of organizational members and enhancing their commitment by elevating their goals" (p. 180). By engaging teachers as partners in decision making, principals are able to use transformational leadership behaviors to provide direction while empowering and supporting teachers (Marks and Printy, 2003). Empowering and supporting teachers facilitates teacher identification with the school vision and goals while decreasing teacher emotional strain (Eyal & Roth, 2011; Holstad et al., 2014). In addition, transformational leaders are able to strengthen job involvement and teacher intrinsic motivation by encouraging critical thinking and supporting teachers who find new ways to approach their jobs (Walumba et al., 2004).

Leithwood and Jantzi (2000, p. 114) describe transformational leadership in schools using the following seven dimensions:

1. Building school vision and establishing school goals;
2. Providing intellectual stimulation;
3. Offering individualized support;
4. Modeling best practices and important organizational values;
5. Demonstrating high performance expectations;
6. Creating a productive school culture;
7. Developing structures to foster participating in school decisions

Kurt et al. (2012) draw on the work of Avolio and Bass (1994) when they state that, "through transformational leadership practices, principals show confidence and trust in the capabilities of the teachers" (p. 82). Using Leithwood and Jantzi's (2000) dimensions of transformational leadership, principals begin to build a foundation that creates a self-regulatory climate (Adams & Forsyth, 2014) in which teachers begin to

feel the effects of trust and autonomy supportive structures that lay the foundation for teachers to maximize their potential. There is evidence that, "teachers identify themselves with the school and the principal in such a motivating and trusting environment" (Kurt et al., 2012, p. 82). Through the dimensions of transformational leadership, principals begin to create an environment which supports teacher psychological needs of autonomy, competence, and relatedness thus creating a culture in which motivation, efficacy, and organizational citizenship thrive.

Principal transformational leadership behaviors create an environment where teachers are involved in the process of creating a shared vision, holding shared values, and making joint decisions (Nielson & Daniels, 2011). Feeling connected and valued in the important processes of a school serves to help teachers gain an understanding of the goals of the group and increases the meaningfulness of their daily work, thus serving to meet teacher psychological needs for autonomy, relatedness, and competence. Principal and teacher relationships, which are built on trust and respect, pave the way for teacher buy in to principal vision and mission, while also strengthening their commitment to the organization. Transformational leadership not only influences teacher commitment to the organization it has been directly related to teacher motivation (Eyal & Roth, 2011; Eres, 2011; Geijsel, Sleegers, Leithwood, & Jantzi, 2006). Researchers (Eyal & Roth, 2001; Barnett & McCormick, 2003) have found a significant, positive relationship between transformational leadership and autonomous motivation.

Teacher Motivation

The task of creating and maintaining teacher motivation is vital to improving school effectiveness. The limited amount of time that students spend in any classroom, coupled with the implications of past learning for future academic success, creates an environment where maximizing teacher performance is essential. Leithwood and Jantzi (2006) have found that, "teachers' motivation, capacities, and work setting have a direct effect on their school and classroom practices" (p. 203). Teacher motivation serves many purposes including improving classroom performance and preventing teacher burnout. Dorman (2009) points out that, "Unless teachers feel that they are making a difference, that effort is matched by output and that they are not inconsequential, there is the potential for burnout" (p. 122). Principal failure to create a school culture in which teachers feel motivated and efficacious can result in a downward spiral resulting in low teacher performance and ultimately in negative student outcomes. Nguni et al. (2006) found that, "transformational leadership motivates followers to do more than they originally expected and often even more than they thought possible" (p. 148).

Autonomous or intrinsic motivation is important in the school setting where extrinsic rewards such as salary and materials are often limited due to budget constraints. While resources for extrinsic rewards are usually controlled by the district office, principals are able to control the conditions that influence autonomous or intrinsic motivation by carefully creating a school culture in which teacher psychological needs are met. Bono and Judge (2003) argue that, "transformational leaders emphasize intrinsic rewards, such as self-expression, self-consistency, and self-efficacy rather than extrinsic rewards" (p. 555). Fernet, Guay, Senégal, and Austin

(2012) state that, “teachers are autonomously motivated when they perform their job for the intrinsic value of achieving meaningful and interesting goals or because they personally grasp the value of their work activities” (p. 516).

The effects of teacher motivation are not limited only to positive teacher level outcomes; there are also connections between teacher motivation and both classroom and building level outcomes. Autonomous motivation or being self-determined has been linked to teachers putting more effort than expected into their work (Nguni et al., 2006; Eyal & Roth, 2012; Barnett et al., 2001; Bass & Avolio, 1994; Ross & Gray, 2006). Autonomous motivation that transforms teacher jobs into a meaningful experience, “drives them to practice autonomy-supportive teaching, protects them from burnout, increases their well-being, improves effectiveness, and fosters their retention in the system” (Eyal & Roth, 2011, p. 268). Autonomously motivated teacher behaviors include being more tolerant of difficult students, putting more effort into helping struggling students, being more open to reform, and being willing to try new and different teaching techniques (Geijsel et al., 2003; Leithwood & Jantzi, 2005; Supovitz, Sirinides, & May, 2010; Eyal & Roth, 2011).

In order for principals to help improve teacher motivation, they must understand the ways in which their behavior effects teacher motivation. Principals should look to the work of Sheldon, Turban, Brown, Barrick, and Judge (2003) to better understand how motivation can be developed. Sheldon et al. (2001) state that,

> “anyone who is trying to motivate an individual should try to help that person to feel *competent* in the behavior by expressing confidence in the person’s abilities, providing encouragement, and providing appropriate material and task support;

should help the person feel *related* to the motivator, by evidencing genuine concern for his/her thoughts and feelings and by empathizing; and should help the person feel *autonomous* in the behavior, by helping him or her to endorse and 'own' the task, even if he/she does not enjoy it" (p. 367).

The behaviors outlined by Sheldon et al. (2003) are inherent in the definition of transformational leadership. Transformational leadership behaviors do more than simply inspire teachers, they motivate them to go above what is expected, to take risks, and ultimately result in positive outcomes for the entire school. Transformational leaders must be intuitive enough to assess teacher motives and needs in order to provide appropriate support. Showing followers respect and acknowledging confidence in their skills and abilities results in improved performance and willingness to work toward continuous improvement (Northouse, 2012; Bass and Avolio, 1994). Through a myriad of studies, researchers have established that principal transformational leadership behaviors have a direct link to teacher motivation (Thoonen, Sleegers, Oort, Peetsma, & Geijsel, 2011; Barnett & McCormick, 2003; Eyal & Roth, 2011; Kurt et al., 2012).

Maintaining and increasing teacher motivation is essential to the success of schools. In order for teachers to collaborate and innovate, they must be motivated. Leadership style has a direct influence on teacher motivation. Principals, who fail to consider the implications of their leadership style for teacher motivation, risk negative outcomes such as teacher burnout, turn over and low levels of collective teacher efficacy. In a time when education budgets continue to be cut year after year, leadership style is something that a principal can control, change, and improve even

with a shrinking budget. Transformational leadership behaviors are one way in which principals can work to create a climate that motivates teachers.

Transformational Leadership and Teacher Motivation

Principal leadership style has a direct effect on teacher motivation. Eres (2011) states that, "the most important fact for the motivation of teachers is the school administration" (Introduction, para. 9). Leithwood and Sun (2012) found that, "specific leadership practices with the greatest influence on both teacher commitment and teacher job satisfaction were those related to building relationships, developing people, and developing a shared vision" (p. 405). Building relationships, developing people, and developing a shared vision are all components of transformational leadership. Transformational leadership behaviors such as creating a vision, supporting teacher needs for autonomy, and encouraging individual teacher efforts have a direct influence on teacher motivation (Geijsel et al., 2003; Leithwood & Jantzi, 2005; Eres, 2011; and Barnett & McCormick, 2003). Principals who understand the importance of and engage in transformational leadership behaviors benefit from the resulting outcomes of motivated teachers.

Transformational leaders increase teacher motivation by nurturing their needs, providing support and giving them a sense of purpose (Eyal & Roth, 2011). Indicators of teacher motivation have been identified as actions such as increased effort in teaching, trying new theories and methods of teaching, investigating alternative ways of teaching, and being more open to change and reform (Geijsel et al., 2003; Leithwood & Jantzi, 2005; Supovitz, Sirinides, & May, 2010; Eyal & Roth, 2011). These outcomes

suggest that transformational leadership behaviors support teacher needs for autonomy and competence (Eyal and Roth, 2011; Barnett and McCormick, 2003). Providing teachers with a clear mission and purpose not only increases teacher motivation, but it has also been found to increase commitment to the organization (Ross and Gray, 2006, p. 181; Eyal and Roth, 2011). The practice of building relationships, meeting the needs of teachers, and providing a sense of purpose has a positive effect on teacher motivation.

Another indicator of increased teacher motivation is the reduction of teacher stress and burnout. Teachers who are motivated tend to have more energy and vitality and report feeling fewer symptoms of burnout or exhaustion (Eyal & Roth, 2011; Robbins, 1996; Gagné & Deci, 2005; and Sheldon et al., 2003). Eyal and Roth (2011) found that teachers who felt autonomously motivated were better able to "tolerate occasional frustrations or setbacks, and to prevent those negative experiences from leading to feelings of burnout" (p. 263). Adams and Forsyth (2014) found that, "school leaders can design and monitor local efforts to build a climate that energizes the motivation, engagement, and performance of their school's teachers and students" (p. 6). Transformational leadership behaviors provide principals with a way to increase teacher motivation thereby reducing teacher stress and burnout.

In some instances, sustaining teaching motivation can be as big a challenge for principals as creating motivation. This research choose to focus on behaviors and actions that were easily within a principal's control. As building principals do not always have control over things such as teacher salary schedules, purchasing budgets, and other extrinsic type rewards the research chose to focus on principal behaviors as

principals always have a choice as to how they behave and act as building leaders. Principal behavior can be considered from both a motivational perspective and a demotivational perspective. Snowden and Gorton (2002) argue that just as motivation leads to positive outcomes, demotivation can lead to negative outcomes such as weakened academic press. Engaging in transformational leadership behaviors enables principals to create climates that both sustain and increase teacher motivation by providing autonomy, competence, and relational support for teachers. Transformational leadership "provides intellectual direction and aims at innovating within the organization, while empowering and supporting teachers as partners in decision making" (Marks & Printy, 2003, p. 371). Maintaining motivation through transformational leadership is a careful balance of building relationships and providing structure (Barnett & McCormick, 2003).

Current federal and state reform mandates require teachers to take on more and more responsibility each year with little or no additional salary. Principals are responsible for persuading teachers to comply with these additional responsibilities without reducing the time, energy, or effort that teachers put into the classroom. To accomplish this, principals must use leadership strategies that will increase organizational citizenship behaviors in teachers. Ross and Gray (2006) found that principal transformational leadership behaviors, "consistently predicted the willingness of teachers to exert extra effort and to change their classroom practices/attitudes" (p. 180). Additionally, research shows that principal transformational leadership behaviors result in teacher willingness to work harder with academically struggling students (Gibson & Dembo, 1984 and Ross & Gray, 2006). Geijsel et al. (2002) found that,

"transformational forms of school leadership have direct effects on teachers' commitment to school reform and the extra effort they devote to such reforms" (p. 229).

Principal transformational leadership behaviors are important in creating a school culture where teacher needs are met and they feel supported in their work. Principals must understand that, "the way in which they express their support may affect teachers' functioning" (Fernet, et al., 2012, p. 517). Dorman (2003) states that, "in today's schools, principals ignore emotional support for their teachers' at their own peril" (p. 122). Transformational leadership provides a way for principals to establish a vision and introduce change while providing teachers with the support and autonomy necessary to maintain and improve motivation. Transformational leadership behaviors provide support for teacher desire for autonomy, competence, and relatedness (Barnett and McCormick, 2003; Pelletier and Sharp, 2009; Gagné and Deci, 2005).

The logical connection between principal transformational leadership behaviors and indicators of teacher motivation impels this research toward Ryan and Deci's (2000) Self-Determination Theory as a conceptual framework. The logic begins with the well-established claim that principal transformational leadership behaviors are motivating (Gagné & Deci, 2005; Sheldon et al., 2003; Geijsel et al., 2003; Leithwood & Jantzi, 2005; Eres, 2011; Thoonen et al., 2011; Eyal & Roth, 2011; Kurt et al., 2012; Northouse, 2012; and Barnett & McCormick, 2003). Ryan and Deci's (2000) Self-Determination Theory explains that when individual basic psychological needs are met, those individuals tend to be more intrinsically motivated. Self Determination Theory can explain how transformational leadership behaviors cause teachers to become more

autonomously or intrinsically motivated, namely through the process of satisfying teacher psychological needs.

Chapter 3: Conceptual Framework

Teacher motivation is a critical issue for school leaders as it influences many important outcomes such as how much effort teachers put into their work, how long they will persist at difficult tasks, how well they deal with difficult students, and even whether they remain in the profession. At a time when there is a nationwide teacher shortage and professional morale is often low, it falls on school leaders to create a school climate that motivates teachers. Yildiz and Simsek (2016) state that, "leadership is a critical concept for organizations because of its effect on employee attitudes and actions as well as employee emotions and opinions" (p. 59). Deci, Connell, and Ryan (1989) argued that leaders have critical roles in influencing follower self-esteem and self-determination. Nuguni et al. (2006) found that, "there is a considerable amount of evidence of the effects of transformational leadership on job satisfaction, organizational commitment, and organizational citizenship behavior in business, military, health, and service organizations" (p. 146). Because of the important role that leaders play in influencing employee perceptions and self-determination coupled with the known positive effects of transformational leadership (Judge & Piccolo, 2004), it is important that we understand more specifically how principal transformational leadership behaviors affect teacher motivation.

Bass (1999) pointed out that the processes by which transformational leaders are effective are not understood. In recent literature, several scholars have called for additional research into the mechanisms of transformational leadership (Yukl, 2010; Avolio, Walumba, & Weber, 2009; Kovanic, Schuh, Jonas, Van Quaquebeke, & Van Dick, 2012). Kovanic, et al. (2012) began the expansion of the study of transformational

leadership outside of educational contexts, when they integrated transformational leadership and Self-Determination theory arguing that need fulfillment was the central control mechanism behind transformational leadership. However, even in recent educational research, Eliophotou-Menon and Ioannou (2016) state that, “in the field of education, the research for transformational leadership is at the early stages” (p. 13). One of the deficit areas on the application of Self-Determination Theory to education is that most of it has been conducted at the student level while neglecting to look at how Self-Determination Theory and need fulfillment applies at the teacher level (Korthagen and Evelein, 2016).

Kovanic et al. (2012) posit that, “given the evidence of its effectiveness, it appears to be an important next step in the analysis of transformational leadership to examine *why* it evokes these desirable outcomes” (p.1031). However, the effect of principal transformational leadership behaviors on the psychological needs of teachers and the resulting effect on teacher motivation has not been examined empirically. This research served to integrate transformational leadership and Self-Determination Theory to explain the relationship between teacher psychological needs fulfilment and principal transformational leadership behaviors and the resulting effect on teacher motivation. Transformational leadership will be examined through the lens of Self-Determination Theory using basic psychological needs theory to explain the effects of principal transformational leadership behaviors on teacher motivation.

Support of Teacher Psychological Needs

Ryan and Deci's (2002) Self-Determination Theory begins with the assumption that, "all individuals have natural, innate, and constructive tendencies to develop an ever more elaborated and unified sense of self" (p. 5). Individuals are innately driven to make connections with others and those connections can have a profound effect on the desire and ability to push forward and strive for increased effort and improved performance. Basic Needs Theory, a sub-theory of Self-Determination Theory, explains that for humans to function and develop at optimal levels three basic psychological needs: competence, relatedness, and autonomy must be met. These needs are, "expected to be evident in all cultures and in all developmental periods" (Ryan and Deci, 2002, p. 7) and are therefore evident among all teachers. Self-Determination Theory does not determine any hierarchical relationship between the three needs; they are considered to be universal to all individuals and necessary to an approximately equal extent all the time (Sheldon, et al., 2003).

Self-Determination Theory explains that the fulfillment of these needs is necessary for personal growth and optimal performance. Adams and Forsyth (2014) point out that, "individuals operate below their potential when the social environment thwarts psychological needs" (p. 7). Therefore, a basic understanding of Self-Determination Theory and the basic psychological needs of teachers can help principals maintain and cultivate motivation in their staff. Ryan and Deci (1991, 2000) found that the concept of innate psychological needs is fundamental to Self Determination Theory, and is necessary to understand teachers' motivation and behavior. Additionally, Korthagen and Evelein (2016) found a relationship between the satisfaction of the needs

of competence and relatedness and teacher behavior. This connection between need satisfaction and teacher behavior makes principal awareness and understanding of these needs essential in creating a school climate that nurtures teachers and promotes optimal performance.

Autonomy Support. Transformational leaders create strong and believable visions for their organization and communicate both high expectations and goals for the future to their followers (Bennis & Nanus, 1985; Northouse, 2012). Researchers have found that followers tend to perceive these goals as congruent to their own as transformational leaders are able to relate them to universalistic values (Bass, 1985; Bono & Judge, 2003; Kovjanic et al., 2012). Because followers are able to believe in the vision and agree with the goals and expectations set by the leader, they are able to choose to believe in and follow them. Additionally, transformational leaders take their followers' opinions and perceptions (individual consideration) into account when making decisions (Bass, 1985). Kovjanic et al. (2012) argue that these leadership behaviors, "directly address the followers' need for autonomy" (p. 1034). Based on Self Determination Theory, autonomy refers to an experience of choice and directing one's own behavior (Ryan and Deci, 2008). Kovjanic et al. (2012) define autonomy as, "a sense of choice and a feeling of not being controlled by forces alien to the self" (pg. 1033).

Niemiec and Ryan (2009) stated that when principals and other school policy makers utilize methods perceived as controlling to produce accountability results, they often result in "decrements in motivation and learning outcomes" (p. 140) for both teachers and students. School leaders who enact rigid and unrelenting policies and

procedures can be viewed by teachers as controlling or not autonomy supportive. Gagné and Deci (2005) found that, "when managers were trained to be more autonomy supportive their subordinates became more trusting of the organization and displayed more positive work attitudes" (p. 342-343). Leaders who show individual consideration for their employees and take their opinions and perspectives into account when making decisions are seen as more autonomy supportive as leaders must make the employees feel that they are the origin of their own action (Ryan & Deci, 2008).

Autonomy is often confused with the concept of independence. Although actions can certainly be both independent and autonomous, dependence does not necessarily indicate a lack of autonomy. Ryan and Deci (2002) state that, "one can quite autonomously enact values and behaviors that others have requested or forwarded, provided that one congruently endorses them" (p. 8). Therefore, principals can be both autonomy supportive and provide leadership and direction by collegially creating a vision that teachers can share and support. In order for schools to function in an orderly and productive manner, there has to be organizational structure. However, those structures can vary dramatically from district to district and even school to school (Hoy and Sweetland, 2000; 2001). Hoy and Sweetland (2004) argue that, "the key to success is to avoid the dysfunctions of structure while embracing its positive forces" (p. 464). It follows that principals should not try to eliminate structure altogether, but rather, create structure that is seen by teachers as positive or enabling rather than negative or hindering. When principals create enabling school structures, they are creating an autonomy supportive environment.

Flexibility is a key characteristic of principals who are viewed by teachers as enabling. These principals share the belief that there is no, "single best way to deal with most situations" (Hoy and Sweetland, 2004, p. 474). Enabling principals are able to have this flexible relationship with teachers because of the trust relationship that results from a school climate in which enabling school structures are the norm (Hoy and Sweetland, 2000). This flexibility allows teachers to substitute their own judgement for the rules in order to better solve problems (Wu, Hoy, Hoy, and Tarter, 2012). By carefully crafting school structures to support and encourage teachers, principals are able to provide an autonomy supportive environment (Adams & Forsyth, 2014; Tschannen-Moran, 2009). Hoy (2003) found that, "when school structure was enabling, teachers trust each other, demonstrate professional autonomy, are not bound by rigid rules, and do not feel powerlessness" (p. 91). Creating environments in which teachers' needs for autonomy were met was one way that principals supported teacher psychological needs.

Competence Support. Transformational leaders demonstrate the dimension of individual consideration by enhancing their followers' knowledge skills and abilities through training, feedback, and coaching (Kovjanic et al., 2012). Through these techniques, leaders are able to support followers' personal development and ultimately improve their competence. Transformational leaders also foster competence by encouraging followers to develop their own solutions to existing problems (Kovjanic, Schuh, & Jonas, 2013). Transformational leaders can further inspire competence through inspirational motivation such as expressing high expectations and the confidence that followers can meet these expectations (Shamir et al., 1993). Bandura

(1997) also posits that transformational leaders can build competence through showing optimism about the future and confidence in followers' abilities.

Feelings of teacher competence are reflected as an increased sense of confidence in themselves and their work. Competence is defined as "feeling effective in one's ongoing interactions with the social environment" (Ryan & Deci, 2002, p. 7). According to Self-Determination Theory's basic needs framework, individuals need opportunities to both express and expand their capabilities in order to feel competent (Ryan & Deci, 2000). This need for competence drives teachers to seek challenges and enhance pedagogical skills.

Ryan and Deci (2002) argue that, "when an event increases perceived competence, intrinsic motivation will tend to be enhanced; whereas, when an event diminishes perceived competence, intrinsic motivation will be undermined" (p. 11). Feelings of competence drive teachers to perform and internalize behaviors; whereas, if they do not feel competent, they may avoid or find excuses to not engage in particular behaviors. By providing an environment that has optimal challenges, adequate feedback, and a supportive climate, principals can address teachers' psychological need for competence (Kovjanic et al., 2013).

Relatedness Support. A key characteristic of transformational leadership is creating a sense of relatedness among employees. Walumba, Avolio, and Zhu (2008) argue that transformational leaders foster relatedness between employees by increasing the attraction between the leaders and the follower and by increasing the bond among followers. Transformational leaders accomplish these tasks in a variety of ways using both idealized influence and inspirational motivation (Kovjanic et al., 2012).

Transformational leaders earn the respect and admiration of followers by adhering to high ethical standards and engaging in self-sacrificing actions for the good of the group (Avolio, 1999; Conger & Kanungo, 1998). Transformational leaders also promote the vision and goals of the organization by emphasizing their importance which in turn creates a feeling of belonging or relatedness among followers (Walumba et al., 2008). Relatedness refers to the feeling of interconnectedness or "the psychological sense of being with others in secure communion or unity" (Ryan & Deci, 2002, p. 7). According to Self-Determination Theory, leaders who acknowledge and support followers by showing genuine interest in their thoughts and interests were seen as satisfying their need for relatedness (Ryan and Deci, 2008). Transformational leaders acknowledge the importance of relatedness and take action to create bonds between their followers which support this need.

Relatedness is most directly associated with the concept of internalization. Internalization is when an activity that was previously an extrinsically motivated activity begins to become a more intrinsically motivated activity because the person has begun to integrate the activity with their sense of self (Ryan and Deci, 2002). Internalization occurs when prompts are used to "encourage people to do an uninteresting activity" (Ryan & Deci, 2002, p. 15). Internalization is a spectrum ranging from amotivation to integrated regulation. As individuals move across the Self-Determination continuum, they become more and more internally regulated and more identified with the activity or task. Ryan and Deci (2002) state that while "relatedness is less central than the other two needs for maintaining intrinsic motivation, it is very much central for promoting internalization" (p. 19). Unless there is a relationship

present, a reason for the person to internalize the uninteresting or externally motivated task, then movement toward internalization is not likely to occur. As principals must ask teachers to do many extrinsically motivated tasks, it is important that they form strong relationships which may help teachers move these tasks from extrinsic to internalized motivation.

Ryan and Deci (2002) argue that, "Self-Determination Theory research has been able to pinpoint and examine factors in social environments that facilitate self-motivation and well-being and those that thwart initiative and positive experience" (p. 9). Basic Needs Theory further elaborated the "concept of basic needs and its relation to life goals and daily behaviors, specifying the essential role of needs to psychological health and well-being" (Ryan and Deci, 2002, p. 27). Sheldon et al. (2003) argue that, "The concept of innate psychological needs is fundamental to Self-Determination Theory, and is necessary to understand and make predictions about individuals' motivation and behavior" (p. 366). Self-Determination Theory can be appropriately applied to schools, principals, and teacher motivation.

Indicators of Teacher Motivation

Researchers have already demonstrated in numerous studies that teacher perceptions of principal behavior as transformational result in teachers being happier with school leadership and being more willing to put greater effort into their jobs (Philbin, 1997; Geijsel et al., 2003; Barnett & McCormick, 2003; Leithwood & Jantzi, 2005; Eres, 2011; and Hauserman & Stick, 2013). Transformational leaders have a clear vision, articulate that vision to their followers, create climates of trust, provide

emotional and ideological support, and inspire workers to go beyond what is expected (Kurt, Duyar, & Çalik, 2012; Northouse, 2012; Geijsel et al., 2002). Researchers (Geijsel et al., 2002; Leithwood & Jantzi, 2005) have found that transformational leadership behaviors have a direct effect on teacher motivation.

Scholars agree that transformational leaders nurture the needs of their followers, promoting follower intrinsic motivation (Eyal & Roth, 2011; Gagné & Deci, 2005; Sheldon et al., 2003; and Northouse, 2012). Barnett and McCormick (2003) discovered that transformational leadership behaviors provide autonomy support, "through encouragement and recognition of individual efforts as well as direction and guidance based on individual needs and development" (p. 70). Eres (2011) argues that the most important factor affecting teacher motivation in the school is leadership. When teachers are intrinsically motivated, principals see positive outcomes for both student achievement and teacher productivity.

One of the basic elements of transformational leadership is the articulation of a clear vision. Eyal and Roth (2011) propose that because transformational leaders establish and articulate a clear vision, they may "generate followers' identification with the organizations' goals and the leader's vision" (p. 259). This identification with the goals and vision of the organization creates a climate in which employees feel autonomously motivated (Eyal & Roth, 2011; Sheldon et al., 2003; Adams & Forsyth, 2014; Gagné & Deci, 2005; and Northouse, 2012). This idea is argued by Adams and Forsyth (2014) who state that, "autonomy support at the school level is rooted in shared perceptions and beliefs of the faculty" (p. 8). Gagné and Deci (2005) agree that transformational leadership meets the psychological needs of followers. They reason

that, “because transformational leadership involves motivating through facilitating identification with the group, increasing follower self-efficacy and linking work values to follower values, it appears that transformational leaders support their followers’ autonomy and allow satisfaction of the basic psychological needs” (Gagné & Deci, 2005, p. 346).

Transformational Leadership Behavior

Early in its inception, transformational leadership was closely tied to meeting the needs of its followers. In 1978 when Burns first introduced the concept of transformational leadership he stated, “the essence of the leaders’ power is the extent to which they can satisfy, or appear to satisfy, specific needs of the followers” (p. 294). Burns (1978) work further defined a transformational leader as a person who, “seeks to satisfy higher needs and engages the full potential of the follower” (p. 4). Following later, Bass (1990) argued that the fulfillment of followers’ emotional needs was a central aspect of transformational leadership. In more recent literature, researchers have identified the focus on follower psychological needs as a central aspect that differentiates transformational leadership from transactional leadership (Bono & Judge, 2003). Because of this focus on follower psychological needs, transformational leadership behaviors allow leaders to demonstrate their support of follower needs for autonomy, competence, and relatedness through their daily actions and activities (Gozukara & Simsek, 2015).

Vanblaere and Devos (2016) argue that transformational leadership, “involves the creation of a kind of norm for the entire school that requires all stakeholders to be

on the same page" (p. 35). Hauserman and Stick (2013) found that highly transformational principals, "worked collaboratively with staff to increase the level of personal and school support to create a consistent vision" (p. 193). By taking the time to involve staff in the creation of a vision, transformational leaders work to create a culture in which teachers feel valued and supported, which leads to many other positive outcomes such as increased trust, motivation, efficacy, and occupational citizenship behaviors (Aas & Brandmo, 2016; Eliophotou-Menon & Ioannou, 2016; Hauserman & Stick, 2013; Leithwood, 1992; Leithwood & Jantzi, 2005; Simola, Barling, & Turner, 2009).

Increases in the commitment of employees to the organization, their trust in their leader, their job satisfaction, and their motivation to learn have all been linked to transformational leadership (Eliophotou-Menon & Ioannou, 2016). Faculty trust in the principal has been found to be an essential component for school leaders to forge relationships that help inspire teachers to move to higher levels of achievement and effort even in the face of the challenging problems in public schools (Tschannen-Moran & Gareis, 2015; Forsyth & Adams, 2014; Tschannen-Moran, 2009). Yukl (1999) found trust in the leader was an important feature of transformational leadership. More specifically, Mirza and Redzuan (2012) found a statistically significant relationship between the principal's leadership style and the trust of teachers, particularly in the case of transformational leadership.

Transformational leadership has been found to have a direct effect on teacher motivation and willingness to do more than is expected in the classroom. Walumba et al. (2004) reasoned that,

> Because transformational leaders are able to encourage followers to think critically, and to seek new ways to approach their job, this may directly strengthen followers' job involvement and intrinsic motivation, resulting in more desirable work-related attitudes (p. 525).

Motivation is not the singular cause of increased teacher work effort; the relationships formed by transformational leaders also have an effect on productivity. Yukl (1999) has found that followers of transformational leaders "trust the leader and as a result show a tendency to do more than what is required of them" (p. 286). Transformational leaders focus on creating social structures that support teachers and create trusting relationships resulting in increased motivation and productivity. Barnett et al. (2001) found that transformational leaders "motivate followers to transcend their own immediate self-interest for the sake of the mission and vision of the organization" (p. 25) thereby increasing teacher confidence levels resulting in increased teacher development.

Evidence of meeting of the basic psychological needs of autonomy, competence, and relatedness propels this research toward Ryan and Deci's (2000) Self-Determination Theory. As established in the previous discussion, Self-Determination Theory (Ryan & Deci, 2001) seems an appropriate theoretical framework for this research because it provides the rationale for why transformational leadership is an effective leadership style. Ryan and Deci (2001) found that meeting basic psychological needs results in increased intrinsic motivation. Gagné and Deci (2005) found that transformational leadership meets psychological needs. It follows, therefore, that through supporting teacher psychological needs, principal transformational leadership results in increased indicators of teacher intrinsic motivation.

This research seeks to examine the following theoretical models (Figures 1 and 2) examining the relationships between principal transformational leadership behavior and both collective teacher efficacy and organizational citizenship behavior and the possible mediating effects of principal support for teacher psychological needs.

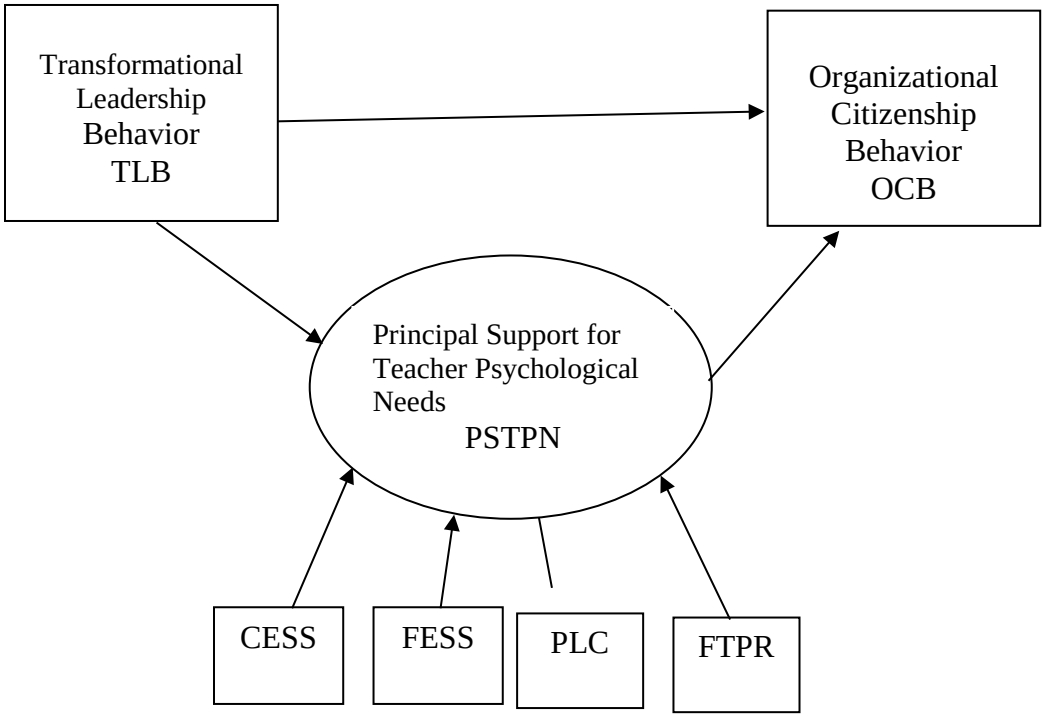

Figure 3.1. *Theoretical Model 1*
(CESS = centralized enabling school structures; FESS = formalized enabling school structures; PLC = professional learning community performance; FTPR = faculty trust in the principal)

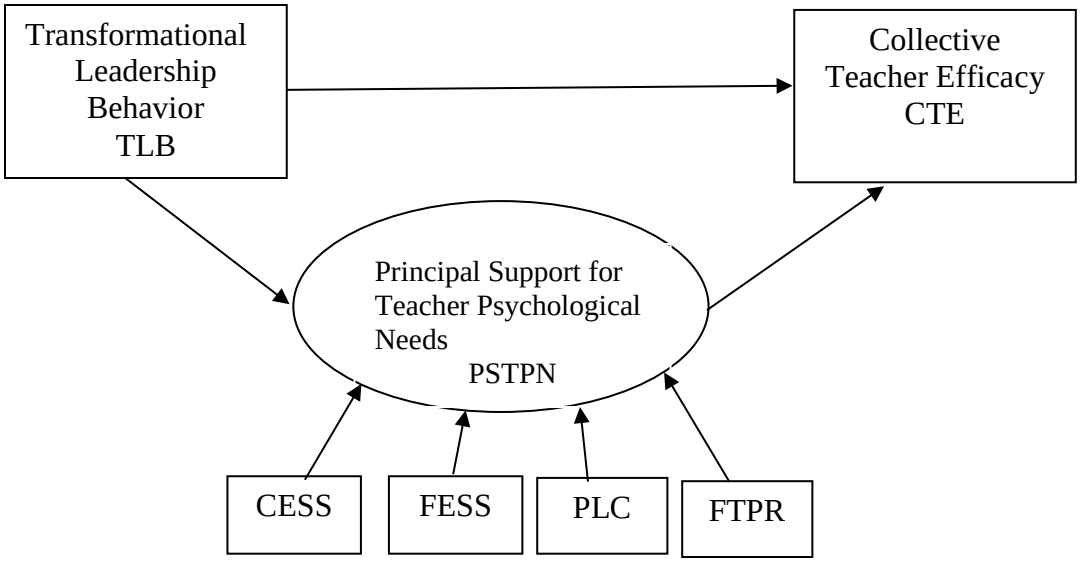

Figure 3.2. *Theoretical Model 2*
(CESS = centralized enabling school structures; FESS = formalized enabling school structures; PLC = professional learning community performance; FTPR = faculty trust in the principal)

The following hypotheses will be examined:

H1: The effect of Principal Transformational Leadership on Organizational Citizenship Behavior are mediated by Principal Support for Teacher Psychological Needs.

H2: The effect of Principal Transformational Leadership on Collective Teacher Efficacy are mediated by Principal Support for Teacher Psychological Needs.

Chapter 4: Method

This study used data from an urban school district in a southwestern state, to test the relationship between transformational leadership behaviors, teacher psychological needs, and teacher motivation.

Data Source

Data for this study were collected in 2014 by the Oklahoma Center for Education Policy at the University of Oklahoma. Principals, faculty, parents, and students from 73 schools were surveyed in a Midwestern city as a part of a larger university study. Participation was voluntary. School principal surveys were delivered via e-mail. Teachers were randomly assigned to one of two online surveys which were also delivered by e-mail.

The school district is located in a city with a population of approximately 400,000 people. The district serves approximately 40,000 students in 86 schools. The demographic make-up of the district is 30 percent Hispanic, 27 percent Caucasian, 26 percent African American, 6 percent American Indian, 1 percent Asian, and 0.32 percent Pacific Islander. Eighty percent of the student population is eligible for the federal free and reduced lunch program. The district employs nearly 3,000 certified staff with nearly half having 11 plus years of experience. Nearly 40 percent of the certified staff hold advanced degrees and approximately 4 percent are National Board Certified Teachers.

This study used a non-experimental research design as it did not involve any manipulation of the situation, circumstances, or experience of the participants. The data

were cross-sectional; participant responses represent one point in time. Measures of school organizational citizenship behavior, collective teacher efficacy, transformational leadership behavior, enabling school structures, faculty trust in principal, and professional learning community performance are analyzed. The unit of analysis for all indicators is the school.

Conceptual and Operational Definitions

Transformational Leadership Behaviors. Transformational leadership refers to the ability of leaders to motivate and prompt individuals to want to change and improve by evaluating the motives and satisfying the needs of the members of the organization (Eliophotou-Menon & Ioannou, 2016). Transformational Leadership Behavior is marked by seven key behaviors which are 1) articulating a vision, 2) modeling, 3) fostering group cohesion, 4) setting high performance expectations, 5) providing individualized support, 6) challenging assumptions and the status quo, and 7) recognizing outstanding work. By means of these seven key behaviors, transformational leaders establish a culture in which employees feel valued, empowered, and trusted, which in turn, motivates them to put more effort into their work, trust in the leader, and feel more confident in their own professional abilities. Transformational leaders "lift ordinary people to extraordinary heights" (Boal & Bryson, 1988, p. 11) by causing them to perform beyond the level of expectation (Bass, 1985). A clear connection between principal transformational leadership behaviors and teacher motivation has been established in extant literature (Kurt et al., 2012;

Northouse, 2012; Geijsel et al., 2002; Leithwood & Jantzi, 2005; Simon, Barling, & Turner, 2010; Eres, 2011).

This study measured principal transformational leadership using a seven item scale based on teacher perceptions of principal behaviors, these data were aggregated to the school level. Items based on school-specific transformational leadership behaviors were originally developed by Leithwood and Jantzi (2002, 2006). Teachers responded to prompts regarding their perceptions of principal behavior in relation to the seven key behaviors of transformational leadership (see Table 4.1). These items were scored on a 1-6 scale from strongly disagree (score 1) to strongly agree (score 6). Reliability, as measured by Cronbach's alpha, was .94 for the Transformational Leadership Behavior Scale, suggesting strong internal consistency among the items (Oklahoma Center for Education Policy, 2014). The structure of the factor analysis supported the construct validity, as did concurrent and predicative validity procedures (Oklahoma Center for Education Policy, 2014).

Table 4.1

Transformational Leadership Behaviors

Item	**Likert Scale**
• The principal at this school inspires others with his/her plans for the future.	1 (strongly disagree) to 6 (strongly agree)
• The principal at this school provides a good role model for me to follow.	1 (strongly disagree) to 6 (strongly agree)
• The principal at this school develops a team attitude and spirit among employees.	1 (strongly disagree) to 6 (strongly agree)
• The principal at this school insists on only the best performance.	1 (strongly disagree) to 6 (strongly agree)

Table 4.1 (Continued)

Transformational Leadership Behaviors

• The principal at this school behaves in a manner thoughtful of my personal needs.	1 (strongly disagree) to 6 (strongly agree)
• The principal at this school asks questions that prompt me to think.	1 (strongly disagree) to 6 (strongly agree)
• The principal at this school commends me when I do a better than average job.	1 (strongly disagree) to 6 (strongly agree)

Teacher perceptions of their psychological needs being met. Ryan and Deci (2017) claim that within every individual is an observable, natural tendency toward growth and development. However, although this growth is natural, it is also conditional, "requiring social and emotional support for persons to satisfy basic psychological needs – the needs of autonomy, competence, and relatedness" (Ryan and Deci, 2017, p. 8). They claim that social contexts that support satisfaction of all three psychological needs result in more effective performance and functioning, whereas contexts that fail to support these needs promote controlled motivation leading to poorer performance (Ryan and Deci, 2017).

Bartholomew, Ntoumanis, Cuevas, and Lonsdale (2014) found that when teacher psychological needs are not satisfied as a result of job pressures, they experience burnout. Many practices associated with the school improvement movement such as high stakes testing create a controlling environment that serves to thwart the fulfillment of teacher psychological needs (Ryan and Deci, 2017). Conversely, school leaders and policies that provide teachers with opportunities for choice, professional

growth, and the opportunity to build professional relationships, engage in behaviors that support teacher psychological needs. Ryan and Deci (2017), state that, "substantial research has indicated that highly effective organizations are those in which basic psychological needs are satisfied as workers autonomously engage in work that they value and for which they feel respected" (p. 553). In this research, four observed variables compose the latent variable principal support of teacher psychological needs: centralized enabling school structures, formalized enabling school structures, professional learning community performance, and faculty trust in principal.

The conceptual definition of principal support for teacher psychological needs is based on definitions of competence support, autonomy support, and relational support. The latent variables chosen to make up Principal Support for Teacher Psychological Needs were chosen to capture a set of behaviors that teachers would expect a principal to exhibit in an environment supportive of all three psychological needs. Thus, (1) the observed variable(s) enabling school structures (formalized and centralized), it is argued, taps teacher perceptions that the organizational structures of the school as designed and implemented by the school's leaders, enable teacher work rather than hinder it. For teachers, such perceptions are consistent with Ryan and Deci's satisfaction of the psychological need for autonomy. (2) The observed variable professional learning community performance, it is argued taps teacher perception of support for the teacher psychological need for competence. Authentic professional learning opportunities made available to teachers increase their classroom success in the context of a particular school. It is argued, therefore, that teachers experience support for their competence in well-functioning Professional Learning Communities. (3)

Finally, the observed variable faculty trust in the principal, it is argued, taps teacher perceptions of the school's support for teacher psychological need for relatedness, especially focusing on the relationship between the principal and teacher.

The coherence of the latent variable so constructed, principal support of teacher psychological needs, will be tested, as well as its empirical justification based on adequate between-school variability.

Enabling School Structures – Centralized and Formalized. Hoy and Sweetland (2004) define enabling school structure as, "a hierarchy that helps rather than hinders and a system of rules and regulations that guides problem solving rather than punishes failure" (p.110). In schools with enabling school structures, "principals and faculty work cooperatively across recognized authority boundaries while retaining their distinctive roles" (Wu, Hoy, and Tarter, 2013, p. 178). Enabling structures focus on improvement and encourage participation and collaboration between teachers by fostering trust and valuing those who learn from mistakes (Hoy, 2003). Principals are able to create autonomy supportive school structures when they deemphasize external controls based on rewards and threats, and instead trust teachers to think, problem-solve, and make decisions independently (Ryan and Deci, 2000).

Enabling school structures produce a school environment in which teachers are viewed as professionals and encouraged to communicate, collaborate, and innovate. Tschannen-Moran (2009) found that enabling school structure is "grounded in trust; specifically, that teachers have the knowledge and ethical considerations to be granted greater autonomy and discretion in the conduct of their work" (p. 220-221). Hoy and Sweetland (2004) found that when principals established enabling school structures

teachers felt they were treated as professionals and as a result there was an atmosphere of "openness and authenticity that pervaded teacher-principal interactions" (p. 471). In short, enabling school structures support teachers rather than enhance principal power (OCEP, 2014). Teacher acknowledgement of enabling school structures provides evidence of principal support of their need for autonomy.

Adler and Borys (1996) theorize that how bureaucracies are constructed (centralization) and the ways in which rules are written and enforced (formalization) determine whether a structure is hindering or enabling. Formalization consists in those structures that create, "a codified system of rules, regulations, and procedures" (Sinden, Hoy, and Sweetland, 2004, p. 463). Centralization refers to the overall bureaucratic structure and how much employees are allowed to participate in the decision making process (Sinden et al, 2004). Structures that are put in place to help organizational members solve problems and function effectively are considered enabling structures whereas those that create problems and impede progress are considered hindering structures (Wu, Hoy, and Tarter, 2013).

Survey data were collected for enabling school structures using twelve items with a 1-5 Likert scale ranging from never (1) to very often (5) measuring the degree to which teachers perceive school structure as enabling. Five of the items on the enabling school structures questionnaire were developed to measure formalized enabling school structures while the remaining seven were designed to measure centralized enabling school structures (Tables 4.2 and 4.3). The structure of this survey enabled the researcher to gather a total enabling school structure (ESS) score, a centralized enabling school structures score (CESS), and a formalized school structures score (FESS). As

these data come from the same survey, they will be used interchangeably in the data analysis based on the needs of the statistical measurement models.

A higher score indicated a more enabling school structure where conversely a lower score indicated a more hindering structure. (OCEP, 2014). The enabling school structures form asked teachers a series of questions designed to gather their perceptions on administrative structures within their school. The reliability of the two scales is explained with Chronbach's alphas and is consistently high, usually .90 or higher (Hoy & Sweetland, 2001). The construct and predictive validity have been strongly supported in a number of studies (Hoy & Sweetland, 2000; Hoy & Sweetland, 2001).

Table 4.2

Formalized Enabling School Structures.

Item	Likert Scale
• Administrative rules in this school enable authentic communication between teachers and administrators.	1 (never) to 5(very often)
• In this school, red tape is a problem.	1 (never) to 5(very often)
• Administrative rules help rather than hinder.	1 (never) to 5(very often)
• Administrative rules in this school are guides to solutions rather than rigid procedures.	1 (never) to 5(very often)
• Administrators in this school use their authority to enable teachers to do their job.	1 (never) to 5(very often)

Table 4.3

Centralized Enabling School Structures.

Item	Likert Scale
• The administrative hierarchy of this school enable teachers to do their job.	1 (never) to 5(very often)
• The administrative hierarchy obstructs student achievement.	1 (never) to 5(very often)
• The administrative hierarchy of this school facilitates the mission of this school.	1 (never) to 5(very often)

Table 4.3 (Continued)

Centralized Enabling School Structures.

• Administrative rules in this school are used to punish teachers.	1 (never) to 5(very often)
• The administrative hierarchy of this school obstructs innovation.	1 (never) to 5(very often)
• Administrative rules in this school are substitutes for professional judgement.	1 (never) to 5(very often)
• In this school, the authority of the principal is used to undermine teachers.	1 (never) to 5(very often)

Professional Learning Communities. One way principals support teacher needs for competence is by creating opportunities for reflective practice though Professional Learning Communities. Teacher ability to work together in a collaborative work culture where supportive interactions between peers can take place is essential to the success of a professional learning community program. In addition, collective responsibility is central to a successfully functioning professional learning community. Teachers in strong professional learning communities do not see school improvement solely as the responsibility of the principal, but collectively feel responsible (Vanblaere & Devos, 2013). Vanblaere and Devos (2013) found that, "the higher teachers assess their school leader's transformational leadership, the more collective responsibility they experienced in the school" (p. 31). This sense of collective responsibility is an essential part of a successful professional learning community as it helps teachers understand their broader responsibilities within the school.

Principals increase the chances that a school will become a competency supportive environment when they advocate and support the implementation of professional learning communities. The purpose of professional learning communities is

to provide cooperative learning opportunities for teachers to strengthen their pedagogical and content knowledge leading to improved teaching and learning in the classroom (DuFour, DuFour, and Eaker, 2008; DuFour, 2004; Ermeling, 2010). DuFour (2004) states that, "the powerful collaboration that characterizes professional learning communities is a systemic process in which teachers work together to analyze and improve their classroom practice" (p. 9). It takes much more than the formation of teacher work groups for professional learning communitites to be successful. There must be a purposeful and long-term commitment from principals to provide both the time and resources for these groups to meet and work frequently during the school day (DuFour et al., 2008). Commitment to this, "ongoing cycle of questions that promote deep team learning" (DuFour, 2004, p. 9) is clear evidence of principal support for teacher competency. Therefore, this study used teacher perception of professional learning community performance as an indicator of principal competency support.

The professional learning community performance scale was designed to, "assess the degree to which faculty feel that the inquiry team structure enables the team to accomplish its task" (Oklahoma Center for Education Policy, 2014, p. iii). Questions ask teachers if the team works together (See Table 4.3). High levels of professional learning community performance indicate that the inquiry team structures are coordinated and consistent with its goals for student learning. Survey data for professional learning community performance was collected using fifteen items with a 1-6 Likert scale. Reliability, as measured by Cronbach's alpha was .97. Factor loading ranged from .72 to .92 (Oklahoma Center for Education Policy, 2014). The survey was adapted from Stanford University's Center for Research on the Context of Teaching.

Table 4.4

Professional Learning Community Performance.

Item	Likert Scale
• Our PLC members are open and honest about their instructional weaknesses and mistakes.	1 (never) to 6 (almost always)
• Our PLC members solve important issues during team meetings.	1 (never) to 6 (almost always)
• Our PLC members discuss decisions that are key to the school's success.	1 (never) to 6 (almost always)
• Our PLC members challenge one another in order to make informed decisions.	1 (never) to 6 (almost always)
• Our PLC members nurture the interpersonal vitality of the team.	1 (never) to 6 (almost always)
• Our PLC members are able to come to agreement without compromising individual members' perspectives.	1 (never) to 6 (almost always)
• Our PLC members end team meetings with clear and specific understanding of actions to be taken.	1 (never) to 6 (almost always)
• Our PLC members work as a group equitably to distribute the workload.	1 (never) to 6 (almost always)
• Our PLC members know what team members are working on.	1 (never) to 6 (almost always)
• Our PLC members leave meetings confident that there is consensus on decisions.	1 (never) to 6 (almost always)
• Our PLC members share ownership of team learning.	1 (never) to 6 (almost always)
• Our PLC members are concerned about the prospect of letting one another down.	1 (never) to 6 (almost always)
• Our PLC members establish clear measures for assessing our success.	1 (never) to 6 (almost always)
• Our PLC members stay on task despite distractions and competing priorities.	1 (never) to 6 (almost always)
• Our PLC members willingly make sacrifices for the achievement of our goals.	1 (never) to 6 (almost always)

Faculty Trust in the Principal. Building a relationship of trust with and between teachers is perhaps one of the most important tasks of a building principal. Principals play a vital role in creating a climate of trust, respect, autonomy, and competence in

their schools. Tschannen-Moran (2009) found that, “the correlation of faculty trust in principal with faculty trust in colleagues suggests that the principal may set the tone for the quality of relationships among adults in the building” (p. 240). Without a principal who has the capacity to support teacher relatedness, a trusting environment is not likely to develop. Without a climate of trust, instructional practice is not likely to improve as continuous improvement strategies require teachers to embrace change and risk vulnerability.

Hoy and Sweetland (2001) argue that trust between teachers is not sufficient for school improvement; but that trust between teachers and principals must also be present to achieve improved teacher innovation and effectiveness. Adams (2013) found that, “fear blocks risk taking, fosters self-protected behavior and restricts innovation, the very behaviors necessary to stimulate learning in students” (p. 367). Handford and Leithwood (2013) argue that principals are perceived as trustworthy when they demonstrate the characteristics of, “competence, consistency and reliability, respect and integrity” (p. 208). Teacher identification of these traits in their principal leads to, “openness and trust in the organizational climate” (Menon, 2014, p. 511) thus creating an environment in which strong, professional relationships are formed. The presence of trust in teacher relationships with colleagues and principal are an indicator of principal relational support.

Survey data were collected for faculty trust in principal using an eight item 1-6 Likert scale. Faculty trust in principal was designed to measure the quality of the relationship between the faculty and the principal (Oklahoma Center for Education Policy, 2014). Items probe faculty perceptions of the support, dependability,

competence, and openness of the principal (See Table 4.4). High principal trust indicates that teachers respect and trust the leadership of the principal (Oklahoma Center for Education Policy, 2014). The Omnibus T-Scale is a short operational measure of three dimensions of faculty trust (trust in principal, trust in colleagues, and trust in clients), which can be used with both elementary and secondary teachers. The reliabilities of the three subscales typically range from .90 to .98. Factor analytic studies of the Omnibus T-Scale support the construct and discriminant validity of the concepts (Oklahoma Center for Education Policy, 2014).

Table 4.5

Faculty Trust in Principal.

Item	Likert Item
• Teachers in this school trust the principal.	1 (strongly disagree) to 6 (strongly agree)
• Teachers in this school are suspicious of most of the principal's actions.	1 (strongly disagree) to 6 (strongly agree)
• The teachers in this school have faith in the integrity of the principal.	1 (strongly disagree) to 6 (strongly agree)
• The principal in this school typically acts in the best interests of teachers.	1 (strongly disagree) to 6 (strongly agree)
• The principal in this school does not show concern for the teachers.	1 (strongly disagree) to 6 (strongly agree)
• Teachers in this school can rely on the principal.	1 (strongly disagree) to 6 (strongly agree)
• The principal in this school is competent in doing his or her job.	1 (strongly disagree) to 6 (strongly agree)
• The principal doesn't tell teachers what is really going on.	1 (strongly disagree) to 6 (strongly agree)

Indicators of Teacher Motivation.

Transformational leaders are able to meet the psychological needs of their followers using the four core leadership practices of transformational leadership. Leithwood and his colleagues have developed the most accepted and widely used model of transformational leadership in schools (Leithwood, Jantzi, & Steinbach, 1999; Leithwood & Jantzi, 2006; Leithwood & Sun, 2012). Leithwood and Sun's (2012) model of transformational leadership consists of the following four core leadership practices: setting directions; developing people; redesigning the organization; and improving the instructional program. These four core leadership practices support the psychological needs of teachers by enhancing their feelings of autonomy, relatedness, and competence within the organization.

Setting directions and redesigning the organization support teacher need for relatedness. Setting directions refers to developing a shared vision and fostering acceptance of the group goals through this vision (Ninković & Knežević Florić, 2018). By better identifying with group norms and values, teachers become a part of the group. Kovjanic et al. (2012) argue that transformational leaders foster the bond between leader and follower by connecting the follower to the organization's goals and mission by emphasizing their importance to help ensure relatedness fulfillment. Additionally, redesigning the organization focuses on strengthening the school culture and building structures that allow for collaboration engagement between teachers (Ninković & Knežević Florić, 2018). Strengthening these bonds between colleagues also enhances feelings of belonging and helps to meet relatedness needs among the teaching corps.

Leithwood and Sun (2012) defined developing people as providing individualized support and intellectual stimulation. Leaders demonstrating these behaviors help build the competence of their followers by supporting them and their practice. Transformational leaders also work to improve teacher competence by expressing high expectations and then voicing confidence that these expectations can be met (Shamir et al., 1993). These high expectations coupled with support including professional development helps to build feelings of competence within the teaching corps (Kovjanic et al., 2012).

By providing instructional support to teachers, monitoring school activities, and buffering staff from distractions, principals are improving the instructional program (Ninković & Knežević Florić, 2018). By allowing teachers time and distance from outside distractions, principals are supporting teacher autonomy. Additionally, by supporting teachers in the classroom principals are supporting not only teacher competence, but also teacher autonomy. When principals treat teachers like the professionals they are and allow them creative freedom in the classroom this enhances feelings of teacher autonomy. An additional benefit of this autonomy support is increased efficacy among the teaching corps. Tschannen-Moran, Hoy, and Hoy (1998) underscore the finding that higher-levels of efficacy are demonstrated when the administration provides "resources and buffers of disruptive factors but allowed teachers flexibility over classroom affairs" (p. 220).

Following the principles of transformational leadership, principals are able to support the psychological needs of teachers. As a result of psychological needs being met, teachers are more likely to show more energy, concentration, and persistence to the

degree that their needs for competence, relatedness and autonomy are satisfied (Ryan & Deci, 2000). The meeting of these basic psychological needs provides the basis for fueling teacher internal motivation (Gagne & Deci, 2005) which in turn results in a number of positive school level outcomes including increased indicators of teacher motivation.

Leithwood, Harris, and Hopkins (2008) argue that transformational leaders improve teaching and learning through their effect on the motivation of teachers. In addition, numerous studies have shown that transformational leadership has a positive effect on a wide range of positive outcomes in the school environment including teachers' job satisfaction, student achievement, innovative school climate, organizational citizenship behavior, organizational commitment, and collective teacher efficacy (Judge & Piccolo, 2004; Nguni, Sleegers, 2006; Moolenar, Sleegars, & Daly, 2012; Sun & Leithwood, 2012). This research connects transformational leadership, principal support for teacher psychological needs, and teacher motivation. Arguing that as a result of principal transformational leadership behaviors, teacher psychological needs are met, resulting in increased indicators of teacher motivation such as collective teacher efficacy and organizational citizenship behavior.

Collective Teacher Efficacy. Collective teacher efficacy refers to educators' shared belief that together their efforts can positively affect student achievement even for those students who are unmotivated or face academic challenges (Donohoo, 2018). Goddard et al. (2000) define collective teacher efficacy as, "a construct measuring teachers' beliefs about the collective (not individual) capability of a faculty to influence student achievement" (p. 486). Principal leadership style plays an important role in

establishing a climate in which teacher collective efficacy is able to thrive. Previous research (Leithwood & Jantzi, 2005; Adam & Nati, 2006) has found a significant positive relationship between transformational leadership behaviors and collective teacher efficacy. Through core leadership practices, transformational leaders create a climate in which teacher collective efficacy can be effectively created and supported. Transformational leaders encourage a collective identity among their followers which contributes to an increased sense of collective efficacy (Ninković & Knežević Florić, 2018).

Collective teacher efficacy is closely associated with student achievement because teachers who believe in their ability to effect student learning are more likely to behave in ways that increase student achievement (Goddard et al., 2000; Angelle and Teague, 2013). Goddard et al. (2000) explain the positive effects of collective teacher efficacy on student achievement as the result of increased motivation and persistence of teachers. Brinson and Steiner (2007) reported that, "stronger collective efficacy encourages individual teachers to more effectively deploy the skills they already have, find new ways to tackle difficult situations, and share what they know with others" (p. 3). Tschannen-Moran and Barr (2004) noted that high levels of collective teacher efficacy lead to the commitment of teachers toward common objectives, the creation of high professional expectations, and acceptance of responsibility for their students' academic outcomes. Collective teacher efficacy is associated with teacher persistence and tenacity (Angelle & Teague, 2013).

This research used collective teacher efficacy as an indicator of teacher motivation. Research studies support the idea that collective teacher efficacy is an

indicator of teacher motivation (Goddard et al., 2000; Angelle & Teague, 2013). Collective teacher efficacy was chosen to represent a change in teacher belief as a result of the transformational leadership behaviors of the principal. Collective teacher efficacy served as a measure of teacher beliefs consistent with intrinsic motivation and resulting from psychological support provided by principals. Survey data were collected using twelve items with a 1-6 Likert scale ranging from strongly disagree (1) to strongly agree (6). The survey questions were based on Goddard, Hoy, and Hoy's (2000) Collective Teacher Efficacy Scale. This measure was designed to capture perceptions of a school's teacher corps that its efforts as a group will result in positive student outcomes. Questions from the Oklahoma Center for Education Policy (2014) survey asked teachers, "If the faculty as a collective group possess the knowledge, competencies, confidence, and motivation to affect student learning" (See Table 4.5). Data were aggregated to the school level based on the work of Goddard, Hoy, and Hoy (2000) who argue that group oriented items reflect the collective experience of group members better than individually-oriented items. Higher collective efficacy indicates that faculty perceives the collective ability of the faculty as having a stronger influence on learning than the social context of the students. Content and predictive validity of the scale is strong, and an alpha of .96 indicates strong item consistency (Goddard, Hoy, & Woolfolk Hoy, 2000).

Table 4.6

Collective Teacher Efficacy

Item	Likert Scale
• Teachers in this school are able to get through to the most difficult students.	1(strongly disagree) to 6(strongly agree)

Table 4.6 (Continued)

Collective Teacher Efficacy

• Teachers here are confident they will be able to motivate their students.	1(strongly disagree) to 6(strongly agree)
• If a child doesn't want to learn, teachers here give up.	1(strongly disagree) to 6(strongly agree)
• Teachers here don't have the skills needed to produce meaningful student learning.	1(strongly disagree) to 6(strongly agree)
• Teachers in this school believe that every child can learn.	1(strongly disagree) to 6(strongly agree)
• Home life provides so many advantages that students here are bound to learn.	1(strongly disagree) to 6(strongly agree)
• Students here just aren't motivated to learn.	1(strongly disagree) to 6(strongly agree)
• Teachers in this school do not have the skills to deal with student disciplinary problems.	1(strongly disagree) to 6(strongly agree)
• The opportunities in this community help ensure that these students will learn.	1(strongly disagree) to 6(strongly agree)
• Learning is more difficult at this school because students are worried about their safety.	1(strongly disagree) to 6(strongly agree)
• Drug and alcohol abuse in the community make learning difficult for students here.	1(strongly disagree) to 6(strongly agree)

Organizational Citizenship Behavior. Organ (1988) defines organizational citizenship behaviors as, "behavior[s] of a discretionary nature that are not part of employees' formal [role] requirements, but nevertheless promote the effective functioning of the organization" (p. 4). Podsakoff, MacKenzie, Mooreman, and Fretter (1990) found that, "previous theoretical and empirical research suggests that there is good reason to believe that transformational leader behaviors influence extra-role or organizational citizenship behaviors" (p. 109). Nguni, Sleegers, and Denessen (2006)

found that, “empirical support for the relationship between supportive leadership style and organizational citizenship behavior can be found in various research studies” (p. 151). Shamir, House, and Arthur (1993) theorize that transformational leaders “promote followers’ intrinsic motivation to act beyond their job description by elevating their self-esteem, self-value, and social identification” (p. 257). Although these studies were outside the educational context, the theoretical reasoning can be applied to school settings. Eyal and Roth (2011) argue that transformational leadership can be linked to teacher identification with the organizations’ goals and the principal’s vision causing them to demonstrate increased organizational citizenship behaviors such as putting more effort into teaching and investigating new methods of practice. Ross and Gray (2006) state that transformational leadership contributes to organizational citizenship behavior by increasing individual willingness to, “go beyond the formal requirements of the job to engage in productive functions that enhance organizational effectiveness” (p. 181). Koh et al. (1995) found that, “transformational leadership did, in fact, have significant and substantial add-on effects in the prediction of OCB” (p. 329).

High levels of motivation and commitment among the teaching corps are essential to fulfill the vision and mission of schools. Transformational leadership plays an important role in raising the organizational commitment of employees by helping to increase motivation and commitment among teachers (Aydin, Sarier, & Uysal, 2013). DiPaola and Tschannen-Moran (2001), identified a strong link between organizational citizenship behavior and school climate. They argue that principals who treat their teachers as the professionals they are, will see “greater organizational citizenship as a natural consequence” (p. 17). Additionally, they found that “a strong school climate

was positively related to the cultivation of OCBs in schools" (p. 18). By using the seven key behaviors of transformational leadership, principals are able to create a positive climate resulting in building level outcomes such as increased job satisfaction and increased organizational commitment as a result of motivating followers and paying close attention to them (Deluga & Souza, 1991; Leithwood & Jantzi, 1999; Rowold & Scholtz, 2009).

The fundamental aim of transformational leadership is to develop higher levels of commitment and performance from followers. Organizational citizenship behavior is a significant phenomenon for schools as a strong commitment from the teaching corps is needed in order to achieve educational goals (Quraishi & Aziz, 2018). Principal transformational leadership behavior is essential in achieving this level of commitment from the teaching corps. Leithwood and Jantzi (2006) argue that followers increased levels of commitment, "result in extra effort and greater productivity" (p. 204). Teachers demonstrate organizational citizenship behaviors as a result of feeling intrinsically motivated and able to identify with the school vision and mission. This research used organizational citizenship behavior as an indicator of teacher motivation. Organizational citizenship behavior served as a measure of teacher intrinsic motivation resulting from psychological support provided by principal transformational leadership behaviors.

The organizational citizenship behavior scale is a twelve item Likert-type scale that measures the degree to which the teaching faculty of a school engages in organizational citizenship behavior. The higher the score, the greater the extent of citizenship behavior of the school. Survey questions are designed at the school level to

gather data about the faculty as a whole (See Table 4.6). The reliability of the scale is consistently high-range .86 to .93 (DiPaola, Tarter, and Hoy, 2005). The construct validity has also been supported in three separate factor analyses (DiPaolo, Tarter, and Hoy, 2005).

Table 4.7

Organizational Citizenship Behavior.

Item	Likert Scale
• Teachers help students on their own time.	1(strongly disagree) to 6(strongly agree)
• Teachers waste a lot of class time.	1(strongly disagree) to 6(strongly agree)
• Teachers voluntarily help new teachers.	1(strongly disagree) to 6(strongly agree)
• Teachers volunteer to sponsor extracurricular activities.	1(strongly disagree) to 6(strongly agree)
• Teachers arrive to work and meetings on time.	1(strongly disagree) to 6(strongly agree)
• Teachers take the initiative to introduce themselves to substitutes and assist them.	1(strongly disagree) to 6(strongly agree)
• Teachers begin class promptly and use class time effectively.	1(strongly disagree) to 6(strongly agree)
• Teachers give colleagues advance notice of changes in schedule or routine.	1(strongly disagree) to 6(strongly agree)
• Teachers give an excessive amount of busy work.	1(strongly disagree) to 6(strongly agree)
• Teacher committees in this school work productively.	1(strongly disagree) to 6(strongly agree)
• Teachers make innovative suggestions to improve the overall quality of our school.	1(strongly disagree) to 6(strongly agree)

Analytical Technique

This research used statistical analysis to explore the direct and mediated effects of transformational leadership on indicators of teacher motivation. The analysis began

by running Intraclass Correlation Coefficients (ICC_1 and $ICC_{2)}$ for the three latent variables (enabling school structures, professional learning community performance, and faculty trust in the principal) in the model. The Intraclass Correlation Coefficients were used as a measure of the reliability of the measurements for these latent variables. Additional Intraclass Correlation Coefficients were performed for the observed variables (transformational leadership behavior, collective teacher efficacy, and organizational citizenship behavior) to ensure that there were sufficient between school variance. Confirmatory Factor Analysis was used to determine if the level and adequacy of the observed latent variables in composing the proposed latent variable principal support for teacher psychological needs.

Next, Structural Equation Modeling was used to examine the relationship between transformational leadership behaviors, teacher psychological needs, and indicators of teacher motivation such as collective teacher efficacy and organizational citizenship behavior. Schreiber, Nora, Stage, Barlow, and King (2010) define Structural Equation Modeling as, "statistical techniques that one can use to reduce the number of observed variables into a smaller number of latent variables by examining the covariation among the observed variables" (p. 323). As previously described, teacher perception of psychological needs being met acceptable criteria for a latent variable composed of multiple indicator variables. Structural Equation Modeling was chosen as the most appropriate statistical approach because it allowed each indicator variable to be considered as a part of the latent construct rather than creating composite variables, as required by Baron and Kenny's (1986) Classic Mediation Test, which would have hidden the unique effects of each indicator variable.

Teacher motivation and teacher perception of principal support for psychological needs are complex phenomena that cannot be measured directly or by a single perceptual questionnaire item. Schreiber, et al. (2010) state that, "almost all of the variables of interest in education research are not directly observable" (p.326). Thus, the claim that this research required the use of Structural Equation Modeling because it accounts for the observed variables that make up the latent variables in the proposed models (Figure 3.1). Bowen and Guo (2011) argue that using Structural Equation Modeling increases the quality and rigor of research using multiple-item measures, "thereby increasing the credibility of results and strengthening the contribution of studies to the literature" (p. 3). Schreiber, et al. (2010), state that, "SEM allows researchers to test theoretical propositions regarding how constructs are theoretically linked and the directionality of significant relationships" (p. 326). Analysis of the results of the Structural Equation Model provided, "information about how strongly each of the indicators is related to its factor or variable (Vogt, 2007).

There is evidence that transformational leadership behavior meets the psychological needs of teachers (Gagné & Deci, 2005). In this study the satisfaction of teacher psychological needs was explored as a mediating variable between principal transformational leadership behavior and teacher motivation. Data were examined to determine if principal transformational leadership behavior fulfills the psychological needs of teachers resulting in enhanced indicators of teacher motivation such as collective teacher efficacy and organizational citizenship behavior.

Chapter 5: Results

Self-determination theory and evidence on transformational leadership and teacher motivation led to a hypothesis that support for teacher psychological needs mediates the relationship between transformational leadership behaviors and indicators of teacher motivation such as collective teacher efficacy and organizational citizenship behaviors. This relationship was tested in 73 schools from one urban district. The results section reports findings from the interclass correlation coefficients, confirmatory factor analysis, and structural equation models. The chapter concludes with findings from a post-hoc analysis.

The following analyses were conducted as a part of this research:

1. Calculate and examine ICC_1 to determine if there is sufficient variation at the school level to calculate the subsequent analysis.
2. Use Confirmatory Factor Analysis on the observed variables hypothesized to measure principal support of teacher psychological needs to demonstrate that these indicators successfully combine to form the latent variable principal support of teacher psychological needs.
3. Use Structural Equation Modeling to test and show the theorized models and results.
4. Post Hoc Analysis was conducted to further explore issues of fit in the originally theorized model.

Intraclass Correlation Results

Intraclass correlations were run as a measure of the reliability of the measurements for these observed variables. Cases with three or fewer item responses were deleted from the analysis. Intraclass correlations were used to determine if there was adequate variability at the school level to conduct subsequent analyses. Variance at the school level is necessary in order to make the argument that these variables coalesce into the latent variable principal support for teacher psychological needs. If the variables that compose principal support of teacher psychological needs do not capture variance at the school level, then they should not be included in the measure of school level variance.

The data (Table 5.1) show that there was a statistically significant ($ICC_1 > .05$) amount of variance at the school level sufficiently adequate to continue to the next analytical step.

Table 5.1

Intra-Class Correlations for Observed Variables

Variable	ICC(1)	Chi Square	Significance	*d.f.*
TLB	0.19	201.75931	<0.001	70
PLC	0.09	129.83805	<0.001	70
OCB	0.12	146.50591	<0.001	70
FTPR	0.26	245.43151	<0.001	71
CTE	0.32	323.80251	<0.001	71
ESS	0.17	183.03098	<0.001	71

Confirmatory Factor Analysis

The second step was to examine the theoretically proposed components of principal support for teacher psychological needs to determine if they function as a factor (Figure 5.1). Confirmatory factor analysis was used to determine if the observed

variables (FESS, CESS, PLC, FTPR) combine to form a meaningful latent variable (PSTPN). In the confirmatory factor analysis, enabling school structures was broken down into its two factors formalized and centralized enabling school structures (FESS and CESS) to provide four observed variables which were necessary for the model to run properly. The standardized regression weights showed that formalized enabling school structures (.97), centralized enabling school structures (.98), and faculty trust in the principal (.92) all had strong relationships to principal support of teacher psychological needs (Figure 5.1) and held together well to form the latent variable.

The standardized regression weights did not show a strong relationship between professional learning community performance (.30) and principal support of teacher psychological needs (Figure 5.1). The weak standardized regression weight for professional learning community performance indicates that professional learning community performance's contribution to principal support of teacher psychological needs is very small and may even suggest that it exists as a separate factor. As professional learning community performance was a part of the originally proposed theory, it is the intention of the researcher to keep professional learning community performance in the analysis even though it has a low standardized regression score and a weak relationship to the proposed model. The researcher did not want to trim the originally proposed theory prior to statistical analysis despite the poor standardized regression scores for professional learning community performance. The theoretical reasoning for including professional learning community performance in the theory still stands even though empirically it may not be verified.

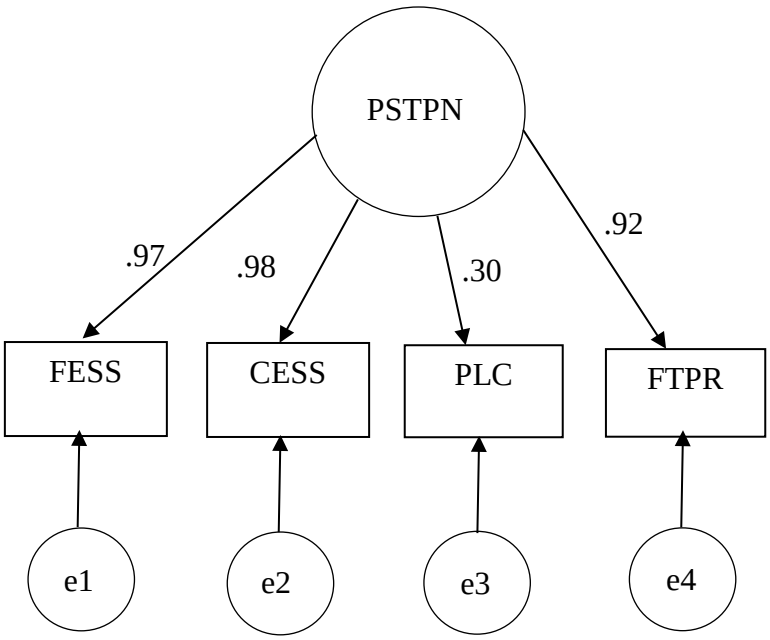

Figure 5.1. Confirmatory Factor Analysis
(PSPTN = principal support for teacher psychological needs; FESS = formalized enabling school structures; CESS = centralized enabling school structures; PLC = professional learning community performance; FTPR = faculty trust in the principal)

Structural Equation Modeling

The third step of the analysis was to use Structural Equation Modeling to test the relationships hypothesized in the theoretical models of how leadership behavior affects certain teacher motivational behaviors (Figures 3.1 and 3.2). The relationships hypothesized in these theoretical models (Figures 3.1 and 3.2) suggest the existence of mediation. Iacobucci (2008) argues that mediational structure is present when "an independent variable might affect a dependent variable – not directly, but rather through an intervening process, captured by the mediator variable" (p. 1). To establish that mediation exists in the theorized models (Figures 3.1 and 3.2), there are pre-conditions that must be met. In model one (Figure 3.1), transformational leadership behaviors must be related to collective teacher efficacy; transformational leadership behaviors

must be related to principal support for teacher psychological needs; and principal support for teacher psychological needs must be related to collective teacher efficacy. These same pre-conditions must be met for the second model (Figure 3.2) as well, transformational leadership behaviors must be related to organizational citizenship behavior; transformational leadership behaviors must be related to principal support for teacher psychological needs; and principal support for teacher psychological needs must be related to organizational citizenship behavior. If statistically significant relationships are present between all of these variables, the conditions for attempting a mediation model have been met (Iacobucci, 2008). Before attempting the mediation, the researcher made sure the conditions for mediation were met. The correlation matrix (Table 5.2) demonstrates the legitimacy of the attempted mediation analysis.

Table 5.2

Correlation Matrix

Measure	OCB	PSTPN	TLB	CTE
OCB	1	0.45**	0.48**	—
PSTPN	0.45**	1	0.59**	.560**
TLB	0.48**	0.59**	1	—
CTE	—	.560*	.294*	1

**Correlation is significant at the 0.01 level
* Correlation is significant at the 0.05 level

The correlation matrix (Table 5.2) shows that transformational leadership behavior is moderately related to both organizational citizenship behavior and principal support for teacher psychological needs. All of the relationships between the variables are positive and their strength is moderate. This suggests that when transformational

leadership behaviors increase, there is also an increase in organizational citizenship behaviors and teacher perception of principal support for their psychological needs. The correlation matrix (Table 5.2) also shows that transformational leadership behavior is moderately related to collective teacher efficacy and principal support for teacher psychological needs. The relationship between the variables is positive. The strength between transformational leadership behavior and principal support for teacher psychological needs is moderate while the relationship between transformational leadership behavior and collective teacher efficacy, although statistically significant, is weak. The relationship between principal support for teacher psychological needs and collective teacher efficacy is moderately strong. The relationships indicated in the correlation matrix (Table 5.2) meet the pre-conditions for mediation (Iacobucci, 2008).

The first structural equation model used organizational citizenship behavior as the single dependent variable. This model (Figure 5.2) ran successfully, but did not produce statistical significance among all of the variables necessary to meet the requirements for mediation (Iacobucci, 2008). The lack of statistical significance in the relationship between principal support for teacher psychological needs and organizational citizenship behavior (.03), does not support a mediation hypothesis.

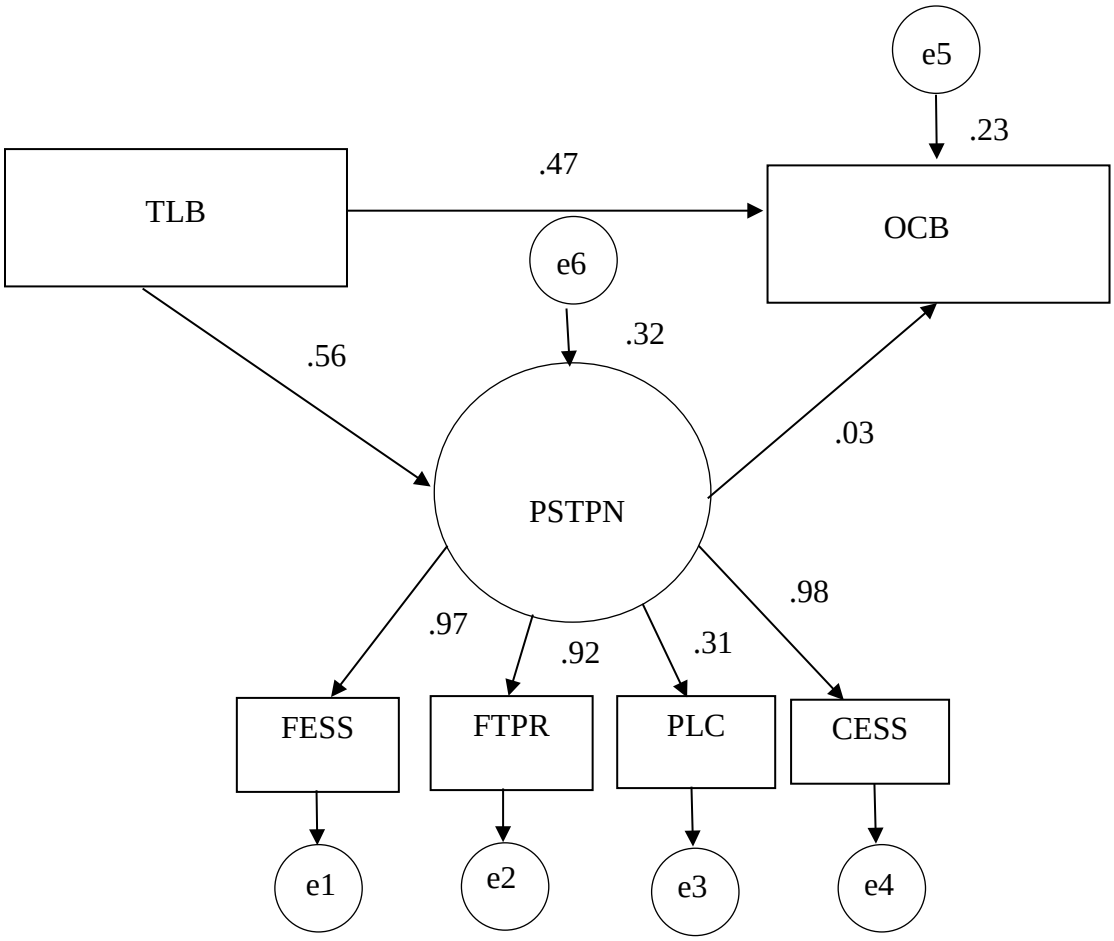

Figure 5.2. Structural Equation Model – Organizational Citizenship Behavior (TLB = transformational leadership behavior, OCB = organizational citizenship behaviors, PSTPN = principal support of teacher psychological needs, FESS = formalized enabling school structures, FTPR = faculty trust in principal, PLC = professional learning community performance, CESS = centralized enabling school structures)

The structural equation model (Figure 5.2) shows that there is a moderately strong relationship (.47) between transformational leadership behaviors and organizational citizenship behaviors. It also shows that there is a moderately strong, positive relationship (.56) between transformational leadership behaviors and principal support for teacher psychological needs. However, there is a weak (.03), and statistically insignificant relationship between principal support of teacher

psychological needs and organizational citizenship behavior. The absence of a relationship between principal support of teacher psychological needs and organizational citizenship behavior prevents this model from meeting the requirements of a mediation model (Iacibucci, 2008). Therefore, in this model principal support for teacher psychological needs does not appear to mediate the relationship between transformational leadership behavior and organizational citizenship behavior.

In addition to failing to provide evidence of mediation, the model (Figure 5.2) does meet minimal fit statistics. The Root Mean Square Error of Approximation is .85 which is above the .05 that would indicate a good fitting model (MacCallum, Browne, & Sugawara, 1996). Additionally, the Comparative Fit Index is much lower (.82) than levels considered acceptable fit (Schermelleh-Engel, Moosbrugger, and Müller, 2003). Both of these statistics suggest that this model is defective, but they do not provide any additional insight as to why.

Next, collective teacher efficacy was used as the single dependent variable in an otherwise identical model. The model (Figure 5.3) ran successfully showing statistical significance where predicted and full mediation as hypothesized. The structural equation model (Figure 5.3) shows that there is a non-significant and negative relationship between transformational leadership behaviors and collective teacher efficacy. It also shows that there is a moderately strong, positive relationship between transformational leadership behaviors and principal support for teacher psychological needs. Additionally, there is a moderately strong, positive relationship between principal support of teacher psychological needs and collective teacher efficacy. This model (Figure 5.3) provides evidence of full mediation of the relationship between

transformational leadership behavior and collective teacher efficacy through principal support of teacher psychological needs, but the fit statistics suggest that there may be another alternative model that fits better. The cause of these poor fit statistics may be missing variables or unidentified paths.

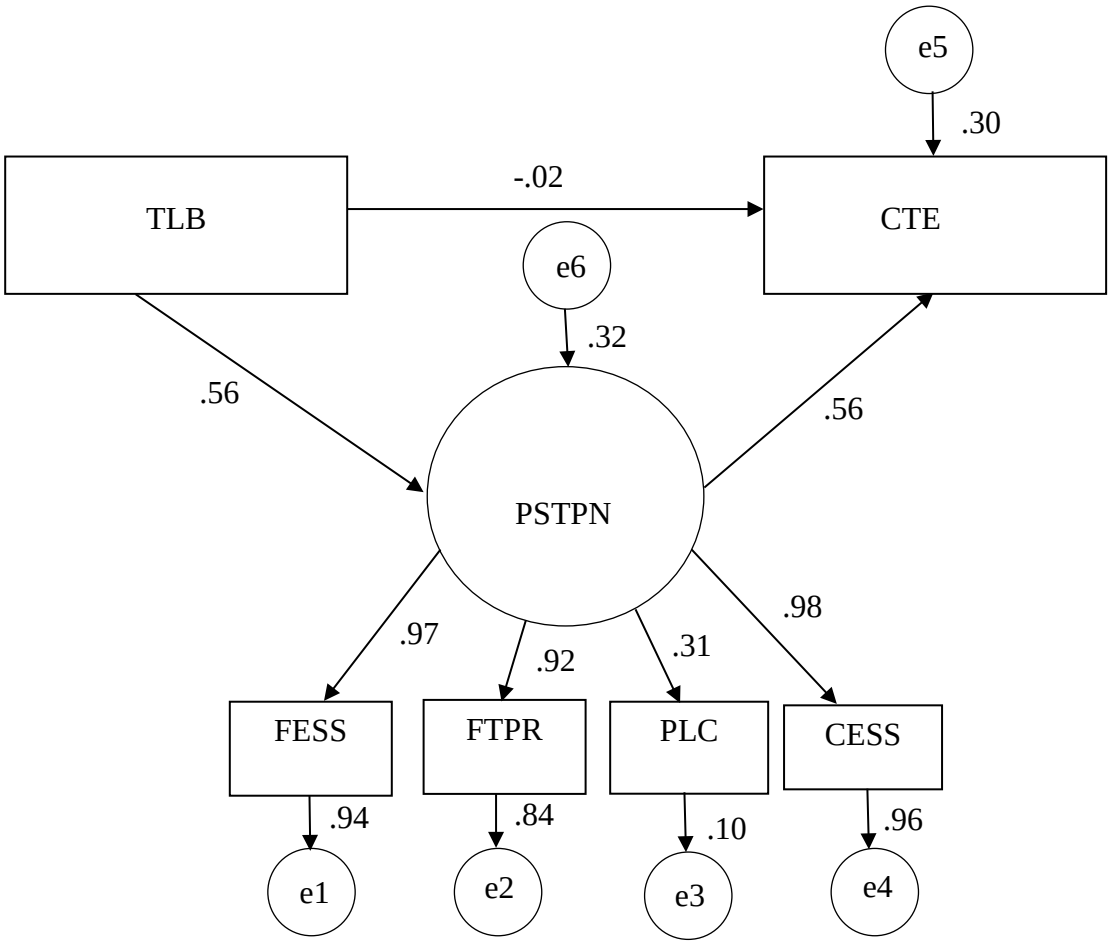

Figure 5.3. Structural Equation Model – Collective Teacher Efficacy (TLB = transformational leadership behavior, CTE = collective teacher efficacy, PSTPN = principal support of teacher psychological needs, FESS = formalized enabling school structures, FTPR = faculty trust in principal, PLC = professional learning community performance, CESS = centralized enabling school structures)

When examining the model fit statistics, the Root Mean Square Error of Approximation is .154 which is greater than .05, indicating that the model is not a good fit (MacCallum, Browne, & Sugawara, 1996). Additionally, the Comparative Fit Index

of .961 is slightly lower than the usual measure of .99. Comparative Fit Index ranges from 0 to 1 with high values indicating a good fit. Schermelleh-Engel et al. (2003) argue that, "a CFI value of 0.97 is representative of a good fit while values higher than 0.95 may be interpreted as an acceptable fit" (p. 20). Using Schermelleh-Engel et al.'s (2003) values, this model has an acceptable fit. As it would be nearly impossible to pin-point the reason(s) for the less than optimal fit statistics, it was decided to run some post hoc analysis to try to bring additional clarity to the results.

Post Hoc Analysis

In the confirmatory factor analysis examining the relative contributions of observed variables to the latent variable, principal support of teacher psychological needs, the standardized regression weight for the relationship between professional learning community performance and principal support for teacher psychological needs was low (.30) (Figure 5.1). As the researcher made the decision to continue to include professional learning community performance in all further analysis, this weak relationship may have depressed fit indicators in the structural equation model. Unimpressive fit statistics led the researcher to complete a post hoc analysis to try to clarify the results.

The purpose of the post hoc analysis was to determine if the predictors of these two facets of teacher motivation, organizational citizenship behavior and collective teacher efficacy, are in fact different, rather than the same, as theorized in the original models. The same mediating structure was proposed in both models (Figures 3.1 and 3.2), and from the structural equation modeling results we can see that one relationship

appears mediated (Figure 5.3) while the other was not (Figure 5.2). The researcher took the position that a stepwise regression of all of the components of principal support for teacher psychological needs might help explain variation in both collective teacher efficacy and organizational citizenship behavior.

In the post hoc regression, enabling school structures was included in the stepwise regression as a single variable rather than as in its two discrete dimensions, centralized and formalized enabling school structures. The analysis done with the stepwise regression results did not require data for both centralized and formalized enabling school structures individually. Gathering data for enabling school structures as a single variable was sufficient to provide adequate information for the post hoc analysis.

Stepwise regression analyzes the zero order relationship with each of these variables as well as different models with these variables combined. The computer software (SPSS) is designed to enter the strongest variable first followed by the next strongest and so on. Any variable that explains no unique variance is excluded from the model. Stepwise regression can work going forward, adding one variable at a time; or backward, removing one variable at a time (Nau, 2018). This research added all variables and allowed the computer to eliminate those variables having no strong relationship.

Table 5.1

Regression Results for Organizational Citizenship Behavior Regressed on Transformational Leadership Behavior, Professional Learning Community Performance, Faculty Trust in Principal, and Enabling School Structures

	Model 1		Model 2	
Variable Name	**β**	**Sig.**	**β**	**Sig.**
Transformational Leadership Behaviors	.48	$p < .01$	.15	$p < .05$
Professional Learning Community Performance	—	—	.77	$p < .01$
Faculty Trust in Principal	—	—	excluded	
Enabling School Structures	—	—	excluded	
	$R^2 = .23$	$p < .01$	$R^2 = .70$	$p < .01$

The first multiple regression used organizational citizenship behavior as the dependent variable (Table 5.3). There was a positive relationship between transformational leadership behavior and organizational citizenship behavior in this regression (β=.48). When transformational leadership behavior, enabling school structures, faculty trust in the principal, and professional learning community performance were entered; faculty trust in the principal and enabling school structures did not meet inclusion criteria leaving professional learning community performance (β=.77) as the only variable with a strong relationship to organizational citizenship behavior. The effect of transformational leadership behavior on organizational citizenship behavior was substantially reduced (β=.15) when professional learning community performance was added to the second model suggesting a partial mediation. Results from this multiple regression suggest that professional learning community performance plays an important role in the formation of organizational citizenship behaviors.

Table 5.2

Regression Results for Collective Teacher Efficacy Regressed on Transformational Leadership Behavior, Enabling School Structures, Faculty Trust in Principal, and Professional Learning Community Performance

	Model 1		Model 2	
Variable Name	**β**	**Sig.**	**β**	**Sig.**
Transformational Leadership Behaviors	.29	$p < .05$	excluded	
Professional Learning Community Performance	—	—	.23	$p < .05$
Faculty Trust in Principal	—	—	excluded	
Enabling School Structures	—	—	.48	$p < .01$
	$R^2 = .07$	NS	$R^2 = .33$	$p < .01$

The second multiple regression used collective teacher efficacy as the dependent variable (Table 5.4). There was a small but positive relationship between transformational leadership behavior and collective teacher efficacy (β=.29). When all of the observed variables hypothesized to compose principal support for teacher psychological needs were entered, transformational leadership behavior and faculty trust in the principal failed to meet inclusion criteria leaving professional learning community performance (β=.23) and enabling school structures (β=.48) as the strongest predictors of collective teacher efficacy.

The effect of transformational leadership behaviors on collective teacher efficacy was so substantially reduced when all of the dependent variables were added it was excluded from model two (Table 5.4). The exclusion suggests that the effects of transformational leadership behavior that are found in model one is redundantly measured in enabling school structures and professional learning performance in model two. As the effect of those two dependent variables (ESS and PLC) are stronger in model two, the computer model assigns that variance to enabling school structures. The

effects of transformational leadership have not disappeared; they manifest themselves in how hierarchical leadership is acted out by the principal as perceived by teachers on a scale of enabling to hindering. This is an indicator of full mediation.

When using transformational leadership behavior, enabling school structures, faculty trust in principal, and professional learning community performance in a multiple regression predicting organizational citizenship behavior; only professional learning community performance turns out to be a significant predictor of organizational citizenship behavior. If we enter that same set of variables into a multiple regression predicting collective teacher efficacy, professional learning community performance and enabling school structures are predictors. The post hoc analysis suggests that the mediating structure for these two facets of teacher motivation appears to be different. Although both collective teacher efficacy and organizational citizenship behavior are predicted by transformational leadership behavior, the mediation paths are different for each. Suggesting needed changes to the originally hypothesized models.

In summary, although the original structural equation models did not have adequate fit statistics, the post hoc analysis supports the idea that there is a relationship between transformational leadership behaviors and measures of teacher motivation such as organizational citizenship behavior and collective teacher efficacy. Additionally, the post hoc analysis indicates that variables related to principal support of teacher psychological needs such as professional learning community performance and enabling school structures play a mediating role in these relationships between transformational leadership behaviors and indicators of teacher motivation. The post

hoc analysis suggests that there is a divergence here of phenomena. While there was a legitimate reason to choose collective teacher efficacy and organizational citizenship behavior as outcomes of teacher motivation; the predictive structures of these variables appear not to be identical.

Chapter 6: Discussion

Increased mandates for measureable accountability, a political climate that demands improvement, and media claims that public schools are failing have created a perfect storm in which teacher morale and motivation have been negatively affected. With budgets continuously shrinking, schools are not able to offer teachers extrinsic rewards to stay in the profession. Yildez and Simsek (2016) argue that, "leadership is a critical concept for organizations because of its effect on employee attitudes and actions as well as employee emotions and opinions" (p. 59). Throughout this research, the author has argued that principals and their behavior play an important role in supporting the psychological needs of teachers positively to affect indicators of teacher motivation. This research was designed to gather and examine empirical evidence that principals are able to create conditions through transformational leadership behaviors that support teacher psychological needs.

Nuguni et al. (2006) found that, "there is a considerable amount of evidence of the effects of transformational leadership on job satisfaction, organizational commitment, and organizational citizenship behavior in business, military, health, and service organizations" (p. 146). However, the effect of principal transformational leadership behaviors on the psychological needs of teachers and the resulting effect on teacher motivation has not been well examined empirically. Bass (1999) pointed out that there is a poor understanding of the processes by which transformational leaders are effective. This research examined transformational leadership through the lens of self-determination theory using basic psychological needs theory to create a possible

explanation of how principal transformational leadership behaviors affect teacher motivation.

Implications for Practice

Transformational leadership is a somewhat abstract conceptualization of leadership, rarely fully operationalized on the ground, which provides leaders with little in the way of how it is enacted. This research suggests that principal support of teacher psychological needs appears to mediate the relationship of transformational leadership on collective teacher efficacy, but it has a different, less direct relationship with organizational citizenship behavior. These findings make theoretical sense and also provide more grounded information about the behavior of principals that might motivate teachers in the pursuit of organizational goals or contribute to beliefs about efficacious practice.

If the goal of the principal is to get teachers working together and get them more committed to the school so that they are energized in their work and the performance of tasks that are above the requirements of the job, then perhaps the way to do that is through creating strong professional learning communities. Professional learning communities are defined as, "educators committed to working collaboratively in ongoing processes of collective inquiry and action research to achieve better results for the students they serve" (DuFour, DuFour, & Eaker, 2008). They are one method that principals use to provide job embedded learning experiences for teachers to help improve their competence and increase student achievement. It makes logical sense that professional learning communities would inspire teachers to display organizational

citizenship behaviors or go beyond their basic job duties, as professional learning communities are designed to create collaborative teams in which teachers work to achieve common goals. One purpose of these collaborative teams is to make teachers mutually accountable for the outcomes, which could explain the potential for professional learning communities to serve as a motivating factor for teachers who could feel accountable to their peers for their performance.

Multiple regression results from this research suggest that transformational leadership behaviors appear to be a strong predictor of organizational citizenship behavior. These results also suggest that the effect of transformational leadership behavior on organizational citizenship behavior is substantially reduced when professional learning community performance is added. In fact, the relationship between transformational leadership behavior and organizational citizenship behavior essentially disappears. This seems reasonable considering professional learning communities are designed to foster collective responsibility. Teachers in strong professional learning communities do not see school improvement solely as the responsibility of the principal, but collectively feel responsible (Vanblaere & Devos, 2013). This sense of collective responsibility is consistent with teacher organizational citizenship behaviors in which they might not engage without a strong professional learning community. In order to build a school community in which professional educators go out of their way to perform duties above and beyond the scope of their jobs, it seems to require more than transformational leadership behaviors; it seems to require principal support for professional learning communities.

The relationship found between enabling school structures and collective teacher efficacy is also logical when you consider that, "structures can either hinder or enable the effective operation of schools" (Sinden, Hoy, & Sweetland, 2004). With respect to the motivation and health of the teaching corps, such as collective teacher efficacy, it appears that the types of structures the principal puts in place may in some instances be more important than the support for psychological needs (Table 5.4). These relationships hold together when you think about collective teacher efficacy not only as an issue of competence, but also as an issue of autonomy. A school environment where teachers feel controlled or where structures prevent them from being able to adequately perform their jobs diminish feelings that the teaching staff can make a difference in student learning (Hoy & Sweetland, 2001; Hoy & Miskell, 2001). Competence without autonomy is not going to produce in teachers, as individuals or collectively, efficacy beliefs. Principals who are able to create enabling school structures that, "guide behavior and clarify responsibility, reduce stress and enable individuals to feel and be more effective" (Hoy & Sweetland, 2001, p. 297).

Implications for Research

This research began in an attempt to gain a better understanding of the role of the principal in creating an environment that is motivating and stimulating to teachers. Although there was a large body of research indicating that transformational leadership resulted in increased motivation for teachers (Gagné & Deci, 2005; Sheldon et al., 2003; Geijsel et al., 2003; Leithwood & Jantzi, 2005; Eres, 2011; Thoonen et al., 2011; Eyal & Roth, 2011; Kurt et al., 2012; Northouse, 2012; and Barnett & McCormick, 2003),

there was an absence of explanatory writing on the mechanics of how transformational leadership was motivating. This research proposed theoretical models (Figures 3.1 and 3.2) to create a link between transformational leadership behaviors and Self-Determination Theory (Ryan and Deci, 2000) hypothesizing that by meeting the psychological needs of teachers, principal engagement in transformational leadership behaviors would result in increased indicators of teacher motivation.

Using a theoretical scaffolding to connect principal support of teacher psychological needs (Figures 3.1 and 3.2) to the basic psychological needs of autonomy, competence, and relatedness, this research began building the argument for examining the issue through the lens of Self-Determination Theory (Ryan and Deci, 2000). This Self-Determination Theory model developed into the hypothesis that if the basic psychological needs of teachers are being met and transformational leadership behaviors are the mechanism through which this is happening, then transformational leadership behaviors result in increased teacher motivation by meeting the basic psychological needs of teachers. Based on the literature studied and the theory chosen, it was reasonable to make this argument, establish these hypotheses, and test them.

Principal understanding of specific behaviors that address the psychological needs of teachers should theoretically help them enhance teacher motivation (Geijsel, Sleegers, Leithwood, & Jantzi, 2003; Leithwood & Jantzi, 2005; Eres, 2011; Barnett & McCormick, 2002; Aas & Brandmo, 2016; Eliophotou-Menon & Ioannou, 2016). However, there is clearly more to the issue of teacher motivation than is addressed in this research. There are many paths through which teacher motivation may be influenced and it is reasonable to believe that many of these paths are things that are not

easily controlled by the principal. This research gives nuance to the theoretical discussion in that it shows that while there is a relationship between transformational leadership behavior and collective teacher efficacy that appear to be mediated by principal support for teacher psychological needs; the proposed theoretical model (Figures 3.2) shows only a portion of the variance in teacher motivation. The role of the principal in teacher motivation is nuanced and complex. There is not only one way to produce outcomes of motivation in the teaching corps just as there is not one way to tell principals how to be successful in terms of creating a motivating environment. However, the findings from this study show that the conceptualization of teacher motivation has to be multi-faceted; there are multiple paths, both research and practical, to enhance the motivation of teachers. The originally proposed theoretical models (Figures 3.1 and 3.2) and their proposed indicators of teacher motivation, organizational citizenship behavior and collective teacher efficacy, are only two of many possible ways that principals could seek to motivate the teaching corps.

Findings from this research do suggest that principal behavior and actions play a role in the motivation of teachers. This research demonstrates that for principals to shape parts of the environment to help increase collective teacher efficacy requires that in addition to transformational leadership behaviors, principals must also address the psychological needs of teachers. The traditional parts of transformational leadership such as establishing a vision, offering individualized support, and creating a productive school culture (Leithwood & Jantzi, 2000) are not enough to increase feelings of efficacy among the teaching staff if these actions do not also have a direct, positive effect on teacher need for autonomy, competence, and relatedness. In order to build a

school community in which the professional educators feel like they can collectively make a difference, it seems to require more than transformational leadership. It seems to require that the principal be seen as someone who in fact supports the autonomy, relatedness, and competence of teachers.

This research suggests that principal support for teacher psychological needs appears to mediate the effects of transformational leadership behaviors on collective teacher efficacy (Figure 5.3). When principals practice certain behaviors such as creating enabling school structures, developing professional learning communities, and creating trusting relationships with their staff they are not only practicing the transformational leadership behaviors of encouraging collaboration, creating culture, and forming relationships (Leithwood & Sun, 2012); but also fulfilling the basic psychological needs of autonomy competence and relatedness through these actions. This link between transformational leadership behaviors, principal support of teacher psychological needs, and teacher motivation (collective teacher efficacy) supports the claim that the effect of principal transformational leadership on collective teacher efficacy are mediated by principal support for teacher psychological needs.

With respect to other features that speak to the motivation and health of the teaching corps such as organizational citizenship behavior, this research indicates that neither transformational leadership nor principal support for teacher psychological needs are the most important factors. The proposed theoretical model (Figure 5.2) indicates that principal support for teacher psychological needs does not mediate the relationship between transformational leadership behavior and organizational citizenship behavior. When it comes to organizational citizenship behavior, neither

Self-Determination Theory nor Basic Needs Theory (Ryan and Deci, 2000) appear to help us gain an understanding of this issue. It seems that organizational citizenship behavior is more dependent on principal support for professional learning communities than for principal support of teacher psychological needs or transformational leadership behaviors (Table 5.3). Although this finding does not support the originally proposed hypothesis, it is still valuable to principals as this research suggests that creating and supporting quality professional learning communities appears to have a positive effect on teacher organizational citizenship behaviors.

The failed mediation of the proposed model (Figure 5.2) clearly indicates that there are other variables that play a more important role in the formation of organizational citizenship behavior. Additionally, the strong relationship between professional learning community performance and organizational citizenship behavior (Table 5.3) combined with the weak relationship of professional learning community performance as a part of principal support for teacher psychological needs (Figure 5.1) lend further evidence as to why there is poor fit in the proposed model (Figure 5.2). This research did not support the hypothesis that the effect of principal transformational leadership on organizational citizenship behavior are mediated by principal support for teacher psychological needs.

This research provides some direction for future researchers in that the poor fit statistics of the theoretical models (Figures 5.2 and 5.3) point to omitted variables or additional pathways that require further investigation. The low factor score for professional learning communities as an observed variable for principal support for teacher psychological needs suggests that a better fit could be had if that variable had

been removed from the model (Figure 5.1). As no mediation was found in the proposed theoretical model (Figure 5.2), the search continues to better understand what motivates teachers to exhibit organizational citizenship behaviors. Finally, this research suggests that teacher motivation is complex and nuanced. Future researchers should consider this complexity and look to examine more than collective teacher efficacy and organizational citizenship behaviors as indicators of teacher motivation.

Summary

This study adds to the literature on transformational leadership behaviors and indicators of teacher motivation by examining it through the lens of Self-Determination Theory. This research supported the claim that principal support for the psychological needs of teachers mediates the relationship between transformational leadership behaviors and collective teacher efficacy. This research adds to the argument that principal involvement in creating a healthy psychological environment that addresses teacher psychological needs contributes significantly to collective teacher efficacy, which is at the heart of school effectiveness.

This research further adds to the literature by providing evidence that professional learning community performance is a key piece in establishing organizational citizenship behaviors within the teaching corps. High quality professional learning communities are designed to provide collaborative learning opportunities for teachers to strengthen their pedagogical and content knowledge (DuFour, DuFour, and Eaker, 2008; DuFour, 2004; Ermeling, 2010). By supporting teachers need for competence through the creation of professional learning

communities, or perhaps other forms of institutionalized teacher collaboration, principals are creating a culture in which school improvement is seen as a collective responsibility (Vanblaere & Devos, 2013).

Additionally, this research supports the idea that the creation of enabling school structures is an important part of creating an environment in which collective teacher efficacy can grow. This provides additional information to principals on ways that their behavior can influence collective teacher efficacy. Principals are able to create autonomy supportive school structures when they deemphasize external controls based on rewards and threats, and instead trust teachers to think, problem-solve, and make decisions independently (Ryan and Deci, 2000). By creating structures that are seen as enabling rather than hindering, principals create an environment in which teachers can feel more efficacious.

This research helps us to move forward knowing that principal creation of psychologically supportive school environments for teachers is important in the formation of collective teacher efficacy, which is truly at the heart of school effectiveness. Additionally, the creation of effective professional learning communities and the implementation of enabling school structures also have positive effects on organizational citizenship and collective teacher efficacy respectively. Research has shown that both organizational citizenship behaviors and collective teacher efficacy have numerous positive outcomes for the health and function of schools (Goddard et al., 2000; Angelle and Teague, 2013; Tschannan-Moran and Hoy, 2001; Jerald, 2007; Bandura, 2001; Brinson and Steiner, 2007; Leithwood and Jantzi, 2006). The actions and behaviors of principals are important; their choices, decisions, and actions have far-

reaching implications for the overall health and well-being of the teaching corps. The implications of results of this study for research and practice are best summed up by Alexander and Fritts (2004) who state that, “In any school environment, the administration holds a great deal of power over teachers and can deeply affect their sense of motivation and commitment” (p. 344). Transformational leadership provide a scaffolding for principals to be more purposeful in their behaviors engaging in practices that can result in positive outcomes such as increased organizational citizenship behaviors and collective teacher efficacy. Using transformational leadership behaviors principals become more supportive of teacher psychological needs and as a result provide support for teacher competence, relatedness, and autonomy.

References

Aas, M. & Brandmo, C. (2016). Revisiting instructional and transformational leadership: The contemporary Norwegian context of school leadership. *Journal of Educational Administration*, 54(1), 92-110.

Adams, C.M. & Forsyth, P.B. (2014). Self-regulatory climate: A positive attribute of public schools.

Adams, C.M. (2013). Collective trust: a social indicator of instructional capacity. *Journal of Educational Administration*, 51(3), 363-382.

Adler, P.S. & Borys, B. (1996). Two types of bureaucracy: Enabling and coercive. *Administrative Science Quarterly*, 41(1), 61-89.

Ahston, P. (1985). Motivation and the teacher's sense of efficacy. *Research on Motivation in Education*, 141-171.

Angelle, P. & Teague, G.M. (2013). Teacher leadership and collective efficacy: teacher perceptions in three US school districts. *Journal of Educational Administration*, 52(6), 738-753.

Avolio, B.J. (1999). *Full leadership development: Building the vital forces in organizations*. Newbury Park, CA: Sage.

Avolio, B.J., Walumba, F.O., & Weber, T.J. (2009). Leadership: Current theories, research, and future directions. *Annual Review of Psychology*, 60, 421-229.

Aydin, A., Sarier, Y., & Uysal, S. (2013). The effect of school principal's leadership styles on teachers' organizational commitment and job satisfaction. *Educational science: Theory and practice*, 13(2), 806-811.

Bandura, A. (2001). Social cognitive theory: An agentive perspective. *Annual Review of Psychology*, 52, 1-26.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.

Barnett, K. & McCormick, J. (2003). Vision, relationships and teacher motivation: a case study. *Journal of Educational Administration*, 41(1), 55-73.

Barnett, K., McCormick, J., & Conners, R. (2001). Transformational leadership in schools – Panacea, placebo, or problem? *Journal of Educational Administration*, 39(1), 24-46.

Baron, R.M. and Kenny, D.A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.

Bartholomew, K.J., Ntoumanis, N., Cuevas, R., and Lonsdale, C. (2014). Job pressure and ill-health in physical education teachers: The mediating role of psychological need thwarting. *Teaching and Teacher Education*, 37, 101-107.

Bass, B.M. (1985). *Leadership and performance beyond expectation*. New York: Free Press.

Bass, B.M. & Avolio, B.J. (1994). *Improving organizational effectiveness through transformational leadership*. Thousand Oaks, CA: Sage.

Bennis, W. & Nanus, B. (1985). *Leaders: The strategies for taking charge*. New York, NY: Harper and Row.

Blumberg, A. (1980). *Supervisors and Teachers: A private cold war* (2nd Ed.). Berkley: McCutchan Publishing Company.

Boal, K.B. & Bryson, J.M. (1988). Charismatic leadership: A phenomenological and structural approach. In J.G. Hunt, H.P. Dachler, & C.A. Schriesheim (Eds.), *Emerging leadership vistas* (pp. 11-28). New York: Lexington.

Bono, J. E. & Judge, T.A. (2003). Self-concordance at work: Toward understanding the motivational effects of transformational leaders. *Academy of Management Journal*, 46(5), 554-571.

Bowen, N.K. & Guo, S. (2011). *Pocket Guide to Social Work Research Methods*. Oxford, NY: Oxford University Press.

Brien, M., Haas, C. & Savoie, A. (2012). Psychological health as a mediator between need satisfaction at work and teachers' self-perceptions of performance. *Canadian Journal of Behavioral Science*, 44(4), 288-299.

Brinson, D. & Steiner, L. (2007). Building Collective Efficacy: How leaders inspire teachers to achieve. Issue Brief: The Center for Comprehensive School Reform and Improvement.

Bryk, A.S. & Schneider, B. (2002). *Trust in schools: A core resource for improvement*. New York: Russell Sage.

Bryman, A. (1992). *Charisma and leadership in organizations*. London; Newberry Park: Sage Publications.

Burns, J.M. (1978). *Leadership*. New York, NY: Harper & Row.

Burton, K.D., Lydon, J.E., D'Alessandro, D.U., & Koestner, R. (2006). The differential effects of intrinsic and identified motivation on well-being and performance: Prospective, experimental, and implicit approaches to self-determination theory. *Journal of Personality and Social Psychology*, 91(4), 750-762.

Collie, R.J., Shapka, J.D., & Perry, N.E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology*, 104(4), 1189-1204.

Conger, J.A. & Kanungo, R.N. (1998). *Charismatic leadership in organizations*. Thousand Oaks, CA: Sage.

Deci, E.L., Connell, J.P., and Ryan, R.M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, 74, 580-590.

Deci, E.L. (2009). Large-scale reform as viewed from the self-determination theory perspective. *Theory and Research in Education*, 7(2), 244-253.

Deci, E.L. & Ryan, R.M. (2000). The what and why of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.

Deluga, R.J. & Souza, J. (1991). The effects of transformational and transactional leadership style on the influencing behavior of subordinate police officers. *Journal of Occupational Psychology*, 64, 49-55.

Denney, S.C. & Daviso, A.W. (2012). Self-determination: A critical component of education. *American Secondary Education*, 40(2), 43-51.

DiPaola, M. F. & Tschannen-Moran, M. (2001). Organizational citizenship behavior in schools and its relationship to school climate. *Journal of School Leadership*, 11, 424-447.

DiPaola, M.F., Tarter, & Hoy, W.K. (2005). Measuring organizational citizenship of schools: The OCB scale. In W.K. Hoy & C. Miskel (Eds.), *Educational leadership and reform* (pp. 319-341). Greenwich, CT: Information Age Publishing.

Donohoo, J. (2018). Collective teacher efficacy research: Productive patterns of behavior and other positive consequences. *Journal of Educational Change*, 19, 323-345.

Dorman, J.P. (2003). Relationship between school and classroom environment and teacher burnout: A LISREL analysis. *Social Psychology of Education*, 6, 107-127.

DuFour, R., DuFour, R., & Eaker, R. (2008). Revisiting Professional Learning Communities at Work: New Insights for Improving Schools. Bloomington, IN: Solution Tree Press.

DuFour, R. (2004). What is a "Professional Learning Community"? Educational Leadership, 61(8), 6-11.

Eliophotou-Menon, M. & Ioannou, A. (2016). The link between transformational leadership and teachers' job satisfaction, commitment, motivation to learn, and trust in the leader. *Academy of Educational Leadership Journal*, 20(3), 12-22.

Eres, F. (2011). Relationship between teacher motivation and transformational leadership characteristics of school principals. *International Journal of Education*, 3(2), E4.

Ermeling, B.A. (2010). Tracing the effects of teacher inquiry on classroom practice. *Teaching and Teacher Education*, 26, 377-388.

Eyal, O. & Roth, G. (2011). Principals' leadership and teachers' motivation: Self-determination theory analysis. *Journal of Educational Administration*, 49(3), 256-275.

Fernet, C., Guay, F., Senécal, C., & Austin, S. (2012). Predicting intraindividual changes in teacher burnout: The role of perceived school environment and motivational factors. *Teaching and Teacher Education*, 28, 514-525.

Forsyth, P.B. & Adams, C.M. (2014). "Organizational predictability, the school principal, and achievement", in VanMaele, D., Forsyth, P.B., & VanHoutte, M. (Eds), *Trust Relationships and School Life: The Influence of Trust on Learning, Teaching, Leading, and Bridging*, Springer, New York, NY.

Fullan, M. (2002). The latest ideas on school reform. Leading and Learning for the 21st Century. 1(3). Retrieved Jan 28, 2016 from www.leading-learning.co.nz/newsletters/vol01-no03-2002.html.

Gagné, M. & Deci, E.L. (2005). Self-Determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331-362.

Geijsel, F., Sleegers, P., Leithwood, K., & Jantzi, D. (2003). Transformational leadership effects on teachers' commitment and effort toward school reform, *Journal of Educational Administration*, 41(3), 228-256.

Gibson, S. & Dembo, M.H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 74(4), 569-582.

Gray, J., Kruse, S., & Tarter, J.C. (2016). Enabling school structures, collegial trust and academic emphasis: Antecedents of professional learning communities. *Educational Management Administration*, 44(6), 875-891.

Goddard, R.D., Hoy, W.K. & Hoy, A.W. (2000). Collective Teacher Efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal*, 37(2), 479-507.

Gozukara, I. & Simsek, O.F. (2015). Linking Transformational Leadership to Wok Engagement and the Mediator Effect of Job Autonomy: A study in a Turkish private non-profit university, *Procedia – Social and Behavioral Science*s, 195, 963-971.

Handford, V., Leithwood, K. (2013). Why teachers trust school leaders. *Journal of Educational Administration*, 51(2), 194-212.

Hauserman, C.P. & Stick, S. L. (2013). The Leadership Teachers Want from Principals: Transformational. *Canadian Journal of Education*, 36(3), 184-203.

Holstad, T.J., Korek, S., Rigotti, T. & Mohr, G. (2014). The relation between transformational leadership and follower emotional strain: The moderating role of professional ambition. *Leadership*, 10(3), 269-288.

Hoy, A.W. (2008). What motivates teachers? Important work on a complex question. *Learning and Instruction*, 18, 492-498.

Hoy, W.K. (2003). An analysis of enabling and mindful school structures: Some theoretical, research and practical considerations. *Journal of Educational Administration*, 41(1), 87-109.

Hoy, W.K. & Miskel, C.G. (2008). Educational Administration: Theory, Research, and Practice (8th Ed.). New York, NY: McGraw-Hill.

Hoy, W.K., Sweetland, S.R., & Smith, P.A. (2002). Toward an organizational model of achievement in high schools: The significance of collective efficacy. *Educational Administration Quarterly*, 38, 77- 93.

Hoy, W.K. & Sweetland, S.R. (2001). Designing better schools: The meaning and measure of enabling school structures. *Educational Administration Quarterly*, 37(3), 296-321.

Hoy, W.K. & Sweetland, S.R. (2004). An analysis of enabling school structure: Theoretical, empirical, and research considerations. *Journal of Educational Administration*, 42(4), 462-478.

Huei, T.Y., Mansor, N.N.A., & Tat, H.H. (2014). Role of OCB and demographic factors in the relationship of motivation and employee performance. *Intangible Capital*, 10(3), 425-447.

Iacobucci, D. (2008). *Mediation Analysis*. Thousand Oaks, CA: Sage Publications.

Jerald, C.D. (2007). Believing and Achieving. Issue Brief: The Center for Comprehensive School Reform and Improvement.

Jones, L. (2000). *Supervisory Beliefs and Behaviors Associated with Veteran Teacher Motivation* (doctoral dissertation). Retrieved from Share OK. (AA19962960).

Judge, T.A. & Piccolo, R.F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755-768.

Kark, R., Sharmir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of Applied Psychology*, 88(2), 246-255.

Koh, W.L, Steers, R.M., & Terborg, J.R. (1995). The effects of transformational leadership on teacher attitudes and student performance in Singapore. *Journal of Organizational Behavior*, 16(4), 319-333.

Korthagen, F.A.J. & Evelein, F.G. (2016). Relations between student teachers' basic needs fulfillment and their teaching behavior, *Teaching and Teacher Education*, 60, 234-244.

Kovjanic, S., Schuh, S.C., Jonas, K., Van Quaquebeke, N., & Van Dick, R. (2012). How do transformational leaders foster positive employee outcomes? A self-determination based analysis of employees' needs as mediating links. *Journal of Organizational Behavior*, 33, 1031-1052.

Kovjanic, S., Schuh, S.C., & Jonas, K. (2013). Transformational leadership and performance: An experimental investigation of the mediating effects of basic needs satisfaction and work engagement. *Journal of Organizational Psychology*, 86, 543-555.

Kurt, T., Duyar, I. & Çalik, T. (2011). Are we legitimate yet? *Journal of Management Development*, 31(1), 71-86.

Leithwood, K. (1992). The move toward transformational leadership. *Educational Leadership*, p. 8-12.

Leithwood, K. & Jantzi, D. (1999). The effects of transformational leadership on organizational conditions and student engagement with school. *Journal of Educational Administration*, 38(2), 112-129.

Leithwood, K., Harris, A., & Steinbach, R. (1999). Changing Leadership for Changing Times. Buckingham, UK: Open University Press.

Leithwood, K. & Jantzi, D. (2002). The effects of transformational leadership on teachers' commitment to change in Hong Kong. *Journal of Educational Administration*, 40(4), 368-389.

Leithwood, K. & Jantzi, D. (2006). Transformational school leadership for large-scale reform: Effects on students, teachers and their classroom practices. *School Effectiveness and School Improvement*, 17(2), 201-227.

Leithwood, K. & Jantzi, D. (2005). A review of transformational school leadership research 1996-2005. *Leadership and Policy in Schools*, 4, 177-199.

Leithwood, K. & Sun, J. (2012). The nature and effects of transformational school leadership: A meta-analytic review of unpublished research. *Educational Administration Quarterly*, 48(3), 387-423.

MacCallum, R.C., Browne, M.W., & Sugawara, H.W. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130-149.

Marks, H.M. & Printy, S.M. (2003). Principal leadership and school performance: An integration of transformational and instructional leadership. *Educational Administration Quarterly*, 39, 370-397. DOI: 10.1177/0013161X03253412

Menon, M. E. (2014). The relationship between transformational leadership, perceived leader effectiveness and teachers' job satisfaction. *Journal of Educational Administration*, 52(4), 509-528.

Mirza, M. & Redzuan, M. (2012). The relationship between principal's leadership styles and teacher's organizational trust and commitment. *Life Science Journal*, 9(3), 1356-1362.

Moolenaar, N.M, Daly, A.J., & Sleegars, P.J. (2010). Testing a conception of how school leadership influences student learning. *Educational Administration Quarterly*, 46(5), 623-670.

Nau, R. (2018). Stepwise and all-possible regressions. *Statistical forecasting: Notes on regression and time series analysis*. Retrieved from: https://people.duke.edu/~rnau/411home.htm

Nguni S., Sleegers, P.J., Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in the primary schools: The Tanzanian case. *School Effectiveness and School Improvement*, 17(2), 145-177.

Nielson, K. & Daniels, K. (2012). Does shared and differentiated transformational leadership predict followers' working conditions and well-being? *The Leadership Quarterly*, 23, 383-397.

Niemiec, C.P. & Ryan, R.M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination to educational practice. *Theory and Research in Education*, 7(2), 133-144.

Ninković, S.R. & Knežević Florić, O.C. (2018). Transformational school leadership and teacher self-efficacy as predictors of perceived collective teacher efficacy. *Educational Management Administration & Leadership*, 46(1), 49-64.

Northouse, P.G. (2007). Leadership: Theory and practice. California: Sage.

Northouse, P.G. (2012). Transformational Leadership. In L. Shaw (Ed.), *Leadership: Theory and Practice* (pp. 185-217). New York, NY: Sage.

Nguni, S., Sleegers, P., & Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement*, 17(2), 145-177.

Oklahoma Center for Education Policy. (2013). 2012-2013 School Health Indicators: The path to performance, quality, & capacity, Sample District Report. 1-38. Retrieved from: http://okedpolicy.org/wp-content/uploads/2014/05/Sample-District-Report.pdf

Oklahoma Center for Education Policy. (2014). 2014 School Health Indicators: The path to performance, quality, & capacity, Central High School, Tulsa Public Schools, 1-31.

Organ, D.W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington MA: Lexington Books.

Pelletier, L.G. & Sharp, E.C. (2009). Administrative pressures and teachers' interpersonal behavior in the classroom. *Theory and Research in Education*, 7, 174-183. doi: 10.1177/1477878509104322

Philbin, L. (1997). Transformational leadership and the secondary school principal. *Dissertation Abstracts International*, 58, 33-86.

Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly*, 1(2), 107-142.

Porter, L.W., Bigley, G.A., & Steers, R.M. (2003). Motivation and Work Behavior. New York: McGraw-Hill/Irwin.

Quraishi, U. & Aziz, F. (2018). An investigation of authentic leadership and teachers' organizational citizenship behavior in secondary schools of Pakistan. *Cogent Education*. doi: 10.1080/2331186X.2018.1437670

Reis, H.T., Sheldon, K.M., Gable, S.L., Roscoe, R., & Ryan, R. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin*, 26, 419-435.

Roth, G., Assor, A., Kanat-Maymon, & Kaplan, H. (2007). Autonomous motivation for teaching: How self-determined teaching may lead to self-determined learning. *Journal of Educational Psychology*, 99(4), 761-774.

Ross, J.A. & Gray, P. (2006). Transformational leadership and teacher commitment to organizational values: The mediating effects of collective teacher efficacy. *School Effectiveness and School Improvement*, 17(2), 176-199.

Rowold, J. & Scholtz, W. (2009). Transformational and transactional leadership and followers' chronic stress, Kravis leadership institute. *Leadership Review*, 9(2), 35-48.

Ryan, R.M. & Deci, E.L. (2002). Overview of Self-Determination Theory: An organismic dialectical perspective. In E.L. Deci and R.M. Ryan (Eds.), *Handbook of Self-Determination Research* (3-33). Rochester, NY: The University of Rochester Press.

Ryan, R.M. & Deci, E.L (2008). Self-determination theory and the role of basic psychological needs in personality and the organization of behavior. In O.P. John, R. W. Robbins, & L.A. Pervin (Eds.), *Handbook of personality: Theory and research* (654-678). New York, NY: Guildford Press.

Ryan, R.M. & Deci, E.L. (2017). Self-Determination Theory: Basic psychological needs in motivation, development, and wellness. New York, NY: The Guildford Press.

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, 8(2), 23-74

Schreiber, J.B., Nora, A., Stage, F.K., Barlow, E.A., & King, J. (2010). Reporting Structural Equation Modeling and Confirmatory Factor Analysis: A review. *The Journal of Educational Research*, 99(6), 323-338.

Schunk, D. H., Pintrich, P.R., & Meece, J.L. (2008). Motivation in Education (3rd Ed.). Upper Saddle River, NJ: Pearson Education.

Shamir, B., House, R.J., & Arthur, M.B. (1993). The motivational effects of charismatic leadership: a self-concept based theory. *Organizational Science*, 4(4), 577-594.

Sheldon, K.M., Elliott, A.J., Kim, Y., & Kasser, T. (2001). What's satisfying about satisfying events? Comparing ten candidate psychological needs. *Journal of Personality and Social Psychology*, 80, 152-165.

Sheldon, K.M., Turban, D.B., Brown, K.G., Barrick, M.R., & Judge, T.A. (1993). Applying self-determination theory to organizational research. *Research in Personnel and Human Resources Management*, 22, 357-393.

Simola, S.K., Barling, J., & Turner, N. (2010). Transformational leadership and leader moral orientation: Contrasting and ethic of justice and an ethic of care. *The Leadership Quarterly*, 21, 179-188.

Sinden, J.E., Hoy, W.K., & Sweetland, S.R. (2004). An analysis of enabling school structure: Theoretical, empirical, and research considerations. *Journal of Educational Administration*, 42(4), 462-478.

Snowden, E. & Gorton, R. (2002). *School leadership and administration*. Boston: McGraw Hill

Stewart, J. (2006). Transformational leadership: An evolving concept examine through the works of Burns, Bass, Avolio, and Leithwood. *Canadian Journal of Educational Administration and Policy*, 54, 2-29.

Sun, J. & Leithwood, K. (2012). Transformational school leadership effects on student achievement. *Leadership and Policy in Schools*, 11(4), 418-451.

Supovitz, J., Sirinides, P., & May, H. (2010). How principals and peers influence teaching and learning. *Educational Administrative Quarterly,* 46(31), 31-56.

Thoonen, E.E.J., Sleegers, P.J.C., Oort, F.J, Peetsma, T.T.D., & Geijsel, F.P. (2011). How to improve teaching practices: The role of teacher motivation, organizational factors, and leadership practices. *Educational Administration Quarterly*, 47(3), 496-536.

Tschannen-Moran, M. (2014). *Trust Matters: Leadership for Successful Schools*, 2nd ed., Jossey-Bass, San Fransisco, CA.

Tschannen-Moran, M. (2009). Fostering teacher professionalism in schools: The role of leadership orientation and trust. *Educational Administration Quarterly,* 45(2), 217-247.

Tschannen-Moran, M., Hoy, A.W., & Hoy, W. (1998). Teacher Efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202-248.

Tschannen-Moran, M. & Hoy, A.W. (1998). Trust in schools: A conceptual and empirical analysis. *Journal of Educational Administration*, 36, 334-352.

Tschannen-Moran, M. & Hoy, A.W. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.

Vanblaere, B. & Devos, G. (2016). Relating school leadership to perceived learning community characteristics: A multilevel analysis. *Teaching and Teacher Education*, 57, 26-38.

Vogt, W.P. (2007). Quantitative Research Methods for Professionals. Boston, MA: Pearson.

Walumba, F.O., Wang, P., Lawler, J.J. & Shi, K. (2004). The role of collective efficacy in the relations between transformational leadership and work outcomes. *Journal of Occupational and Organizational Psychology*, 77, 515-530.

Walumba, F.O., Avolio, B.J., & Zhu, W.C. (2008). How transformational leadership weaves its influence on individual job performance: The role of identification and efficacy beliefs. *redfs*, 61, 793-825.

Wu, J.H., Hoy, W.K., Hoy, A.W., & Tarter, C.J. (2012). Enabling school structure, collective responsibility, and a culture of academic optimism: Toward a robust model of school performance in Taiwan. *Journal of Educational Administration*, 51(2), 176-193.

Yildez, I.G. & Simsek, O.F. (2016). Different pathways from transformational leadership to job satisfaction: The competing mediator roles of trust and self-efficacy. *Non-profit Management and Leadership*, 27(1), 59-77.

Yukl, G. (1999). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *Leadership Quarterly*, 10(2), 285-305.