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Measurement of a New Construct

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*To my mother, Michele Suprunowicz.*

*While you passed before I was able to complete this dissertation, it was your endless encouragement that got me to this point. Your brave fight against cancer inspired me to attack my own goals and pushed me to finish this research.*

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## **Abstract**

As it stands, there are few measurement tools for leaders to use in assessing the degree to which they are supporting the growth of teacher leadership within their school, and those that do exist are based on varying, and sometimes conflicting, definitions of teacher leadership. Furthermore, principals also need to know whether their teacher leadership initiatives are supporting or thwarting teacher motivation. Using the theoretical framework of self-determination theory, this dissertation advances principal support for the development of teacher leadership (PSDTL) as a concept and tool to measure teacher perception of a principal's efforts to develop teacher leadership within a school. By surveying teachers in a large urban midwestern school district, PSDTL was conceptualized, designed, and tested as a new instrument intended to measure just such principal practice—the degree to which principals were perceived as supporting teacher leadership development via support for teachers' psychological needs as learners. PSDTL was found to have strong reliability and reasonable validity. Additionally, PSDTL was positively associated with a school's faculty trust in principal and collective teacher efficacy, suggesting PSDTL is related to the conditions of effective leadership and school improvement.

## **Chapter 1:**

### **Introduction**

Over the past few years, educators across the country have been making national headlines as they participated in walkouts and strikes to advocate for improved teaching conditions, increased pay, and more supportive union representation. Amid these national demonstrations, teachers have emerged as leaders and advocates for not only themselves but also their districts, schools, and students—just one of many forms of teacher leadership.

While the concepts and practices are broad, teacher leadership continues to be of importance to schools and school districts, appearing regularly in reform initiatives and administrative leadership development programs (Bryant et al., 2017). Key research groups such as Leading Educators (2015) and The Aspen Institute (2014) have suggested that to best support reform efforts, models for teacher leadership should specifically address three major areas: instructional capacity, school structure, and student culture. Unfortunately, this is not often what teachers see in schools. Schools and administrators do not prioritize leadership opportunities for teachers, but those opportunities are typically limited to sundry administrative tasks or school needs outside of the classroom. Additionally, professional development or coaching to support any sustained improvement rarely accompany these requests (Helterbran, 2010). With the expansion of their role, teachers may receive additional time and compensation, but this is not consistent and often dependent on connections and seniority. Increased teacher leadership is regularly presented as one of few advancement opportunities for a career that still offers a very limited career trajectory.

Teacher leader initiatives often result in more work for teachers with little benefit; adding additional responsibility without adjusting pay, providing acknowledgment, and/or time in

accordance with the new responsibilities—an issue that has been at the core of teacher demands in strikes and walkouts (Dyke & Bates, 2019; Karvelis, 2019). Scholars have been skeptical of the purpose of various distributed leadership models in schools; they suggest that many “teacher leadership” models are disguised as autonomous, collegial, and/or collaborative systems but are, in fact, highly exploitative of teachers’ labor (Crawford, 2012; Lumby, 2013). Scrutiny should be paid to how such models support the growth, effectiveness, agency, and self-determination of those being asked to do more (Ford & Youngs, 2018; Woods & Gronn, 2009). School reform initiatives often rely on teacher leadership to make up for shortfalls in funding and support, and this leads to more work for teachers often under the increased scrutiny of high-stakes evaluation systems and accountability measures. Meanwhile, education has been defunded annually, resulting in limited funding for raises accompanied by increased teacher demands in the classroom such as high class sizes and heavily prescribed curricula (Dyke & Bates, 2019).

Despite these issues, teachers across the nation have great capacity and opportunity to be leaders within their school sites, and that leadership has the capacity to support school reform. To do this effectively, however, teachers need to be supported in their leadership development. While Federal, State, and district policy and funding are often out of a principal’s control, their personal interactions with teachers and the systems and structures they put in place to support teacher leadership at their school sites are very much so. Providing this support requires school leaders to reflect on their own practice and ensure they are developing future leaders within their building that feel supported rather than controlled (Bryant et al., 2017).

Beyond supporting school reform initiatives, teacher leadership models also have the capacity to increase teacher motivation (Sowell, 2018). As extrinsic incentives like salary raises are sparse, it is important for organizations to develop structures to build teacher satisfaction and

efficacy. Satisfying teachers' psychological needs activates existing intrinsic motivation and is associated with outcomes such as decreased teacher intent to leave and/or turnover, workplace satisfaction, decreased burnout, and increased student achievement (Ford et al., 2019; Ford & Ware, 2018). From a social-emotional perspective, the hard work of building effective teacher leader models can implicitly affirm the talents, efforts, and knowledge of teachers and allow them to share in the ownership of the organizational vision of the school.

### **Research Problem**

The term “teacher leadership” has been around for decades and been subject to significant discussion, research, and policy. Accordingly, the term teacher leadership has been understood and defined in many different ways throughout literature in order to support various shifts in focus and purpose over time (Bagley & Margolis, 2018; Harris, 2005; Little, 2003). Despite regular conversation about teacher leadership, there are still varying definitions, and no single model has emerged as overwhelmingly successful for schools or teachers (Little, 2003). The concept of teacher leadership can range from informal or low-stakes structures such as grade level team leadership to higher responsibility structures such as senior team lead in an autonomous school model (Angell & DeHart, 2010; Riel & Baker, 2008; Silva, Gimbert, & Nolan, 2000; Wallace et al., 1999). Building on distributed and shared leadership models, teacher leadership, for the purposes of this study, is defined as: A model which empowers successful classroom teachers, through collaboration, shared knowledge, and collective goals, to lead alongside principals in building instructional capacity, adult and student culture, and teamwork among staff (Leading Educators, 2014; Nappi, 2014). Without removing them from the classroom, principals are charged with creating systems that support teacher leaders by clearly

defining their roles, providing them with proper time and resources, and developing leadership knowledge and skills (Hairon & Goh, 2015; The Aspen Institute, 2014).

Most current teacher leader models have arisen from a school district's need to retain top performing teachers as well as to compensate for the absence of support for reforms and other initiatives which have been thrust on schools from either district, state, or federal sources (Little, 2003). Teachers have been placed under stress due to low pay, high stakes accountability measures, and limited supports for their increased responsibilities. With increased loads on teachers and administrators, it is challenging to build efficacy from within the structures that currently exist (Little, 2003). As districts increase the expectations they have for instructional capacity, school structures, and student culture, they need to also be willing to increase time and resources for teachers as well as set a clear definition for the role in their school. Addressing these concerns would go a long way to supporting, not thwarting, teachers' psychological needs as learners (Ford & Ware, 2018).

As teacher leadership models are developed and implemented, it stands to reason that principals will also need a mechanism with which to assess, analyze, and track their progress towards supporting the growth of teacher leadership within their school. However, as it stands, there are few measurement tools for leaders to use in assessing the degree to which they are accomplishing these tasks, and those that do exist are based on varying, and sometimes conflicting, definitions of teacher leadership (Angelle & DeHart, 2016; Flood & Angelle, 2017; Hairon & Goh, 2015; Parlar et al. 2017).

### **Purpose of the Study**

Through the lens of Self-determination Theory (SDT), the purpose of this study is to conceptualize and develop a new measure, Principal Support for the Development of Teacher

Leaders (PSDTL). PSDTL is defined as a set of school-wide organizational and normative conditions, emerging through leader actions, that support the psychological needs of teachers necessary for the development of their leadership capacities within the school. PSDTL as a measure is an embodiment of the idea that teacher leadership activities and goals need to be intentionally planned, supported, and measured by school principals. That intentional development will, in-turn, support the activation of existing intrinsic motivation of teachers, hopefully helping to spur overall improvement of social and academic conditions within the school. The study is framed by the following research questions:

1. What empirical evidence is there to support the validity and reliability of the PSDTL concept and measure?
2. If valid, in what ways is PSDTL related to other conditions of effective leadership and school improvement, such as faculty trust in the principal, enabling school structure, and/or collective teacher efficacy?

### ***Potential Contributions***

There is a clear need for more intentional studies focused on how school leaders can support the development of teachers' leadership skills in schools and districts. The continued appearance of teacher leadership models in various reform initiatives as well as continued lack of clear evidence of the effectiveness of these models suggests the need for continued research. Additionally, future discourse needs to center on what teachers need as professionals, learners, and leaders. Although responsibility for this shift is and should be shared, principals have the ability to directly affect teachers' day-to-day environment and working conditions. If principals are unable to support teacher leadership initiatives with their leadership knowledge and actions, these initiatives are likely to amount to nothing more than added tasks for already overburdened



teachers. We need tools to assist school principals in their understanding of how teachers are perceiving their actions in support of teacher leadership and to what extent such support is improving. This study and its findings seek to advance the literature in the following dimensions: a) to better understand how current structures can be modified to further meet the leadership-building needs of teachers, principals, and schools; and b) to provide additional tools in assisting the accountability of schools and their leaders towards teacher leadership development.

### **Organization of the Remainder of the Dissertation**

The remainder of the dissertation is organized thus. Chapter two contains a review of the current literature relevant to the study. Chapter three advances a theoretical framework for the study that aided in the development, conceptualization, and validation of the PSDTL measure. Chapter four explicates the method for this validation study, including setting, data collection, procedures, measures and instrumentation, and analytical approach. Chapter five details the results of the study analysis, including the following tests of validity: substantive, structural, convergent, and empirical. Lastly, Chapter six summarizes and discusses the findings of this study including implications for policy and practice, addresses its limitations, and provides suggestions for future research.

## **Chapter 2:**

### **Review of the Literature**

Before detailing the conceptualization of PSDTL, it is necessary to understand how this construct fits within the broader literature about educational leadership. This chapter will frame the major trends in leadership literature that support the growth and understanding of teacher leadership as its own concept within modern educational research. The literature review is organized as follows. First, it will review key literature on school leadership. Particular attention is paid to why leadership matters for students and teachers. Second, the review will note how interactions between leaders and teachers affect school climate. Third, the chapter will transition to research regarding distributed leadership, noting how this perspective supports and affirms the inclusion of the follower within a leadership system. This section also addresses how the theory of distributed leadership is often misinterpreted and will highlight the gaps within this theory that need to be addressed. Finally, the review concludes with a discussion of the concept of teacher leadership, including its history, common conceptualizations, professional development, and opportunities for further research.

#### **School Leadership**

There has been a consistent increase in the demands asked of schools, and consequently, there are a variety of models of leadership advanced in educational research over time to address these changes (Howey, 1988). Early research about school leadership points to Trait Theory, which suggests that leaders have certain personality traits that make them predisposed to effective leadership (Bass, 1990; Derue et al., 2011). According to Bass (1990), the types of personality traits that contribute to transformational leadership include charisma, inspiration, intellectual stimulation, and individualized consideration. These traits were selected because they

support vision, communication, problem solving, and individuality (Bass, 1990). However, other studies have noted that leaders themselves are far too unique and complex, making it difficult to isolate and evaluate specific leadership traits consistent within most leaders (Bass, 1990; Bird, 1940; Jenkins, 1947; Stogdill, 1948). This suggests that there is no set of qualities that predisposes any individual to effective leadership roles or actions. Given this understanding, it can be implied that teachers too are as capable of helping lead schools as those formally placed in those positions (Howey, 1988).

School leadership is important because it directly relates to improvement in school effectiveness, positive school climate, and student achievement. Walters, Marzano, and McNulty (2004) assert that increased student achievement hinges on two essential things. First, that school leaders correctly focus on elements of the organization that need change. Second, that school leaders properly present those elements for action in accordance with their potential magnitude for change. Teachers are in a position to support leaders in both of these essential tasks because a single individual, like a principal, is less likely to be able to identify focus areas that drive change, and to correctly determine the order in which they should be addressed. Instead, the responsibility of school improvement needs to be shared throughout the school community (Copland, 2003). In this spirit, teachers should be included in school leadership structures as contributors and decision-makers. Including them in decision making allows for better perspective on school improvement and, thus, an increased likelihood of gains in student achievement (Engin, 2020).

In addition to student achievement, effective school leadership supports a positive school climate (Heck, 2000). School climate can be defined as the “personality” of a school organization and is often examined through a school’s openness or health (Forsyth et al., 2011).

Openness refers to authentic behavior exchanged within a school organization. Health refers to the integrity and efficacy in what the organization, or persons within the organization, are working for the purpose of the organization. Not surprisingly, both perspectives hinge on trust (Forsyth et al., 2011). One way to support school climate is through teacher leadership, as it provides a venue for authentic exchange between teachers and principals in alignment with a school's vision (Lambert, 2003). Lambert (2003) asserts that this provides motivation and purpose for teachers within a school organization:

Humans yearn for vitality, for purpose. Teachers who attain such vitality are energized by their own curiosities, their colleagues and their students. They find joy and stimulation in the daily dilemmas of teaching and are intrigued by the challenge of school improvement in adult communities. Teachers become fully alive when their schools and districts provide opportunities for skillful participation, inquiry, dialogue, and reflection. They become more fully alive in the company of others. Such environments evoke and grow teacher leadership. (pp. 421-422)

### ***Distributed Leadership***

Initial attempts at providing teachers with leadership opportunities can be found in the conceptualization and study of distributed and shared leadership models in the literature. Schools often lean on hierarchical leadership models; they place the majority of responsibility on a single leader. As needs for the school increase, this model is not sustainable as required to meet growing need. Distributed leadership theory suggests that organizations must rely on more than one individual to ensure sustainability and success (Spillane, 2006). There are three major elements of a distributed leadership perspective: 1) the enactment, or practice, of leadership itself is the primary importance, not a particular individual; 2) this practice is composed of the

interactions of both leaders and followers within each particular situation; and 3) the situation can define the leadership practice and also be defined by the leadership practice (Spillane, 2006). This suggests that each individual interaction between the leader and followers affects both leadership practice and the larger context within which it is embedded.

All parties within a distributed leadership structure have significant power to affect the outcome, which renders salient the need to study “how” a situation happens, rather than “what” happens (Spillane, 2006). The distributive perspective provides a lens into what is happening within the school, and also implies that in order to truly understand what is happening, all parties need to be observed and held accountable (Copland, 2003). Despite Spillane’s warning that the distributed leadership perspective is primarily an analytical tool, many recent studies believe that it can bring about school and instructional improvement (Hairon & Goh, 2015; Hall, 2013; Heck & Hallinger, 2010; Liu, 2019; Spillane, 2006). This belief is grounded in a misinformed understanding of the theory that reduces the concept to the spreading of leadership from a single individual to many actors within the organization rather than simply understanding that the concept of DL is intended to be a way of understanding how individuals within a school are interacting and the nature of those interactions.

For distributed leadership theory to be appropriately applied to schools, school leaders need to ensure three major conditions. First, school leaders need to develop a culture of collaboration, trust, learning, and accountability (Copland, 2003). If school leaders do not feel equally accountable to their community, the culture necessary for improvement will crumble. Second, there needs to be agreement on improvement areas (Copland, 2003). If teachers and school leaders believe that organizational problems are different, or have different priorities, the community will not be able to move forward in a collaborative way. This requires systems of

operation, data collection, and review (Copland, 2003). Third, all parties within the organization need to hold key competencies to ensure the work can be accomplished collectively (Copland, 2003). The social relationships built through these operations allow for collective ownership, which will sustain the work at hand (Copland, 2003).

Despite regular attention to distributed leadership, few researchers or practitioners have agreed on a clear definition for the term. Some studies define distributed leadership as a framework for understanding how individuals in an organization interact, while others focus more on how roles and tasks are allocated from the organization's central leadership (Hairon & Goh, 2015; Hall, 2013; Heck & Hallinger, 2010; Liu, 2019; Spillane, 2006). Furthermore, in much discourse, there is a lack of definition for the more basic term of leadership. This lack of clarity has produced several hurdles, such as "conceptual and operational, measurement, and contextual issues" (Hairon & Goh, 2015), which have slowed conceptual development progress. Additionally, there has been much theoretical analysis of distributed leadership, but there has been little research focused on operational analysis, particularly via quantitative methods. This study has the potential to contribute to that gap in research (Hall, 2013).

### ***Shared Leadership***

Shared leadership as a concept is more difficult for many individuals to understand who see leadership as an individual skill or ability. Shared leadership flips this paradigm, noting that the assumption of leadership as arriving from one person ignores the contributions of other key people within an organization (Bolden, 2011). Shared leadership suggests that an organization can utilize social influence to support leadership across an organization.

Similar to distributed leadership, shared leadership suggests that organizations, especially schools, cannot rely on a single leader. Instead, organizations need to lean on other individuals to

“share” leadership tasks. The hope is that this supports sustainability of the organization regardless of the leader at the helm and the frequency with which that position may turn over (Copland, 2003). Lambert (2002) suggests that this sharing can happen within schools through regular collaborative and vision-aligning initiatives: study groups, action research teams, vertical learning communities, leadership teams. Through these practices, teams that include teachers, principals, students, and parents can collaborate to identify areas of the organization that can be improved through inquiry-based reflection and planning. This intentional process provides many stakeholders with opportunities to share in the development of that school and community (Lambert, 2002). In turn, shared leadership approaches support the teams’ morale and productivity (Lindahl, 2008).

Everyone within a school organization needs to be responsible for improvement, and, as such has the potential for shared leadership in the school. Theoretically this makes sense, but logistically it can pose challenges for teachers and other stakeholders within a school. Not everyone has the capacity or competencies necessary to do so effectively, especially within a school system that is still largely hierarchical (Lindahl, 2008). This may be due to the inability of organizations to differentiate between administration and leadership at the school-site and teacher level. Lindahl (2008) notes that as teachers take on leadership roles, they often are stuck handling administrative jobs like scheduling or compliance needs. These tasks often take significant time and effort and do not come with sufficient release time. As a result, there is no way to make these leadership tasks align with a traditional teaching day or workload. While teachers have the skill set and capacity to take on leadership roles in schools, it is necessary to set them up for success with the proper tasks, time, and training to carry out those roles (Lindahl, 2008).

## *Teacher Leadership*

In recent history, teacher leadership has gained significant attention as a subset of educational (and distributed) leadership, as a reform strategy, and as a rhetorical policy tool (Little, 2003). However, the term teacher leadership has been defined and used in many different ways throughout literature in order to support different shifts in policy and agendas (Bagley & Margolis, 2018; Harris, 2005; Little, 2003). Definitions of teacher leadership include a wide range of organizational functions and approaches. For example, teacher leadership for the purpose of: whole-school administration, organizing sub-groups within a school, sharing tasks assigned to the principal, as a training tool, and others (Bagley & Margolis, 2018; Harris, 2005; Little, 2003). For the purpose of this study, teacher leadership is defined as follows: Building on distributed and shared leadership models, a successful teacher leadership model: empowers and leverages successful classroom teachers, through collaboration, shared knowledge, and collective goals, to lead alongside principals in building instructional capacity, adult and student culture, and teamwork among staff (Leading Educators, 2014; Nappi, 2014). Without removing them from the classroom, principals are charged with creating systems that support teacher leaders by clearly defining their roles, providing them with proper time and resources, and developing leadership knowledge and skills (Hairon & Goh, 2015; The Aspen Institute, 2014).

As with other leadership models based more on hierarchy—namely distributive leadership, or shared leadership—a lack of definition around the model and roles within it have caused inefficiencies within schools and research (Hairon & Goh, 2015). Without clearly defined roles, teachers' needs and challenges can be overlooked, which can undermine whatever benefits might be gained as a result. Additionally, because there are wide-ranging interpretations in the theory and practice of teacher leadership, academic research has been inconsistent and has, in



particular, lacked strong empirical, quantitative studies that analyze its effects on teacher, student, or school performance.

There have been three major periods of policy and reform that have supported the concept of teacher leadership. In the 1980s, teacher leadership was conceived as a way of promoting career teachers in order to retain them, rewarding them for accomplishments, and utilizing their expertise in the support of new teachers (Little, 2003; Malen & Hart, 1987). In the early 1990s, the teacher leadership role shifted as a way for teachers to collectively join local whole-school reform efforts (Little, 1999; Little, 2003). The late 1990s were marked by increased high-stakes accountability measures for teachers. In response, school leaders recruited teacher leaders to support in these external accountability measures (Little, 1999; Little, 2003). Since then, teacher leadership roles have continued to increase in the number of additional job demands, while the supports, time, and rewards needed to balance these demands have continued to decrease (Little, 2003). Also notably, teacher leadership models are expensive for schools and districts, and are often dropped during periods of financial hardship (Bagley and Margolis, 2018), conditions which continue to be of concern for states, districts, and schools.

Little (2003) suggests that, throughout these periods, there has been a shift from informal, small-scale collaboration, to systemic institutional agendas that include increased accountability. Additionally, she notes that there has been a shift away from teaching and learning toward using teacher leadership as a new division of managerial labor. These shifts are in line with larger national policy and reform trends. Without assigning value to these shifts, it is important to recognize that teachers have been able to find ways to push for educational purpose and practice initiatives despite setbacks (Little, 2003). There is potential in teacher leadership models for teachers to take the lead in fostering teacher development, teacher commitment, and larger

school reform agendas. This can be accomplished through attention to the organization and structure of specific models and how roles for teachers are defined within the model.

Teacher leadership is essential for school improvement because teacher leaders can serve as a “bridge” between different initiatives within a school (Bagley & Margolis, 2018; Ford & Youngs, 2018). Teachers have the most direct connection with students, other teachers, administration, and other organizational systems, and, as such, they can be leveraged for improvement efforts in an authentic and positive way (Engin, 2020). Traditionally, teachers have a history of resistance to, in particular, externally-imposed reform efforts. This is often because they are not privy to or involved in the decision-making process. Teacher leadership allows for teachers to have a seat at the table—affording them the information and perspective to choose to be aligned with reform initiatives or to push back on initiatives that may not be in the best interest of the organization. They also have the influence needed to enlist the support of other teachers (Bagley & Margolis, 2018).

### **Teacher Leadership Roles**

Before looking at specific teacher leader models and roles, it is first necessary to analyze the dimensions of schools upon which they can have an influence. Harris (2005) suggests that the literature places teacher leadership roles into four main areas: collegial norms, opportunities to lead, working as instructional leaders, and re-culturing schools. Collegial norms refer to a teacher leader’s ability to form bonds and connections with other colleagues so that mutual learning can take place. This work is supported through collective trust and can precipitate change to culture through the cultivation of positive, productive relationships. It can also lead to the establishment of common language, procedures, and structures to organize such collective work (Ford & Youngs, 2018). Next, teacher leadership requires that schools provide real opportunities for

teachers to lead, which also can support trusting relationships and improved instruction within a school. Furthermore, teacher leaders often support instruction by affecting curriculum, teaching, and teacher learning. Lastly, teacher leaders are able to build school culture by emphasizing interpersonal relationships over specific individual actions (Harris, 2005).

Harris (2005) also suggests that these areas of influence lead to four major roles teachers play in the school: brokering roles, participative leadership roles, mediating roles, and the role of forging close relationships. Teachers have the ability to bridge many aspects of the school community through their social ties, which puts them in a position to broker meaningful development for teachers (Acker-Hocevar & Touchton, 1999; Ford & Youngs, 2018). By placing exemplary teachers in leadership positions, they can act as models of practice within the school and, by example, encourage reflection and improvement (Wasley, 1991). Similarly, if teacher leaders are also instructional leaders, they have the information and expertise to drive what high teacher performance looks like and further inform what direction school-wide teacher development needs to go (Snell & Swanson, 2000). Finally, school culture is best developed through collective trust of leaders and teachers; having teacher leaders can provide for additional flattening of leadership matrices and providing space for mutual learning and development (Little, 1990).

Although trends in areas and roles are broadly defined within teacher leadership, additional variation is present in the specific positions teachers may hold and the way in which they operate within those positions (Angell & DeHart, 2010; Riel & Baker, 2008; Silva et al., 2000; Wallace et al., 1999). There are both formal and informal roles teachers can play within teacher leadership frameworks. In an effort to build instructional capacity within schools, formal teacher leadership models often focus on developing teachers. Teachers may spend part of their

time teaching their own classes and the remainder of their time coaching other teachers within the school. Other formal roles, or hierarchal roles, might include department or grade level chairs, mentors, evaluators, resource providers, curriculum writers, data coaches, etc. (Harrison & Killion, 2013; Helterbran, 2010). Formal positions come with a specific role, description, and expectation (Helterbran, 2010). For example, a high school English department chair may be responsible for periodically meeting with all literacy teachers and reporting back to a whole-school instructional team made up of all the department chairs that make instructional recommendations to the principal. Teacher leaders that hold formal positions often receive additional compensation and sometimes additional release time from their classrooms to support in their specific role (Helterbran, 2010).

Informal roles of teacher leadership also exist within schools. Helterbran (2010) suggests that informal roles are a more authentic form of leadership, where teachers feel that they have the ability to address or solve a need or problem that may arise with their school. Helterbran notes that this is only possible when teachers recognize their own leadership potential, develop specific skills needed for leadership, and have the confidence to act. When this happens, teachers feel personally effective within their classrooms and their schools (Helterbran, 2010). Additionally, teachers need to understand the school structure and organization within which they work so that they know best how to advocate for students and teachers within that structure (Silva, et al., 2000). This will not happen if principals are focused on surveilling or micromanaging teachers. Instead, principals need to promote risk-taking around solving teacher and student needs within the school (Acker-Hocevar & Touchton, 1999). Principals can also support teacher reflections on strengths, teacher-to-teacher dialogue, growth feedback, and active listening within a community to build culture (Acker-Hocevar & Touchton, 1999).

Despite many dilemmas in teacher leadership models, there still remains much possibility and potential for the use of teacher leadership in educational reform and teacher learning efforts (Little, 2003). Furthermore, there is still good reason for teachers to be willing to participate in teacher leadership models (Smylie, 1992).

### **Professional Development for Teacher Leadership**

Scholarship on the subject suggests that effective professional development expands instructional practice and student achievement (Poekert, 2012). This is achieved when professional development is collaborative (Cordingley et al., 2005), coherent (Desimone et al., 2002), grounded in content matter (Garet et al., 2001), connected to instructional practices (Borko, 2004), and consistent over time (Yoon et al., 2007).

Professional development for teacher leadership should strive to maintain these standards of good practice within a school's unique context, as effective professional development can be both an impetus for and the result of teacher leadership (Poekert, 2012). Professional development is what initially professionalizes teaching and develops leadership skills that allow teachers to affect the practice of their colleagues (Murphy, 2005). Additionally, teachers holding leadership skills can catalyze effective professional development through their own facilitation, leadership, and practice, successively furthering their own development (MacBeath & Dempster, 2008).

The role of a principal within teacher leadership development is to be the head learner of a school which requires them to model instructional excellence and leadership growth for teachers and students (Barth, 1990). By modeling, listening, and learning, they can begin to share their leadership expertise and cultivate collective ownership of the school. However, these things

do not happen by accident—principals need to intentionally create spaces and times for this dialogue and practice to happen (Yendol-Hoppey & Dana, 2010).

Teacher leadership professional development must go beyond principals simply modeling learning and creating space for dialogue, however; the work of leading school organization is different than teaching a class (Murphy, 2005). Effective professional development starts with a school culture where teachers and principals highly value adult growth and development initiatives and commit to engaging in them with a positive attitude (Murphey, 2005). Such a culture cannot be developed without frequent professional development sessions that are set within a thoughtful long-term plan (Murphy, 2005). Thoughtful plans include both teacher and principal participation and are centered around the specific context of the school and established teacher leadership roles (Murphy, 2005). Additionally, this culture is cultivated through collective trust, which allows individuals within the organization, teachers and principals alike, to try out ideas, practice learning, fail within a safe environment, and reflect on the process (Murphy, 2005). When professional development is continuous, learning can become collegial and collaborative and, as relationships grow, trust increases, and the practice evolves as individuals acquire new skills.

Leadership training can be quite vague. Yet, Murphy (2005) suggests that there are three specific domains where teacher development will reside: “understanding and navigating the school organization, working productively with others, and building a collaborative enterprise” (p. 153). Moreover, these skill domains are specified based on the context of the school, community, and district. Principals should consider internal programming, and also look to collaborate with outside organizations that can complement and support the internal programming directed at teacher growth in these areas. It cannot be expected that teachers will

magically be able to effectively share school leadership roles without quality professional development. Furthermore, an absence of (or otherwise poor quality) leadership professional development can negatively affect teacher's psychological needs and their motivation to take on additional leadership work, as it is needed by the school (Cherkowski, 2018).

### **Teacher Leader Psychological Needs**

Whenever individuals are confronted with new tasks or challenges, there can be substantial uncertainty, challenge, and with these, a risk of failure. As such, when teachers take on new leadership roles, they need support to meet this challenge and uncertainty, and this can be done, in part, by ensuring that leaders address teachers' psychological needs for competence, autonomy, and relatedness (Cherkowski, 2018). Meeting these needs are a key component of activating teachers existing intrinsic motivation for learning and development (Deci & Ryan, 2000), a central proposition of Self-determination Theory (SDT).

At the outset, teachers' perceptions of their role as a leader in the school will be mainly informed by their own experience as students, which likely did not include the observation of teachers participating in their own teacher leadership roles (Lortie, 1975). This means that, when teachers take on leadership roles, they have very little information to drive how they enact this role. This reality requires school administrators to provide support and training on how to take on these roles in a way that supports their psychological needs.

Teacher leadership can be an asset to teacher well-being, but if unsupported, can also thwart healthy outcomes (Cherkowski, 2018). It can provide a sense of satisfaction and joy through connecting to classroom and professional growth, developing new leadership competencies, and having the agency to support whole school improvement (Cherkowski, 2018). Recent studies have established a causal connection between teacher leadership professional

development and teacher leadership (Huerta et al., 2008; Watt et al., 2010). In examining the AVID teacher training program and its relationship to teacher leadership, scholars found that quality professional development is a significant predictor of teacher leadership because the training allows teachers to feel more comfortable with their own leadership skills and abilities and more efficacious in taking on these new roles (Watt et al., 2010).

Ensuring teacher leadership positions support teachers' psychological needs will also support positive school climate and overall teacher wellness (Cherkowski, 2008). More so, a positive school climate is positively related to a teacher's trust in their principal, which is also related to school effectiveness (Forsyth et al., 2011). Cherkowski (2008) also suggests that teacher leaders can be the change agents in school culture and school improvement efforts. However, teacher leaders can only support other teachers' wellbeing when their own needs are also being met (Cherkowski, 2008).

Teacher leadership roles also carry risks psychological well-being of teachers (Cherkowski, 2018). Teachers can often feel overwhelmed by the extra time and work associated with their role, the challenging conversations they need to have with peers while coaching, and the hard decisions that are necessary to make within formal leadership roles (Cherkowski, 2018). It is also important to note that teaching alone, without any additional leadership responsibilities, is incredibly challenging. Teachers are responsible for teaching content, supporting human improvement, controlling a classroom environment, managing both their own emotions and those of their students, and overcoming much uncertainty about the efficacy of their work (Labaree, 2000).



## **Measurement of Teacher Leadership**

Yet, in order to assess the degree to which teachers feel supported in their learning of these new leadership roles within their school, more research is needed which directly measures these perceptions of the role and the support for the role. There is very little existing research which endeavors to measure the various effects of teacher leadership initiatives on teacher psychological well-being, and those that do measure exist have limitations (Angelle & DeHart, 2016; Flood & Angelle, 2017; Hairon & Goh, 2015; Parlar et al., 2017). Parlar, Cansoy, and Kılınç (2017) examined the relationship between a school's teacher leadership culture and teachers' professional behaviors. The purpose of this study was to better understand what explains teachers' professionalism and found that supportive working environments and professional cooperation are significant variables. However, the study failed to clearly define the composition of teacher leadership culture and thus its connection to professionalism. The Angelle and DeHart (2016) study used confirmatory factor analysis to compare different elements of teacher leadership in effort to better define teacher leadership with intentional inclusion of formal and informal roles. Their four-factor model allowed administrators to evaluate teacher leadership within the building and identify strengths and weaknesses. However, only one factor focused on the actions of principals in an effort to support teacher leadership. Flood and Angelle's (2017) study examined the relationship between organizational trust, collective efficacy, and teacher leadership. They found that schools with high levels of collective efficacy and trust, also had conditions that supported teacher leadership. However, this study also did not address the specific principal actions that support the development of this environment. Nor did it address the affect this environment has on the psychological needs of teachers.

Hairon and Goh (2015) created a measurement tool in order to measure distributed leadership via Rasch analysis. The intent was to measure school principals' perceptions of their own distributed leadership practices. Hairon and Goh's study developed their instrument of distributed leadership from a review of the existing literature that focused on three dimensions: empowerment, interaction for shared decision, and development for leadership. This resulted in twenty-five statements that aligned to these dimensions. Respondents were asked to align their agreement with the statement to a Likert scale, with 1 equating to "strongly disagree" and 5 equating to "strongly agree" (Hairon & Goh, 2015). However, their scale was developed for school leaders and did not include teacher perceptions on these leadership processes.

The peripheral focus and/or limitations of prior studies in measuring teacher leadership reveal a need to better understand and/or measure the role of the leader in supporting teacher leadership within their building. Understanding how leaders' actions support the development of teacher leaders in assuming these new roles within their schools, Self-determination theory could serve as a useful theoretical framework towards this goal. SDT has been applied to the study of motivational processes in students, teachers, and leaders and has analyzed how social conditions presented within a school can support or thwart motivation for learning and development (Ford et al., 2019; Ford & Ware, 2018). Several of these studies have examined how school leaders can create conditions that support students' psychological needs, which also supports their development and academic growth (Adams & Olsen, 2017). Additional studies have used SDT to analyze ways in which conditions can support teacher psychological needs and its connection to student needs (Ford & Ware, 2018). Furthermore, recent studies have also used this relationship to explore school districts' support for principals' psychological needs, and its effect on their motivation (Ford et al., 2020). This study represents a straightforward extension of this

existing scholarship into a new area of teacher learning and development—the development of teacher leadership capacity.

### **Summary**

This chapter reviewed key literature on school leadership. First, there was an overview of Trait Theory and the present research that refutes the idea that specific leadership traits need to be present for success. Second, attention was given to how leadership relates to and affects student achievement and school climate. Third, research on distributed and shared leadership was discussed, specific attention was given to the misinterpretation that often happens in research. Next, the history of teacher leadership was considered. The varying models and roles for teachers were examined, including professional development for these models. Specific attention was given to the psychological needs of teachers as they develop their own leadership, which also asserts that self-determination theory is a useful theoretical framework for measuring and analyzing teacher leadership.

## **Chapter 3:**

### **Theoretical Framework**

The purpose of this study was to develop and validate a concept and measure of principal support for teachers' psychological needs in the development of their teacher leadership capacities and roles, or Principal Support for the Development of Teacher Leaders (PSDTL). Conceptually, PSDTL is defined as a set of school-wide organizational and normative conditions, emerging through leader actions, that support the psychological needs of teachers necessary for the development of their leadership capacities within the school. PSDTL as a measure is an embodiment of the idea that teacher leadership activities and goals need to be intentionally planned, supported, and measured by school principals. That intentional development will, in-turn, support the activation of existing intrinsic motivation of teachers, hopefully helping to spur overall improvement of social and academic conditions within the school. This chapter details the specific connections of this project to Self-determination theory. Specifically, how it can be used as the theoretical lens in the investigation of leader support for teacher leadership development. First it reviews the literature about SDT including its connected mini-theories—cognitive evaluation theory, organismic integration theory, causality orientations theory, and basic needs theory. It then shifts to their application within school leadership and teacher development, specifically with respect to the school social conditions that can support or thwart motivation for teachers as learners acquiring leadership skills. There are sections devoted to the three basic psychological needs of all human beings—competence, autonomy, and relatedness. Competence refers to one's ability to feel effective in their work; autonomy, to one's feeling that their work is an expression of themselves; and relatedness, to one's ability to feel

connected to people within their workplace. Lastly, I discuss how the theoretical and conceptual underpinnings of the PSDTL construct as they related to these basic psychological needs.

### **Self-Determination Theory**

Self-determination theory (SDT) provides the theoretical lens for this project— understanding how and why teachers perceive certain principal leadership structures and actions as need-supportive as it pertains to teacher leadership development. At its core, SDT posits that all humans naturally want to improve themselves, but there are social-contextual factors that may support or hinder this innate human drive (Ryan & Deci, 2002). Specifically, Ryan and Deci (2002, 2016), assert that all humans have the capacity to be intrinsically motivated, happy, and fulfilled when their universal human needs are satisfied. Ryan and Deci (2002) define these basic psychological needs as competence (Harter, 1978; White, 1963), autonomy (deCharms, 1968; Deci, 1975), and relatedness (Baumeister & Leary, 1995; Reis, 1994). Competence is a person’s ability to self-perceive a sense of productivity and success within their work (Harter, 1978; Ryan & Deci, 2002; White, 1963). Autonomy involves a person’s ability to learn and grow with a sense of volition and choice (deCharms, 1968; Deci, 1975; Ryan & Deci, 2002). Relatedness is one’s feelings of belonging and connection to their environment and important others in their social sphere (Baumeister & Leary, 1995; Reis, 1994; Ryan & Deci, 2002). Depending on the elements of a given environment, these three psychological needs can be either be supported or thwarted (Ryan & Deci, 2002).

Since its inception, SDT has split into four major mini-theories: cognitive evaluation theory, organismic integration theory, causality orientations theory, and basic needs theory (Ryan & Deci, 2002). These mini-theories combined together provide a framework within which to understand, explain, and predict human motivation given a wide-range of contexts (Ryan &

Deci, 2002). Cognitive evaluation theory describes the effects of different social contexts on an individual's motivation. Organismic integration theory explains how values external to a person can be integrated and how externalized motivation can be slowly integrated/internalized.

Causality orientations theory aligns a person's own orientations to the way in which they will connect to their social environment and how this alignment can affect their autonomy and motivation. Lastly, basic psychological needs theory connects a person's existing intrinsic motivation for learning and growth to their own psychological health (Ryan & Deci, 2002).

Although each mini-theory adds to the larger conceptual framework of SDT, this study is more explicitly connected to basic psychological needs theory, as this theory concerns how leaders create a school environment which supports teachers' existing intrinsic motivation to strive for the collective goals for the school. When an individual freely takes part in an activity because they find interest and derive enjoyment from it, they are demonstrating intrinsic motivation. These feelings originate from within an individual and can be independent of external factors (Ryan & Deci, 2002). This is especially important to teachers, who studies have shown have strong intrinsic motivation for their work, are more often than not underpaid, and with fewer extrinsic rewards (Lortie, 1975; Watt & Richardson, 2014). Intrinsic motivation can be enhanced by positive verbal feedback, which makes it even more essential that school leaders put structures in place that allow for that to happen within existing teacher and teacher leadership initiatives (Deci, Koestner, & Ryan, 1999). Supporting intrinsic drive teachers have for the work of teaching through the development of their teacher leadership roles will not only support their basic psychological needs but research demonstrates will also support higher performance, satisfaction, and lower burnout and turnover (Baard et al., 2004; Ford et al., 2019; Gagné & Deci, 2005).

These needs are essential when thinking about school leadership and teacher development. School leaders have the ability to nurture a school community and working environment that supports the competence, autonomy, and relatedness of its teachers, or one that thwarts it. A school leader's ability to create an environment that supports teachers' psychological needs is one that will develop and retain intrinsically-motivated teachers who feel included and feel collective responsibility for the school's vision (Bryant et al., 2017). Cognitive evaluation theory postulates that both competence and autonomy are necessary to support intrinsic motivation and that contextual events, like a reward or consequence, can affect those basic psychological needs through reinforcement or preclusion (Ryan & Deci, 2002). With autonomous motivation as a goal for a school community, school leaders should ensure that they are fostering a school environment that supports competence and autonomy. In this case, the SDT concept of functional significance can be useful (Ryan & Deci, 2002). For example, a monetary bonus to a teacher could have a controlling functional significance because it could change the teacher's perceived locus of causality to be more external, replacing intrinsic motivation with extrinsic motivation. Instead, positive verbal feedback to a teacher about their work would have an informational functional significance because they would understand it as an increase in perceived competence. This would also enhance their intrinsic motivation to continue those activities. Beyond positive feedback, cognitive evaluation theory also supports maintained or increased intrinsic motivation when the following are provided to individuals: choice, empathy, and non-controllingness (Swann & Pittman, 1977; Koestner et al., 1984). Additionally, social contexts matter when analyzing whether specific structures or actions fall within informational or controlling functional significance. The interpersonal climate of a workplace can inform how factors are experienced (Reeve & Deci, 1996). Although more distal,

this suggests that an emphasis on relatedness can support the maintenance of intrinsic motivation through a positive interpersonal climate (Ryan & Deci, 2002).

Students, teachers, and leaders have been the focus of research grounded in SDT, which has analyzed how school social conditions can support or thwart motivation for learning groups (Ford et al., 2019). Adams and Olsen (2017) examined how the conditions school leaders create affect students' psychological needs, development, and academic growth. Ford and Ware (2018) utilized SDT to advance an argument about the ways school conditions can support teacher psychological needs. Additional recent studies have utilized SDT to examine school districts' relationship to principals' and its connection to principals' psychological needs and motivation (Ford et al., 2020). This study follows a vein to study advance the understanding of principal and teacher interactions as they relate to teacher leadership development.

### ***Competence and Competence Support***

Competence refers to a person's ability to feel effective in the work that they are doing and to feel that they have the opportunity to stretch their own skill set and capabilities through new challenges (Harter, 1978; Ryan & Deci, 2002; White, 1963). In SDT, this term refers less to the actual skill or ability, and more to the feeling of confidence or effectiveness from doing said skill or using abilities in the performance of a task (Ryan & Deci, 2002). Thus, a competence-supportive environment is one that cultivates social contexts and structures which foster self-confidence and self-efficacy (Ryan & Deci, 2000). For teachers taking on leadership roles, not only do they need access to leadership opportunities, but they also need to develop the leadership skills to access the opportunities. A competency-supportive environment would include school leaders supporting teachers in setting goals related to leadership, receiving positive constructive feedback based on action steps from those goals, and celebrating success within the new



leadership roles (Ryan & Deci, 2002). A competence-supported teacher leader would feel confident and self-efficacious in their leadership and teaching roles. Competence-support is essential in ensuring that teachers perceive their leadership tasks as informational, and not controlling. Communication of opportunities, positive feedback, and celebration of successes are key to maintain this functional significance and connected intrinsic motivation (Ryan & Deci, 2002). These initiatives also support a broader community of trust, support intrinsic motivation for teachers, and build capacity within the school (Forsyth et al., 2011; Ryan & Deci, 2002; Lambert, 2003). Additionally, competence is closely related to self-efficacy and can be recognized via growth mindset (Dweck, 2007). Teachers need to feel that they have the ability drive their own goal-setting and action plans, which is also an essential aspect of teacher leadership. A competence-supportive environment would be one that fosters self-efficacy through intentional structures that encourage teachers to practice a growth mindset.

Competence-supportive teacher leadership development hinges on a number of factors: existence of authentic leadership opportunities, structures to engage in the opportunities, and positive constructive feedback on leadership performance within the opportunities. This cannot be done by a single professional development experience at the start of the year. Rather, professional development should be ongoing and include opportunities for creating challenging goals, engaging in authentic practice, receiving positive and constructive feedback, and experiencing mastery (Ford & Ware, 2018). Over time, participation in this ongoing development can inform a school climate that supports teacher psychological needs in an effort to collectively learn and improve for the betterment of the individual and organization (Ford & Ware, 2018). Teachers are excited to take on personal and professional learning because they are motivated to do so, rather than being mandated to do so through a high-stakes evaluation cycle.

This also supports a culture of collective efficacy and trust. Collective teacher efficacy is composed of the interactions of analysis of the tasks and the assessment of a group's competencies, which are highly related in schools (Goddard et al., 2000). Additionally, a positive collective efficacy score predicts an associated gain in student achievement (Goddard et al., 2000). When thinking about the effect of teacher leadership, connecting it to collective efficacy can be a predictor for affects in student achievement. Furthermore, the task teachers are asked to complete within a teacher leadership model also relate to how colleagues perceive the groups' ability to complete them with efficacy. As such in order to feel competent, teachers need to perceive that they can be successful at the leadership task they take on. Collective teacher efficacy and trust are interdependent on teacher leadership within schools (Angelle & DeHart, 2016). The choice of a principal to share decision making with teachers, suggests that they trust teachers' competencies. Teachers need to trust that they have the skills to influence within their schools as well, which happens through intentional leadership development.

### ***Autonomy and Autonomy Support***

Within SDT, autonomy refers to a person's feeling that their work and behavior is an expression of themselves (deCharms, 1968; Deci, 1975; Ryan & Deci, 2002). This should not be confused with independence. Autonomy, instead, is opposite to compliance or conformity (Ryan & Deci, 2002). For teacher leaders, it is important that teachers perceive that they have personally made the choice to engage in leadership tasks because of interest and enjoyment, rather than through extrinsic motivators like an increase in pay or normative pressure. This internal locus of causality is essential in maintaining intrinsic motivation in teacher leaders. Teachers should feel empowered to take on leadership tasks on their own, and to use their own

acquired knowledge and skills to make choices about action to be taken. This also supports an increase in collective trust within the school environment (Forsyth, Adams, & Hoy, 2011).

Autonomy support is grounded in the structural conditions that support or hinder self-motivation and self-regulation. Marks of this environment include opportunity for choice, self-initiation, and an acknowledgment of different perspectives (Assor, Kaplan, & Roth, 2002). Contextual events shift perception of causality regularly (Ryan & Deci, 2002). Intrinsic motivation is supported when an internal locus of causality is perceived and it is thwarted when an external locus of causality is perceived (Ryan & Deci, 2002). It is not necessarily the event that shifts motivation, but the perception of what caused the event to occur. As such, when principals are considering teacher leadership development, it is important for principals to structure development that preserves teacher's locus of control.

Autonomy-supportive teacher leadership initiatives are grounded in teacher choice and recognize teachers' thoughts, opinions, and feelings with perceived authenticity. It is important for school leaders to ensure the formal rules, structures, and hierarchy of the school organization include teacher leadership and empower, not hinder, teacher leaders work to improve the organization (Ford & Ware, 2018; Hoy & Sweetland, 2001). Principals also need to recognize and accept teachers' choices around leadership and their individual perspectives on it. Dismissive interactions with teacher leaders will thwart teacher motivation and affect perceived efficacy and trust within the school.

### ***Relatedness and Relational Support***

Within SDT, relatedness refers to a person's ability to feel like they are connected to the people they work with and to feel cared for by those people. This is less about status within a community of individuals, and more about the feeling of belonging within a unit (Ryan & Deci,

2002). Individuals need to feel secure within their environment and deserving of respect (Connell & Wellborn, 1991). Relatedness connects the needs of autonomy and competence because it allows individuals to interact confidently within their social context, and these interactions further support feelings of competence and autonomy.

For teacher leaders, the interpersonal climate of the school and leadership team can support their intrinsic motivation, which is best maintained through relational support. Teachers should feel a part of a community. They need to know that not only is their voice heard, but it is valued and incorporated into larger leadership visions, conversations, and actions. In order for this to happen mutual trust and psychological safety are required (Ryan & Deci, 2002). When this occurs teachers feel supported, cared about, trusted, and included to the school community and leadership team.

These core values should also translate to a teacher's perception of an environment of collaboration among teachers and leaders. Teachers should have an attachment to their school, which allows them to be vulnerable in development and build trusting relationships with their colleagues (Ford & Ware, 2018). A school climate that supports these conditions will bolster a teachers' ability to find solutions to common school issues (Ford & Ware, 2018). School leaders should know their teachers on a personal level, including their strengths and weaknesses, and teachers need to perceive that their leaders care about them and their success (Ford & Ware, 2018). A relatedness-supportive environment will also enhance collective trust and efficacy because teachers see honest and caring interactions around them.

### **Principal Support for the Development of Teacher Leaders (PSDTL)**

In order to create a community built on the value of all voices within, it is essential to provide structured space for the intentional development of teacher leadership. While it is known

that supporting teacher leadership initiatives within schools can create a more effective educational organizations for leaders, teachers, and students, most quantitative research has assessed the opinions and perceptions of school leaders, rather than teachers (Hairon & Goh, 2015). In order to better understand the conditions that school leaders are creating for teachers, research in this area must include both perspectives. Without this, teacher leader initiatives could be doing more harm than good, unintentionally thwarting teacher psychological needs and taking essential time away from teachers they need in order to support students.

PSDTL connects previous research that suggests that supporting the psychological needs of teachers is paramount to ensuring they can effectively engage in their work and to supporting their intrinsic motivation within the organization (Adams & Olsen, 2017; Ford et al., 2019; Ford & Ware, 2018; Forsyth et al., 2011). Ford and Ware (2018) suggest that there are three dimensions of conditions that support teacher learning and development within a school organization: building teachers' knowledge and skills, providing time and space for teachers to improve, and creating a working environment for teachers that leads to collaborative relationships with colleagues. It is up to school leaders to cultivate these conditions in order to foster intrinsic motivation in teachers. This study builds on this line of inquiry by applying a similar framework to teacher leadership structures and the behaviors of school principals. It suggests that teacher leadership initiatives can be a vehicle for meeting these conditions. As a measurable construct, the PSDTL scale will be a global measure of the degree to which teachers' experiences with their school leader and teacher leadership structures are supportive of their psychological needs. It is defined as a set of school-wide organizational and normative conditions, emerging through leader actions, that support the psychological needs of teachers necessary for the development of their leadership capacities within the school.

## Summary

At their core, humans are self-motivated, eager to learn new things, and desire responsibility (Ryan & Deci, 2000). This is not any different for teachers. They entered the profession to support students in their educational goals and want to work to create a school environment supporting that goal. However, there has been a long history of conditions within a school that diminish the voices and needs of teachers, leaving them feeling belittled and unappreciated (Forsyth et al., 2011; Labaree, 2000; Lortie, 1975). According to Deci and Ryan (2000), alienation can lead to passivity and irresponsibility because basic psychological needs were not being met within the organization.

A frequent solution to passivity in schools is to provide teachers with leadership opportunities. However, if teacher psychological needs are not met within these initiatives, they will have little effect on teacher motivation. PSDTL can serve as a guide for school leaders to analyze and ensure that both their school environment and their actions support teacher leadership and teacher psychological needs. This will, in turn, further develop their school capacity and culture. Teacher leadership initiatives do not always include intentional structures necessary for the support of all three of the psychological needs, and school principals are often unaware of how they can improve development and motivation by meeting these needs through their own actions. By aligning school leader actions and structures to teacher psychological needs, PSDTL has the potential to help leaders assess their efforts in this regard towards ensuring that teacher leadership initiatives positively affect teacher needs in order to build greater leadership capacity.

This chapter established the theoretical and conceptual underpinnings for the development of the PSDTL measure. This was done by reviewing literature connected to SDT,

and its connected mini-theories. Additionally, this chapter detailed how this study advances current education research grounded in SDT. Particular attention was given to Deci and Ryan's basic psychological needs, competency, autonomy, and relatedness. These were connected to intrinsic motivation, social development and well-being within schools. Finally, the PSDTL construct was connected to the literature and an argument was made for how it can support principals' development of teacher leadership within their schools.

## **Chapter 4:**

### **Method**

#### **Restatement of the Purpose**

Through the lens of Self-determination Theory (SDT), the purpose of this study is to develop and validate the concept, followed by the measure of principal support for teachers' psychological needs in the development of their teacher leadership capacities and roles, or Principal Support for the Development of Teacher Leaders (PSDTL). PSDTL is defined as a set of school-wide organizational and normative conditions, emerging through leader actions, that support the psychological needs of teachers necessary for the development of their leadership capacities within the school. PSDTL as a measure is an embodiment of the idea that teacher leadership activities and goals need to be intentionally planned, supported, and measured by school principals. That intentional development will, in-turn, support the activation of existing intrinsic motivation of teachers, hopefully helping to spur overall improvement of social and academic conditions within the school. The study is framed by the following research questions:

1. What empirical evidence is there to support the validity and reliability of the PSDTL concept and measure?
2. If valid, in what ways is PSDTL related to other conditions of effective leadership and school improvement, such as faculty trust in the principal, enabling school structure, and/or collective teacher efficacy?

#### **Focal District Context**

The research setting was a large, urban mid-western school district that serves over 39,000 students in 88 unique schools. The district's student racial demographics were approximately 35% Hispanic or Latinx, 24% African American, 24% White, 10% Multiracial,



5% Native American or Alaskan Native, and 3% Asian or Pacific Islander. About 83% of students were economically disadvantaged, based on free-and-reduced lunch rates. Within the district there were 3,364 certified teachers, of which 742 are considered “novice” teachers meaning they had less than 3 years of teaching experience within their professional career.

### **Data Sources and Collection Procedures**

This research study was part of an IRB-approved research-practice-partnership with a said large urban, Midwestern school district. Data was collected in the spring of the 2017-2018 academic year.

### ***Target Population and Setting***

Parents, students, teachers, and principals were surveyed for the overall research project. Relevant to this study was only the teacher survey data. The primary focus of this study was teacher perception of their principals. As noted in Chapter 2, quantitative research about teacher leadership has already been done from the perspective of principals. Additionally, the scope of this study does not directly affect parents. As such, principal and parent data were omitted from analysis of the PSDTL construct.

### ***Sample***

All certified teachers from 74 elementary and secondary schools in the district, excluding all alternative and early childhood centers, were sent an email containing a link to an individualized electronic teacher survey created through Qualtrics. For each school surveyed, each teacher was randomly assigned one of two survey formats, and the survey questions in this study were included in one of the forms. The constructs included on each form of the survey were mutually exclusive. All survey constructs used in this study came from only one of these teacher survey forms. Teachers were given two weeks to complete the survey and participation

was voluntary. The response rate for this year of the teacher survey was 69%, which resulted in an effective sample size for analysis of 764 teachers.

## **Measures and Instrumentation**

### **Development of the PSDTL Measure**

According to Hinkin (1998), there are two main approaches to create the items within a scale: deductive and inductive. Deductive scale development assumes that the theoretical framework provides information to initially write the items (Hinkin, 1998), while an inductive scale occurs when there are more indefinable aspects to the theory and a researcher may ask more general questions of participants to derive themes (Hinkin, 1998). Both approaches allow a scale to be grounded in a theoretical framework, which is essential to demonstrating content validity (Hinkin, 1998). In the formation of PSDTL, Self-determination theory was used as theoretical framework as significant empirical definitions and understanding of theory and its three domains of basic psychological need already existed. Additionally, this study built upon Hairon and Goh's (2015) existing valid and reliable Distributed Leadership practices instrument. Thus, since there was a sound theoretical foundation to build the PSDTL scale from, a deductive approach was used.

To do this, all twenty-five statements within Hairon and Goh's instrument were edited to shift them from the principal's perspective to the teacher's perspective and to align them with SDT's basic psychological needs theory. For example, question twenty-three of the Hairon and Goh (2015) survey, "I ensure that the competencies of shared leadership are incorporated in our staff development programmes" was rewritten as: "*My school leader ensures that the competencies of shared leadership are incorporated in our staff development programs.*" As a

starting point, then, each of these twenty-five survey statements were rewritten to shift the perspective of the statement to assess the teacher's perception of their principal.

Next, based on analysis of existing teacher leadership research (Hairon & Goh, 2015; Leading Educators, 2015; Nappi, 2014; The Aspen Institute, 2014), a definition of teacher leadership was constructed for the study, which was noted in Chapter 2 of this document (See also Appendix A). This definition specifically noted that teacher leadership requires principals to support teacher leaders by clearly defining roles, provide them with proper time and resources, and assist in developing their leadership knowledge and skills.

The survey statements were then assessed to ensure they aligned with this definition of teacher leadership and included statements about definition of roles, time and resources, and leadership knowledge and skills. Redundant statements were removed or combined with other statements. Then, through the lens of SDT, the new teacher-centric scale was grouped into items that aligned to competence-support, relatedness-support, or autonomy-support. These constructs, discussed below, were assessed with items on a 6-point Likert scale, which ranged from *strongly disagree* (score 1) to *strongly agree* (score 6).

Competence-support teacher leader development statements were framed by a principal's actions to provide: teacher leadership roles, clarity and resources around the work needed to accomplish them, and opportunities to grow within those roles through positive feedback. These supports allowed teachers to gain access to experience that would build their understanding of leadership and put it into action within the school organization. PSDTL items initially written to capture competency-support included: *“My school leaders provide opportunities for teachers to gain experience in developing leadership skills; My school leaders have clearly defined teacher leadership roles within our school; My school leaders provide the time and resources necessary*

*for teachers to take on leadership opportunities within the school; After assigning leadership responsibilities, my school leaders provide periodic constructive feedback to teachers to help develop their leadership skills; My school leaders ensure leadership skills are incorporated into our professional development programs.” See Appendix A for all final items comprising the PSDTL measure.*

Autonomy-supportive teacher leader development statements centered on a principal’s decision to place teachers in control of school-wide efforts. This aspect of principal support is likely to build principal-teacher trust, as it shows teachers that the principal believes that they can execute leadership tasks they believe are important to the school vision. The items initially written to capture autonomy support within PSDTL are as follows: *“My school leaders empower teachers to assume informal leadership roles; My school leaders create opportunities for teachers to take initiative in improving school processes and outcomes; My school leaders often discuss school leadership problems and possible solutions with teachers; My school leaders relinquish control of some key operational decisions to teachers.”*

Relatedness-supportive teacher leader development statements included principal efforts for collaboration around teacher leadership. These supports showed teachers that their leaders care about their voice and provide opportunities for teachers to be heard, work together, and be meaningfully included in organization improvement plans. Relational-support is demonstrated in PSDTL through the following initially written items: *“My school leaders care about our development as teacher leaders; My school leaders make an effort to create shared school goals with their teachers; Our collective goals as a school make it possible for principals and teachers to lead alongside one another; My school leaders provide opportunities for teachers to work collaboratively on leadership tasks.”*

## **Other Measures Used in the Validation Procedure**

In addition to PSDTL, the following measures were used in the various analyses used as a part of the validation procedure that is mentioned in the following section. The items that comprise these measures can be found in Appendix B.

***Enabling School Structure (ESS)***. The Enabling School Structure construct is composed of a twelve-item measure, which includes questions like, “The administrative hierarchy of this school enables teachers to do their job” and “Administrative rules in this school are substitutes for professional judgment” (Hoy & Sweetland, 2001). ESS was assessed with 10 items on a 5-point Likert scale, which ranged from *Never Occurs* (score 1) to *Always Occurs* (score 5). Cronbach's alpha for ESS was .98.

***Faculty Trust in Principal (FTPRIN)***. Items within the faculty trust in principal construct ask teachers about their principals’ integrity, trust, reliability, and competence (Forsyth et al., 2011). The Faculty Trust in the Principal scale is composed of six items, which include questions like, “Teachers in this school can rely on the principal” and “Teachers in this school trust the principal” (Forsyth et al., 2011). This construct was assessed with items on a 6-point Likert scale, which ranged from *strongly disagree* (score 1) to *strongly agree* (score 6). Faculty trust in the principal was used as an outcome of PSDTL in the final validity test as it is likely to improve as a principal develops need-supportive teacher leadership skills and practice.

***Collective Teacher Efficacy (CTE)***. Collective teacher efficacy as a construct measures teachers’ perception of their colleagues’ efforts as positively effecting students (Goddard et al., 2000). The collective teacher efficacy scale is composed of 7 items, which included questions like, “The quality of school facilities here really facilitates the teaching and learning process” and “The opportunities in this community help ensure that these students will learn” (Goddard et

al., 2000). CTE was also assessed with items on a 6-point Likert scale, which ranged from *strongly disagree* (score 1) to *strongly agree* (score 6). Collective teacher efficacy was used as an outcome of PSDTL because it is hypothesized to be a natural result of needs-supportive PSDTL (particularly competence-supportive PSDTL). An increased confidence in one's abilities to accomplish challenging tasks, but also increased belief in the efficacy of one's colleagues towards accomplishing important outcomes for the school are likely important outcomes of good PSDTL practice.

### **Analysis**

The central work of this dissertation was to validate the PSDTL instrument in order to determine if it could become a way of assessing a principal's ability to support the development of teacher leadership within their building and better understand its connections to school improvement outcomes. As such, a quantitative research methodology was adopted for this study. Quantitative methods can be reductionist, and this was something this study was cautious about as data was analyzed. Although qualitative research methods could have also be useful in developing and testing the PSDTL construct, they can be resource demanding and may not necessarily have applicability to larger, more diverse contexts. Yet, with so many interpretations of teacher leadership and its development by researchers, a reductionist perspective could also be a welcome approach, as it provided support in crystallizing the facets of the construct (Hairon & Goh, 2008). Such an approach could also have the potential to support claims that the PSDTL construct was both coherent and distinguishable from other educational and teacher leadership measures.

### ***Construct Validity***

In order to evaluate the construct validity of PSDTL a validation study was conducted. The main purpose of this was to evaluate the extent that the PSDTL had substantial empirical and theoretical validity as a measure of principal actions and their consequences for teacher feelings around teacher leadership development. Messick (1995) notes, “Validity is an overall evaluative judgment of the degree to which empirical evidence and theoretical rationales support the adequacy and appropriateness of interpretations and actions...” (p. 1). If such evidence exists as a result of doing this validation study, the PSDTL scale can then be used as a tool to gather information, make assumptions, and predictions about future interactions with some degree of consistency and accuracy (Messick, 1995).

Messick’s (1995) validity theory argues that all validity is subsumed under construct validity, which is the measure’s ability to make logical judgments about the items it is measuring. There are six parts of Messick’s definition of construct validity: content, substantive, structural, generalizability, external, and consequential validity. This study assessed the validity of the PSDTL measure by assessing content, substantive, structural, and convergent validity. Additionally, construct/convergent validity was examined through a final structural equation model to establish preliminary evidence for the use of the PSDTL tool within leadership practice.

***Content Validity.*** To start the validity test, content validity needed to first be established. Messick (1995) describes content validity as, “expert judgments that test content is relevant to the proposed test use” (p. 3). Specifically, the PSDTL measure was judged to ensure that its scale reflected the teacher leadership support from each of the sub-domains (i.e., basic psychological needs) of Self-determination theory. Although there is no quantitative index to

evaluate a measure's content validity, professional judgement needs to be used (Hinkin, 1998; Stone, 1978).

To establish content validity, the initial 25 survey statements were submitted to several scholars/experts who were well versed in SDT in order to ensure that the statements represented each domain (i.e., autonomy-supportive, competence-supportive, or relational-supportive). They offered suggestions included trimming, phrasing, ordering, and language use. While this method does not completely guarantee content validity, it does support "content adequacy" (Hinkin, 1998; Schriesheim et al., 1993). The initial set of 25 items went through five iterations before a final set of 13 statements were finalized. PSDTL was conceptualized as second-order factor that represented the three distinct, but related, domains of self-determination theory. As such the PSDTL measure was written to mimic SDT's three domains: competence-support with five items, relatedness-support with 4 items, and autonomy-support with 4 items (see Appendix A for the list of items comprising the final PSDTL measure).

***Substantive Validity.*** Substantive validity grounds a measure in more than just professional judgement, as empirical data is added to confirm the content of the scale. Messick (1995) explains, "substantive aspect adds to the content: aspect of construct validity the need for empirical evidence of response consistencies or performance regularities reflective of domain processes" (p. 11). Essentially, substantive validity bridges the theoretical process (or content validity analysis) and the empirical process.

To establish substantive validity, this study employed Rasch measurement and analysis, which is an effective method for obtaining empirical evidence of substantive validity and to establish evidence of construct validity and reliability (Smith, 2001). Rasch measurement, a branch of Item Response Theory (IRT), is a mathematical approach to test development which



considers the individual's ability in tandem with item characteristics/performance (Rasch, 1980). The Rasch model has some distinct benefits. First, it can handle missing data, rather than imputation or subject deletion. Secondly, Rasch can produce scaled-scores of individual performance in log-odds units, which can then be used in the larger analysis. Additionally, Rasch is beneficial for analyzing substantive validity because it places respondent ability and item difficulty on a linear line and provides direct estimates of error variance for those abilities and difficulties allowing for extreme scores to be excluded (Smith, 2001). In order to best evaluate substantive validity using Rasch, person and item fit statistics were examined to ensure they met the predicted hierarchy of items (Smith, 2001).

The Rasch rating scale model was employed to the PSDTL survey items to conduct a first-order latent variable analysis of the teacher data collected. After the Rasch analysis, scaled scores for each of these latent variables were saved for each teacher response and then aggregated to the school level for further analysis. The threshold for item infit was set at mean-squared values of .5–1.5 which are accepted thresholds for Winsteps analysis (Linacre, 2014). Items were either left or discarded from the model based on whether they fell within these limits (none were discarded, all were retained). All first-order constructs that were measured through this process were strongly related to the raw scores from which they derived ( $r > .92$  or above). Below, in Table 1, are the descriptive statistics and zero-order correlations for the study's variables used in the validation of PSDTL.

***Structural Validity.*** The establishment of structural validity further supports the construct validity of PSDTL. In order to ensure structural fidelity, the internal and external structures of an assessment should be consistent (Loevinger, 1957; Messick, 1989; Messick, 1995). Messick (1995) explains, "...the theory of the construct domain should guide not only the selection or

Table 1.

*Descriptive Statistics and Zero-order Correlations for School Level Study Variables (n=74)*

<i>Measure</i>	Mean	SD	Min	Max	1	2	3	4	5	6
1. Principal Support for Development of Teacher Leaders (PSDTL)	4.25	.705	2.38	6.00	-----					
2. PSDTL: Competence Support	2.86	2.48	-3.03	10.17	.96**	-----				
3. PSDTL: Autonomy Support	2.18	2.80	-4.45	10.43	.98**	.96**	-----			
4. PSDTL: Relatedness Support	1.69	2.56	-4.04	9.88	.97**	.93**	.97**	-----		
5. Faculty Trust in the Principal (FTPRIN)	2.54	2.54	-3.15	7.67	.87**	.86**	.84**	.81**	-----	
6. Collective Teacher Efficacy (CTE)	1.97	1.95	-3.40	6.57	.51**	.57**	.50**	.46**	.66**	-----
7. Enabling School Structure (ESS)	1.63	2.15	-3.31	6.89	.87**	.89**	.86**	.83**	.92**	.66**

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

construction of relevant assessment tasks, but also the rational development of construct-based scoring criteria and rubrics” (p. 14). Thus, to establish structural validity for PSDTL, the internal structure needs to reflect the internal structure of SDT. As such, PSDTL was hypothesized as a second-order factor consisting of the distinct, yet related dimensions of competence-support, autonomy-support, and relatedness-support.

Confirmatory Factor Analysis (CFA) in AMOS 24.0 was used to assess the structural validity of the scale. CFA is used to evaluate hypothesized factor structure, confirming or rejecting it by means of a variety of measures of fit. CFA models are led by theory, which made it a good fit for examining the PSDTL measure, as it was structurally designed to mimic the dimensions of the BPNT subtheory of Self-determination theory (Thompson & Daniel, 1996). Additionally, it is especially beneficial because there are numerous fit statistics available for interpretation (Thompson & Daniel, 1996). This study used comparative analysis to examine the difference between the hypothesized second-order model and an alternative first-order specification of PSDTL.

To complete this comparative analysis and further establish structural validity, a first-order model was built and tested within AMOS 24.0, wherein all items were treated equally in structure irrespective of subscale (competence, autonomy, relatedness). All thirteen items were loaded on PSDTL in this first model and then fit statistics were examined. Second, the hypothesized model with three distinct facets of competence-support, autonomy-support, and relatedness support was also built and tested as a second-order model. These two models were compared using fit indices, parameter estimates, and residuals. Root Mean Square of Approximation (RMSEA) was examined for the absolute fit index. Tucker Lewis Index (TLI) and the Comparative Fit Index (CFI) were analyzed for relative fit indices.

***Convergent Validity.*** Finally, convergent validity was tested for PSDTL. Convergent validity tests to what extent a scale correlates with other measures that assess related constructs (Hinkin, 1998). Convergent validity is important because it provides further evidence of construct validity, while also further affirming content, substantive, and structural validity results.

For PSDTL, convergent validity was established by examining the relationships of its scale with measures of leadership effectiveness and school improvement. Specifically, the Enabling School Structure (ESS) construct was used, as it directly relates to the degree to which school structures, policies, and procedures, not necessarily exclusive to teacher leadership, help or hinder teachers (Hoy & Sweetland, 2001). Similarly, PSDTL hypothesized that a principal's efforts to develop teacher leadership can also either support or hinder a teacher's psychological needs, particularly their autonomy. Items within the ESS construct ask teachers about their principals' communication, rules, solutions, and support of teacher autonomy (Hoy & Sweetland, 2001). PSDTL seemed to be related to the ESS construct as teacher leadership can be seen in

some literature as simply a structure that distributes administrative work to teachers without affirming their needs or building their capacity. Additionally, without a supportive school structure, it was predicted that development of teacher leadership would also not be needs-supportive of teachers.

A final empirical test to establish convergent validity was completed using SEM methods. This was done by building and testing a hypothesized model where PSDTL predicts both collective teacher efficacy (CTE) and faculty trust in the principal (FTPrin). It was hypothesized that a principal that developed needs-supportive teacher leadership within their school would see improvements in both faculty trust in the principals and collective teacher efficacy; if teachers are trusted and supported to take on leadership than they in-turn are more likely to extend the same trust to their principal and through intentional leadership development they are likely to perceive themselves and other teachers as more efficacious. A positive PSTDL was hypothesized to be positively related to CTE and FTPrin.

## **Summary**

This chapter details the method used to answer the study's research questions. It included information on the target population, sample, and measures used to collect data obtained through this IRB-approved research project. It also describes the procedures and analysis conducted to test the study's hypotheses related to the validity of the PSDTL measure. The rationale for this approach was to establish a method by which principals are able to measure, assess, and diagnose their efforts to develop teacher leadership by supporting the psychological needs of their teachers related to this challenging task.

## **Chapter 5:**

### **Results**

The central goal of this study was the establishment of a valid and reliable measurable construct for Principal Support for the Development of Teacher Leaders (PSDTL). The results of the results of the analysis described in the previous chapter are presented here. This chapter will report empirical evidence for substantive, structural, and convergent validity, which will substantiate the construct validity of PSDTL.

#### **Substantive Validity**

Substantive validity ensures that empirical data support the inclusion of the chosen items within the scale. As a reminder, the primary empirical evidence of substantive validity was in the form of the results from the Rasch measurement analysis of the PSDTL scale, which provides person and item fit statistics and reliabilities. Conducted in WINSTEPS 3.80, the Rasch item-level analysis produced fit statistics of item difficulty ( $\delta$ ) and response predictability displayed as means square infit and outfit values (see Table 2). The items are given a positive or negative value based on their difficulty of endorsement; in a rating-scale model, this means that positive values are given for increased ease of endorsement (i.e., higher agreement with the statement) and negative values for harder endorsement (lower agreement). The intent of the scale was to include a wide-range of easy to difficult items and thus person and item separation. As such, both item and person fit statistics as well as item and person reliabilities were assessed to validate consistency among responses and to support substantive validity for the PSDTL measure. Response predictability was set between 0.60 and 1.40, consistent with Bond and Fox's (2007) threshold of acceptable predictability. The results of the Rasch analysis of the PSDTL measure is found in Table 4.

Validity is first determined by examining the reliability of a scale. Reliability can be thought of as a prerequisite of validity; in other words, a scale cannot be valid until it is deemed reliable. As is seen in Table 4, both item and person separation reliabilities were high, .93 and .92 respectively. Smith (2001) notes that substantive validity can be addressed by verifying the variable's definition and by examining person fit statistics. The variable's definition can be tested by its item difficulty and there should be a range of difficulties present that should

Table 2.

#### Rasch Item-Level Information of PSDTL Measure

<i>Please rate the extent to which you agree or disagree with the following statements...</i>		$\delta$	Infit	Outfit
PSDTL9	My school leaders relinquish control of some key operational decisions to teachers.	.74	1.24	1.21
PSDTL12	Our collective goals as a school make it possible for principals and teachers to lead alongside one another.	.57	1.35	1.27
PSDTL4	After assigning leadership responsibilities, my school leaders provide periodic constructive feedback to teachers to help develop their leadership skills.	.32	1.21	1.08
PSDTL7	My school leaders create opportunities for teachers to take initiative in improving school processes and outcomes.	.14	.88	.82
PSDTL1	My school leaders provide opportunities for teachers to gain experience in developing leadership skills.	.12	1.02	.96
PSDTL5	My school leaders ensure leadership skills are incorporated into our professional development programs.	-.01	1.04	.97
PSDTL13	My school leaders provide opportunities for teachers to work collaboratively on leadership tasks.	-.04	.79	.72
PSDTL10	My school leaders care about our development as teacher leaders.	-.07	.92	.87
PSDTL3	My school leaders provide the time and resources necessary for teachers to take on leadership opportunities within the school.	-.11	.79	.68
PSDTL8	My school leaders often discuss school leadership problems and possible solutions with teachers.	-.12	.82	.77
PSDTL2	My school leaders have clearly defined teacher leadership roles within our school.	-.32	.88	.79
PSDTL11	My school leaders make an effort to create shared school goals with their teachers.	-.46	.84	.75
PSDTL6	My school leaders empower teachers to assume informal leadership roles.	-.75	.98	.90
Person Separation Reliability				.92
Person Real Separation				3.44
Item Reliability				.93
Item Real Separation				3.76
Cronbach's Alpha Estimate				.96

correspond to individual respondents (Smith, 2001). As noted above, variables, when written, were hypothesized to have a wide range of item difficulties. This hypothesis was confirmed, as item difficulties within this study ranged from .74 to -.75, which supports the variables' definitions. The hardest item (-.75) was PSDTL6, *My school leaders empower teachers to assume informal leadership roles*. The easiest item was PSDTL9, *My school leaders relinquish control of some key operational decisions to teachers*, with a score of .74.

Additionally, infit and outfit scores confirm whether or not respondents answered consistently with the hypothesized hierarchy of difficulty. Results from the Rasch analysis showed infit and outfit scores between .68 and 1.35, which suggests that all items had individual's response patterns consistent with the hypothesized hierarchy. This evidence, taken together, provides abundant evidence of the substantive validity of PSDTL.

### **Structural Validity**

Structural validity ensures that the internal and external structure of the PSDTL scale remains consistent. Confirmatory Factor Analysis (CFA), using AMOS 24.0, was employed to evaluate the factor structure of the PSDTL scale. The first step in this analysis was to build a first-order model loading onto a single factor of PSDTL. If this model exhibited poor fit, other structures would be explored to see if a better fit existed. A two-order factor structure, which included the subscales as separate latent factors in the model was also a plausible factor structure for PSDTL and this was also built and tested at this stage. This second-order model was composed of the three unique facets of self-determination as the factors: competency, autonomy, and relatedness loading on the second order latent factor of PSDTL.

In order to evaluate construct validity, it was necessary to compare this first-order model to a competing model by comparing fit indices, parameter estimates, and residuals (Moss, 1995).

Root Mean Square of Approximation (RMSEA) was used to compare absolute fit index. The Tucker Lewis Index (TLI) and Comparative Fit Index (CFI) were used to evaluate relative fit. Lastly, Chi-square was used to evaluate the overall fit of the model.

The results of the CFA supported PSDTL as a second-order factor represented by the facets of competence-support, autonomy-support, and relatedness-support. This second-order model mimics the internal structure of self-determination theory that was used as a theoretical framework for PSDTL. First, however, the single factor model was fit. Figure 1 displays the results of this CFA analysis. This single factor model had an overall poor fit, as indicated in the fit indices,  $\chi^2 = 818.24$ ,  $df = 65$ ,  $p < .001$ ,  $TLI = .919$ ,  $CFI = .942$ , and  $RMSEA = .129$ .

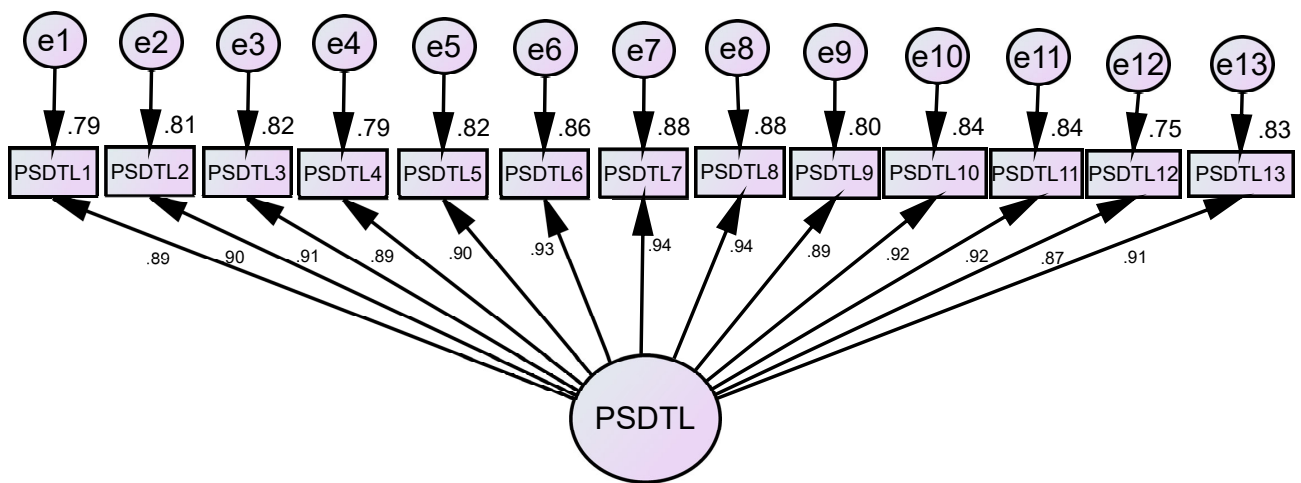


Figure 1. CFA Results for the Alternative First-Order Factor Model.

Note. Standardized estimates presented. Fit statistics:  $\chi^2 = 818.24$ ,  $df = 65$ ,  $p < .001$ ,  $TLI = .919$ ,  $CFI = .942$ , and  $RMSEA = .129$ .  $RMSEA$  90 percent confidence interval = .12-.14.

Figure 2 displays the results of the alternative, two-level factor structure for PSDTL by psychological need. In contrast, the second-order was a superior fitting model, producing the following fit indices,  $\chi^2 = 445.44$ ,  $df = 63$ ,  $p < .001$ , a  $TLI = .958$ ,  $CFI = .971$ , and  $RMSEA = .093$ . The second-order model had a significantly smaller Chi-square and  $RMSEA$ , suggesting it was a model that better fit the covariance structure of the data. Additionally, the  $TLI$  and  $CFI$  of



the second-order model were both higher than the single-order model and higher than the .95 recommended threshold for a good fitting model (Hu & Bentler, 1999). Although results for both models were strong, comparative analysis conclusively supports PSDTL's structural validity by exhibiting an empirical relationship between underlying logic of the second-order model and the sample data.

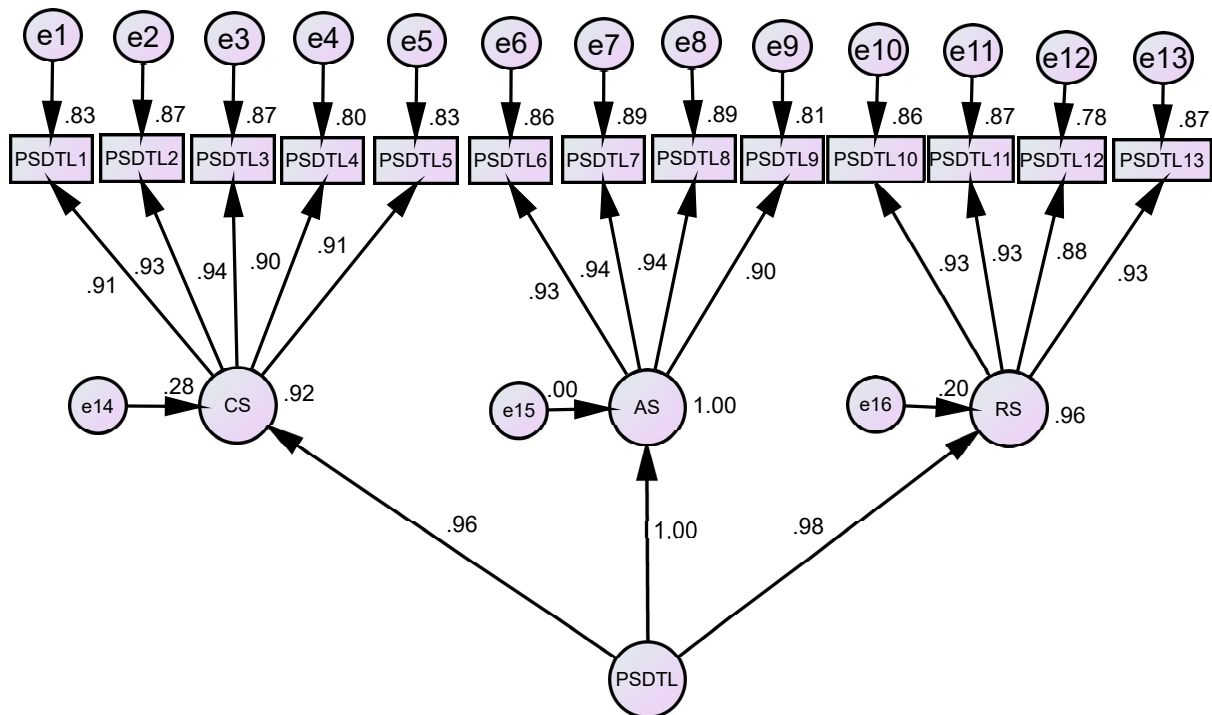


Figure 2. CFA Results for the Second-Order Factor Model.

Note. Standardized estimates presented. Fit statistics:  $\chi^2 = 445.44$ ,  $df = 63$ ,  $p < .001$ , a TLI = .958, CFI = .971, and RMSEA = .093. RMSEA 90 percent confidence interval = .09-.10.

### Convergent Validity

Convergent validity tests the relation of a scale to an already accepted construct, which can serve to further corroborate construct validity and also affirm content, substantive, and structural validities (Smith, 2001). Model testing using structural equation modeling was again used to evaluate the relationship between PSDTL and Enabling School Structure (ESS). As was

mentioned earlier, it is important for school leaders to ensure the formal rules, structures, and hierarchy of the school organization foster the development of teacher leadership and empower, not hinder, teacher leaders work to improve the organization (Ford & Ware, 2018; Hoy & Sweetland, 2001). An enabling school structure is necessary to support authentic teacher

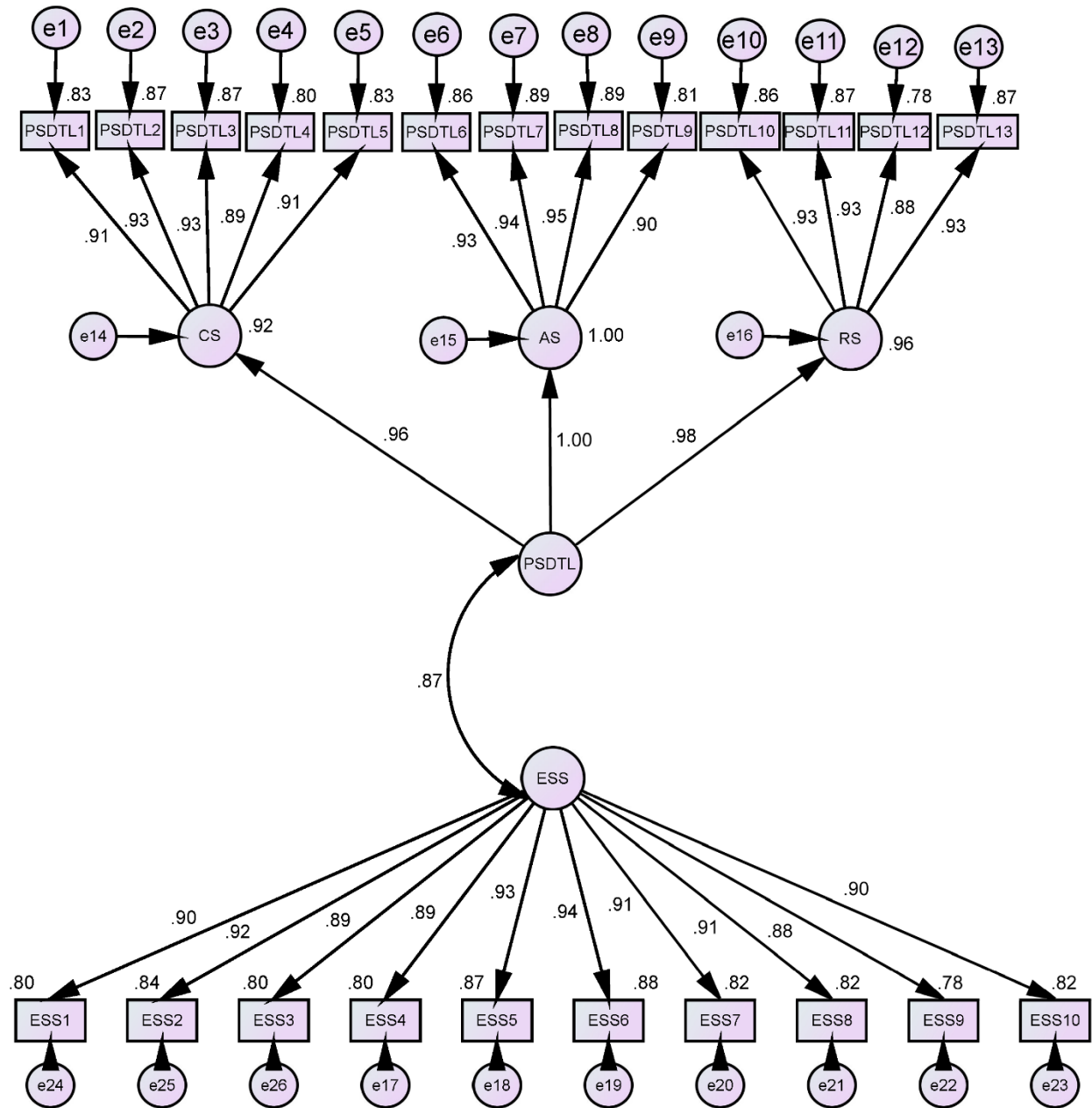


Figure 3. *Structural Equation Model Test of Convergent Validity with Enabling School Structure.* Note. Standardized estimates presented. Fit statistics:  $\chi^2 = 1082.23$ ,  $df = 226$ ,  $p < .001$ , TLI = .96, CFI = .97, and RMSEA = .07. RMSEA 90 percent confidence interval [.069-.078].

leadership structures and their development. A structure that is more bureaucratic in nature will hinder teacher psychological needs, and, in turn, also hinder authentic teacher leadership. However, a school structure that provides clarity and autonomy for teachers, is supportive of their needs and development. Thus, it was hypothesized that ESS would be positively correlated with PSDTL measure.

The results displayed in Figure 3 confirm that the covariance model of PSDTL and ESS exhibited a good model fit, falling within Browne & Cudeck's (1993) thresholds of acceptable model fit,  $\chi^2 = 1082.23$ ,  $df = 226$ ,  $p < .001$ , TLI = .96, CFI = .97, and RMSEA = .07 [.069-.078]. The overall correlation between PSDTL and ESS was strong,  $\beta = .87$ ,  $p < .001$ , thus supporting the hypothesis that autonomy-supportive school structures that help teacher leaders—not hinder them—in their work is positively related to strong principal support for teacher leadership. Furthermore, the strength of the model fit, the strength of the correlation between the two variables, and the amount of variance this model explains, provides substantial evidence for convergent validity.

Building on the prior model, the final empirical test for convergent validity was to introduce endogenous variables as potential outcomes of PSDTL practice within a school. The two variables chosen were faculty trust in the principal and collective teacher efficacy. Faculty trust in the principal was used as an outcome of PSDTL in the final validity test because it was hypothesized that, as good PSDTL practice is put in place, the principal is developing need-supportive teacher leadership skills and practice that will likely result in higher trust in the principal on the part of teachers. Collective teacher efficacy was used as an outcome of PSDTL because it is hypothesized to be a natural result of needs-supportive PSDTL (particularly competence-supportive PSDTL), because CTE means teachers are experiencing increased

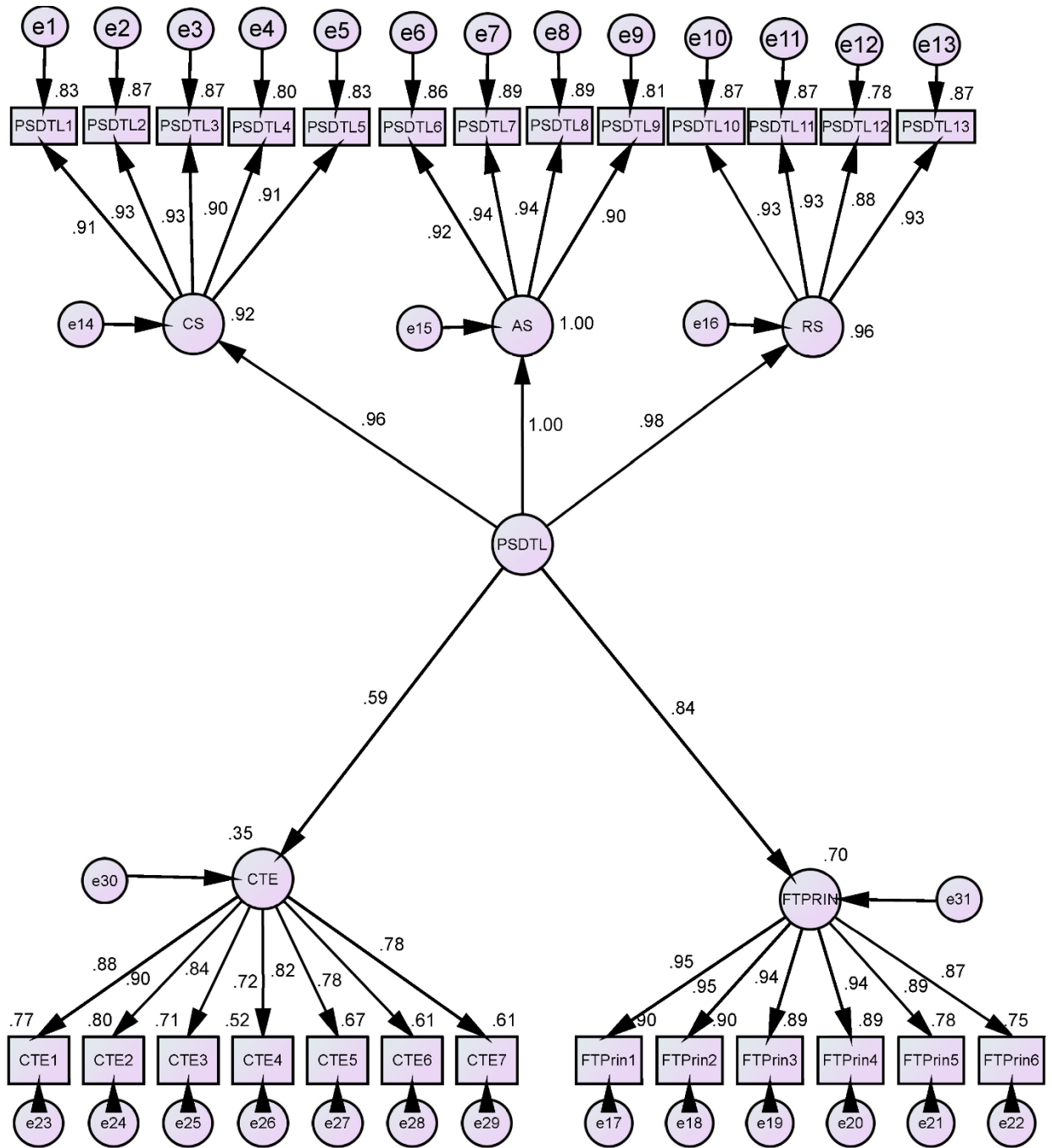


Figure 4. Structural Equation Model for Convergent Validity Test with FTPrin and CTE. Note. Standardized estimates presented. Fit statistics:  $\chi^2 = 1501$ ,  $df = 294$ ,  $p < .001$ , TLI = .940, CFI = .95, and RMSEA = .077, 90% CI for RMSEA [.073-.081].

confidence in their abilities to accomplish challenging tasks, but also increased belief in the efficacy of their colleagues in accomplishing important outcomes for the school.

Figure 4 displays the results of this final empirical validity test. It was necessary to constrain some parameters in the model to recapture the degrees of freedom needed to estimate fit statistics. Specifically, autonomy-support was constrained to a standardized weight of 1 for all models as this was its exhibited loading to begin with. The results show good model fit,  $\chi^2 = 1501$ ,  $df = 294$ ,  $p < .001$ , TLI = .940, CFI = .95, and RMSEA = .077 [.073-.081]. These estimates all fell within the threshold of acceptable model fit (Brown & Cudeck, 1993). The parameter estimates strongly confirmed the predicted correlation between PSDTL and CTE ( $\beta = .59$ ,  $p < .001$ ), and between PSDTL and FTPRIN ( $\beta = .83$ ,  $p < .001$ ). PSDTL explained approximately 35% of the variance in collective teacher efficacy and 70% of the variance in faculty trust in the principal.

This model confirms the predicted positive relationship of PSDTL with both collective teacher efficacy and faculty trust in the principal. The empirical results of structural equation model support the hypothesis that as teachers perceive their principal supporting the development of them as teacher leaders, they also perceive the teachers in their building as more efficacious and in-turn are more trusting of their principal.

### **Summary**

The results obtained through Rasch measurement analysis, confirmatory factor analysis and structural equation modeling approaches generated the empirical evidence necessary to confirm the substantive, structural, and convergent validity and reliability of the PSDTL construct and scale.

## **Chapter 6:**

### **Discussion, Implications, and Suggestions for Future Research**

#### **Restatement of Purpose**

Through the lens of self-determination theory (SDT), the purpose of this study was to develop and validate a measure of principal support for teachers' psychological needs in the development of their teacher leadership capacities and roles—termed Principal Support for the Development of Teacher Leaders (PSDTL). PSDTL is defined as a set of school-wide organizational and normative conditions, emerging through leader actions, that support the psychological needs of teachers necessary for the development of their leadership capacities within the school. PSDTL as a measure is based on the idea that teacher leadership needs to be intentionally planned and supported by school principals. This intentional development will, in turn, support the activation of the existing intrinsic motivation of teachers, and hopefully help spur larger school improvement. The study was framed by the following research questions:

1. What empirical evidence is there to support the validity and reliability of the PSDTL concept and measure?
2. If valid, in what ways is PSDTL related to other conditions of effective leadership and school improvement, such as faculty trust in the principal, enabling school structure, and/or collective teacher efficacy?

#### **Summary of Results**

In this chapter, the findings, implications, limitations, and opportunities for future research are discussed. This study began by recognizing the significant leadership work teachers are engaged in their schools, and questioning the ways principals are setting them up, or not setting them up, for success in their leadership roles. This study has argued that the successful

development of teacher leaders can support school improvement. However, successful development occurs when the work is positioned in such a way that it supports teachers' psychological needs as learners in the areas of competence, autonomy, and relatedness. However, if this claim holds true, principals will need a way to assess the degree to which their support of teacher leadership functions in this way. The purpose of this study was to develop such a measure, PSDTL. PSDTL was conceptualized, designed, and tested as a new instrument intended to measure just such principal practice—the degree to which principals were perceived as supporting teacher leadership development via support for teachers' psychological needs as learners.

The results of the various tests of validity and reliability were as follows. A Rasch item-level analysis was conducted to examine evidence of substantive validity. The produced fit statistics confirmed that the PSDTL items had a wide range of difficulty and responses predictability matched the difficulty of items. Next, a confirmatory factor analysis was conducted to examine the structural validity of the PSDTL construct. First and second-order models were built and compared. The second-order model, which was built to mimic the internal theoretical structure of Self-determination theory, had superior fit in comparison to the single-level model. Subsequently, various tests of convergent validity were conducted. Enabling school structure's relationship to PSDTL was analyzed as a validity parameter—in this case a correlation—and the results a strong correlation and good model fit. Lastly, an empirical test was conducted to evaluate other convergent validity evidence for PSDTL. The relationship between PSDTL, collective teacher efficacy, and faculty trust in the principal was analyzed. Fit statistics and correlations between the measures confirmed a good model fit and important relationships between PSDTL and these outcomes.

## **Discussion**

The central finding of this study is that principal support for the development of teacher leadership can be reliably and validly measured as a concept and measure of teacher perceived needs with respect to teacher leadership support. In examining the evidence as a whole, this study has established to a great degree the validity of the PSDTL measure as a clear and distinct mechanism with the implications for leader policy and practice. This measure also has the potential to further school leaders' understanding of their role in teacher leadership within their school site, the supports necessary to ensure positive teacher perceptions, and deepen the influence school principals have on its successful integration into school structures and practice. This foundation was established by situating the construct within teacher leadership and teacher leadership development literature and theory, which entailed problematizing early leadership research, including Bass' (1990) Traits Theory, in favor of research that recognized that leaders are unique, complex, and cannot be defined by a particular quality or personality (Bird, 1940; Jenkins, 1947; Stogdill, 1948).

Additionally, leadership models such as distributed leadership theory and shared leadership, suggest that successful organizations need not lead through a single individual. By placing teachers within a supportive, empowering leadership model, schools can build their capacity and sustainability (Copland, 2003; Spillane, 2006). However, such a model cannot succeed without an intentional development of collaboration, trust, learning, and accountability (Copland, 2003). Yet, these competencies and conditions are not guaranteed in a school, rather leadership teams need to develop them with proper time and training (Lindahl, 2008). PSDTL provides a measurement tool for evaluating and tracking these conditions as they develop within a school.



Research has already tied school leadership to school effectiveness, school climate, and student achievement (Engin, 2020; Ford & Forsyth, 2021; Forsyth et al, 2001; Heck, 2000; Walters et al., 2004). However, many of these studies have analyzed school leadership unilaterally by focusing on principals as leaders, while omitting teachers and their potential influence on the leadership of the school. While teacher leadership has been popular in research, policy, and reform strategies, the definitions utilized have varied significantly (Little, 2003; Harris, 2005; Bagley & Margolis, 2018). This has slowed the progress of research and application, specifically in quantitative studies, of teacher leadership as a significant construct within school leadership (Hairon & Goh, 2015). PSDTL advances teacher leadership research by providing the theoretical and empirical connections that tie a principal's own leadership to the development of teachers' leadership and other important school-wide organizational conditions.

Developing teacher leadership is in the best interest of school leaders because it supports school improvement. Teachers have the most connection with the many initiatives, systems, and processes that are occurring at any given point within the school (Bagley & Margolis, 2018; Engin, 2020). Lambert (2003) asserted that teacher leadership can be supportive of school climate as it provides an avenue for authentic exchanges between principals and teachers. The findings of this study support such a claim by showing the strong relationship between PSDTL and important schoolwide conditions such as faculty-principal trust and collective teacher efficacy which, themselves, have been linked to other important school outcomes (Forsyth et al., 2011; Goddard et al., 2001).

### **Implications for Policy and Practice**

Yet what the findings of PSDTL also point to the importance of principals learning how to better support teacher leadership growth in their school. If a principal finds low scores on the

PSDTL measure, the next question is what do they do about it? Fortunately, the literature is instructive on what principals can do. For example, in order to support improved instructional practice and student achievement, effective professional development in schools needs to be collaborative, coherent, pedagogical, and consistent (Borko, 2004; Cordingley et al., 2005; Desimone et al., 2002; Garet et al., 2001; Poekert, 2012; Yoon et al., 2007). This is no different for the professional development of teacher leadership. Principals must value effective professional development by integrating it into with school culture (Murphy, 2005). Through this culture, teachers positively contribute to a school's collective trust, and consequently are more likely to utilize professional development spaces to innovate, practice, and reflect on their leadership growth. A culture of teacher leadership is also supportive of teachers' psychological needs for competence, autonomy, and relatedness. Meeting these needs is essential to initialize teachers' existing intrinsic motivation to engage in leadership work, a central proposition of self-determination theory (Deci & Ryan, 2000). Without effective systems and development, teacher leadership can be a detriment to intrinsic motivation. Teachers can become burdened by the extra time and work associated with their role, the challenging conversations they need to have with peers while coaching, and the hard decisions that are necessary within formal leadership (Cherkowski, 2018). This is amplified when principals engage in controlling leadership, such as micromanagement (Cherkowski, 2018).

Teacher leadership has been and continues to be a priority for schools, districts, and reform initiatives (Bryant et al., 2017). As policy is developed that contributes to teacher leadership, it is necessary that they include a plan for consistent professional development around teacher leadership. In order to avoid exploiting teachers, policies need to be funded so teachers can receive ample time, acknowledgment, and compensation in accordance with their

new work (Crawford, 2012; Dyke & Bates, 2019; Karvelis, 2019; Lumby, 2013). Beyond funding, policy needs to be responsive to the psychological needs, autonomy, competence, and relatedness, of teachers to support their intrinsic motivation for growth in their position (Ford & Youngs, 2018; Woods & Gronn, 2009). As there has not been a measurement tool for assessing a teacher's view of their leadership development, PSDTL provides a way evaluate if teachers are perceiving their leadership development as supportive of their needs.

With an increase in teacher leadership models, principals need structures to assess, analyze, and track progress towards associated goals. Previously there have been few measurement tools for leaders to use in assessing the degree to which they are accomplishing these tasks (Angelle & DeHart, 2016; Flood & Angelle, 2017; Hairon & Goh, 2015; Parlar et al. 2017). PSDTL provides this measurement tool that has been lacking, as it positions principals with the ability to directly affect teachers' day-to-day environment and working conditions. PSDTL can help school principals understand how teachers are perceiving their actions in support of teacher leadership.

Furthermore, the PSDTL measure can be used by district-level leaders to evaluate teacher leadership initiatives across the entire school district. PSDTL can provide a score for each school, which could be used as data point to drive growth and evaluative feedback for principals. Additionally, it could be used as a diagnostic tool for evaluating district teacher leadership initiatives. If there was a high aggregate score for the district, it could affirm the work that is being done to develop teacher leaders. However, a low score may indicate that teacher leadership structures are not supportive of teacher motivation or that professional development offerings need to be modified to further meet building needs of teachers and principals.

## **Limitations**

No study is complete, however, within a discussion of its limitations. This dissertation has been built around the following definition of teacher leadership:

Building on distributed and shared leadership models, a successful teacher leadership model: empowers and leverages successful classroom teachers, through collaboration, shared knowledge, and collective goals, to lead alongside principals in building instructional capacity, adult and student culture, and teamwork among staff. Without removing them from the classroom, principals are charged with creating systems that support teacher leaders by clearly defining roles, providing them with proper time and resources, and developing leadership knowledge and skills.

This definition was built through an analysis of key teacher leadership literature (Little, 2003; Harris, 2005; Bagley & Margolis, 2018). However, definitions of teacher leadership in research, policy, and practice have varied and include a wide-range of organizational functions and approaches (Little, 2003; Harris, 2005; Bagley & Margolis, 2018). As such the definition used in this study is a limitation, simply because it reflects one particular perspective and necessarily does not fully encompass the myriad ways teacher leadership is being defined and implemented in schools.

Critical to this study and its assumptions as to the importance of principal support for teacher leadership development is the belief that intentional development of teacher leadership capacity correlates with increased efficacy of teacher leadership initiatives. However, there have only been a few empirical studies that have explored these connections explicitly. A few recent studies have found quality professional development to be a significant predictor of teacher leadership because training allows teachers to feel more apt in their own leadership skills and

abilities (Huerta et al., 2008; Watt et al., 2010). However, both of these studies examined a specific training program—the AVID teacher training program—and its relationship to teacher leadership, which is narrower in scope. Although there is other literature (Barth, 1990; MacBeath & Dempster, 2008; Murphy, 2005; Poekert, 2012; Yendol-Hoppey & Dana, 2010) that supports the theoretical extension of these findings, additional empirical research is needed (Watt et al., 2010) to further support the claims made in this study as to the importance of PSDTL both in measure and in practice.

Additionally, this study argues that teacher leadership can be a lever to better meet teachers' psychological needs and consequently better motivate and support them. The PSDTL project applies Self-determination theory in a novel way to an area of research where it has rarely been used. As such, there are no empirical studies that specifically apply SDT to the research to a principal's development of teacher leadership and while this study's main focus has been to empirically establish PSDTL as a valid and reliable as a measure for use in research and practice, this study needs further empirical support and further examination and refinement of the PSDTL measure is needed.

Related to the following point, it is important to acknowledge that PSDTL is a global measure of teacher perception of principal support at one point in time (cross-sectional). The singular nature of this data presents another limitation. It is likely that a teacher's perception of their principal's needs-supporting behavior for teacher leadership development could vary depending on the time of the survey within the school year. Lastly, the data analyzed in this study was obtained from a single urban district in the Southwestern United States and excluded teachers at early childhood centers and alternative education schools. These limitations raise

questions about whether these findings are generalizable to other educational contexts, such as rural school districts, suburban school districts, early childhood centers, and/or higher-education.

### **Opportunities for Future Research**

Arising out of the limitations, the most obvious opportunity for future research is in further validation of the PSDTL measure, including replication of the study within similar school populations as well as more unique school populations. Replication studies would support additional validation and reliability for PSDTL as a measure, especially if done with alternative populations and educational contexts. Additionally, this study could be enhanced from a replication with multiple survey points over the course of a school year or over multiple school years to build a more robust repository of longitudinal PSDTL data.

Further, studies in the area of principal support for teacher leadership development would benefit from additional research on the causal connection between effective teacher leadership professional development and the efficacy of teachers' leadership. This could be accomplished through methodological replication of the AVID studies (Huerta et al., 2008; Watt et al., 2010), particularly if they were expanded to the general teacher preparation context.

The scope of this study was limited to conceptualizing PSDTL; however, much could be learned through a mixed method study that interviewed principals and teachers at schools to better understand the dynamics of principal support for teacher leadership and perhaps understand those dynamics within school contexts of both low and high PSDTL scores. In order to support effective shifts to policy and practice, additional insight is needed into these dynamics so that researchers can better understand how principal behaviors translate into and/or develop teacher leadership motivation and behavior. PSDTL may provide principals with an initial glimpse at how their behavior is supporting teacher needs around teacher leadership

development, but this study does not provide much in the way of guidance on the tools or structures needed to effectively coach principals on assessing, analyzing, and tracking their progress in these efforts. This additional research could provide better guidance for principals in knowing what to do to effectively improve or maintain their PSDTL scores.

Additionally, there are numerous schools nationally and internationally that have significantly shifted their organizational and operational structures and systems to prioritize teacher leadership. Many of these schools have redefined the role of a principal. Further research could be done to analyze how particular school contexts, especially those with unique teacher leadership initiatives, affect PSDTL. Additionally, these particular schools could be ideal sites to study the ways in which teacher leadership development has been successful from a leadership context and from a motivational context.

## **Conclusion**

Teaching is incredibly difficult, and so is school leadership. Doing both simultaneously is even more challenging. Regardless, teachers are capable of taking on significant leadership roles within their schools while also maintaining instructional excellence in their classrooms. When this leadership is recognized and cultivated, teachers feel seen, trusted, and valued. Yet, developing excellent classroom teachers and teacher leaders does not happen magically. Intentional development of these skills is needed so that teachers have a voice within their school, and their professional and psychological needs are being seen, supported, and nurtured.

It is up to principals to acknowledge teachers' leadership potential and support their leadership development. Sharing leadership with teachers can also help solve school-wide gaps in instructional capacity, school structure, and student culture (Bagley & Margolis, 2018). Teacher leadership is a mindset and an initiative that can support school success and also

reenforce teachers' motivational needs (Ford et al., 2019; Ford & Ware, 2018). However, without accountability, principals are at risk of making decisions that could thwart teacher motivation, rather than support it. Often principals distribute and share leader leadership tasks more than administrative tasks and directly related to the classroom (Helterbran, 2010). Additionally, principals' personal interactions, and systems, with teachers can be seen as controlling, rather than supportive if teachers' psychological needs are not satisfied (Bryant et al., 2017).

This study attempts to shift accountability for teacher leadership towards the school principal, shining a light on how their interactions and behaviors can help or hinder the development of a culture of shared leadership within their school. PSDTL ensures that there is a measurement tool available for principals to monitor their own progress towards shared leadership of the school that values teacher needs and concerns. When principals support teacher autonomy, competence, and relatedness, they are able to foster higher levels of intrinsic motivation in teachers, thus furthering their leadership development, and creating a more efficient and effective school organization. This approach to teacher leadership ensures that it is not only the school's and students' needs that are prioritized, but some consideration is given for the needs of teachers as well.



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## Appendix A:

### Measure for Principal Support for the Development of Teacher Leaders

**Teacher Leadership** - Distributed and shared leadership models empower and leverage successful classroom teachers (Nappi, 2014), through collaboration, shared knowledge, and collective goals, (Leading Educators, 2015) to lead alongside principals in building instructional capacity, adult and student culture, and teamwork among staff. Without removing them from the classroom, principals are charged with creating systems that support teacher leaders by clearly defining roles, providing them with proper time and resources, (The Aspen Institute, 2014) and developing leadership knowledge and skills (Hairon & Goh, 2015).

**Principal Support for the Development of Teacher Leaders (PSDTL)** - PSDTL is defined as a set of school-wide organizational and normative conditions, emerging through leader actions, that support the psychological needs of teachers necessary for the development of their leadership capacities within the school.

*Please rate the extent to which you agree or disagree with the following statements.*

#### Competence

1. My school leaders provide opportunities for teachers to gain experience in developing leadership skills.
2. My school leaders have clearly defined teacher leadership roles within our school.
3. My school leaders provide the time and resources necessary for teachers to take on leadership opportunities within the school.
4. After assigning leadership responsibilities, my school leaders provide periodic constructive feedback to teachers to help develop their leadership skills.
5. My school leaders ensure leadership skills are incorporated into our professional development programs.

#### Relatedness

1. My school leaders care about our development as teacher leaders.
2. My school leaders make an effort to create shared school goals with their teachers.
3. Our collective goals as a school make it possible for principals and teachers to lead alongside one another.
4. My school leaders provide opportunities for teachers to work collaboratively on leadership tasks.

#### Autonomy

1. My school leaders empower teachers to assume informal leadership roles.
2. My school leaders create opportunities for teachers to take initiative in improving school processes and outcomes.
3. My school leaders often discuss school leadership problems and possible solutions with teachers.
4. My school leaders relinquish control of some key operational decisions to teachers.

## Appendix B: Other Study Measures

### *Items Comprising Enabling School Structure (ESS)*

#### *ESS Items*

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##### Enabling formalization items

1. Administrative rules in this school enable authentic communications between teachers and administrators.
2. Administrative rules help rather than hinder.
3. Administrative rules in this school are guides to solutions rather than rigid procedures.

##### Coercive formalization items

4. Administrative rules in this school are used to help teachers improve.
5. Administrative rules in this school are not used as substitutes for professional judgment.

##### Enabling centralization items

6. The administrative hierarchy of this school enables teachers to do their job.
7. The administrative hierarchy of this school facilitates the mission of the school.

##### Hindering centralization items

8. The administrative hierarchy promotes student achievement.
  9. The administrative hierarchy of this school encourages innovation.
  10. In this school, the authority of the principal is used to support teachers.
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### *Items Comprising Faculty Trust in Principal (FTPrin)*

#### *FTPrin Items*

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1. The teachers in this school have faith in the integrity of the principal.
  2. The principal in this school typically acts in the best interests of teachers.
  3. The principal tells teachers what is really going on.
  4. Teachers in this school trust the principal.
  5. Teachers in this school can rely on the principal.
  6. The principal in this school is competent in doing his or her job.
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### *Items Comprising Collective Teacher Efficacy (CTE)*

#### *CTE Items*

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1. Teachers in this school are able to get through to the most difficult students.
  2. Teachers here are confident they can motivate their students.
  3. Teachers here never give up, even if a child doesn't want to learn.
  4. Teachers here have the skills needed to produce meaningful student learning.
  5. Teachers in this school believe that every child can learn.
  6. Teachers in this school have the skills to deal with student disciplinary problems.
  7. Teachers here are able to meet the specific learning needs of each child.
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