THE IMPACT OF TEACHER INTRINSIC AND EXTRINSIC MOTIVATION ON TEACHER

SELF-EFFICACY

by

Sallie Johnakin-Putnam

Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

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ABSTRACT

Teacher recruitment and retention is a growing concern for educational organizations. This is in large part due to the increasing work demands and underfunding of public funding. The purpose of this study was to investigate the relationship between teacher motivation and the adaptive factor of self-efficacy. The theoretical frameworks of Bandura's social learning theory, Deci and Ryan's self-determination theory, and Rotter's locus of control theory were used to guide this study. The researcher used a quantitative correlation study to examine the relationship between self-efficacy and intrinsic motivation, extrinsic motivation, and overall motivation. The two surveys were given to 130 elementary school teachers from two school districts in a southeastern state. The *Teacher Sense of Efficacy Scale (TSES)* and *Work Tasks Motivation Scale for Teachers (WTMST)* surveys were used to measure perceived teacher self-efficacy and motivational beliefs. Pearson product-moment correlations were used to measure the relationship between the dependent variable (teacher self-efficacy) and the independent variables (intrinsic motivation and extrinsic motivation). Data analysis revealed a positive correlation between self-efficacy and intrinsic motivation; however, no relationship was found between self-efficacy and extrinsic motivation nor overall motivation. Recommendations for future research include replicating this study using both elementary and secondary teachers as well as utilizing demographics to determine generalizations about teacher self-efficacy and motivation.

Keywords: extrinsic motivation*, intrinsic motivation, motivation, self-efficacy, teacher efficacy

Dedication

I dedicate my dissertation to my father, Reverend Edwin G. Burch, whose guidance, support, and encouragement have been the driving forces to navigate me through this journey. My only regret is that he passed away before I received my Ed.D., but I know he is my guardian angel and continues to guide me in life's journey. To my mother, who taught me how to demonstrate love and laughter during times of adversity. I often hear your silent whispers of encouragement and miss you every day.

To my daughters, Anne, and Virginia, for sacrificing spending time with their mom for these past six years. I love you more than words can express. I continue to try and be the best mom I can be and lead by example. I know you both will be life-long learners, and I am excited to see what your life's journey has in store.

To my sisters, your encouragement during this process has meant more than you will ever know. I continue to strive to make you both proud.

To my friends, near and far, for your continual who support and encouragement. You believed in me when I had so many doubts. A very special thank you to Frances Tulloss for encouraging me every step of the way. Your prayers and encouragement meant more than you will ever know.

To my dissertation chair, David Gorman, for your patience, guidance, and encouragement. You talked me through not giving up on several occasions. And above all for being my advocate and keeping me in prayer along this journey.

Acknowledgments

"But Jesus beheld them, and said unto them, With men this is impossible, but with God all things are possible." – Matthew 19:26.

Above all others, I give thanks to my Lord and Savior, Jesus Christ, for giving me the strength and courage to complete this journey. Through His strength and by His grace, I have continued to persevere even during those times I felt lost and ready to quit.

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List of Abbreviations

Teacher Sense of Efficacy Scale (TSES)

Work Tasks Motivation Scale for Teachers (WTMST)

Research and Development Corporation (RAND)

The Every Student Succeeds Act (ESSA)

Teacher Motivation Assessment Scale (TMAS)

Teacher Motivation Diagnostic Tool (TMDT)

CHAPTER ONE: INTRODUCTION

Overview

The United States is experiencing a teacher shortage; however, the shortage areas vary by content area and geographical location. According to the Learning Policy Institute, more than 40 states identified special education, mathematics, and science as shortage areas. During 2015-2016, the United States experienced a shortage of approximately 60,000 teachers (Sutcher, Darling-Hammond, & Carver-Thomas, 2016). The supply of teachers declined by 35% between 2009 and 2014 (Sutcher et al., 2016). A projected 316,000 teachers will be in demand per year by 2025 (Sutcher et al., 2016). The teacher demand continues to grow due to an increase in student enrollments, the decrease in pupil-teacher ratios, and overall teacher attrition (Sutcher et al., 2016). Enrollment in teacher preparation programs has dropped 35% between 2009 and 2014 (Sutcher et al., 2016). Researchers have identified four major areas that influence the retention and recruitment of teachers: compensation, preparation, mentoring and induction, and teaching conditions (Grissom, Viano, & Selin, 2015).

Recruiting and retaining quality teachers is paramount to the success of the public education system and student achievement. The constructs of teacher efficacy and motivation are two areas deemed as influential on both teacher qualification and effectiveness (Perlman, 2013). As the stressors of teaching increase, it is not surprising that research might focus on the link between teacher efficacy and burnout rates, teacher retention, and overall job satisfaction (Zee & Koomen, 2016). Given the impact teacher self-efficacy has on instruction and teacher well-being, it is essential to ascertain the influence teacher efficacy has on positive factors of teaching, such as increased job satisfaction and motivation (Han & Yin, 2016). Doing so may influence the structure of schools and assist in retaining teachers.

Background

Bandura defined self-efficacy as "an individual's conviction about his or her capabilities to accomplish a task when faced with a challenge" (Troesch & Bauer, 2017, p. 390). Bandura's construct of social learning theory is at the forefront of self-efficacy. The three core concepts framing the social learning theory include: people learn through observations; mental status is essential to learning; and learning does not necessarily change behavior (Bandura, 1977). Research findings over 20 years continued to determine the influence efficacy had on student achievement (Zee & Koomen, 2016). Zee and Koomen (2016) cite several studies in which researchers have analyzed the impact teacher self-efficacy has on student performance, the use of differentiated instructional methods, classroom management, and job satisfaction.

Researchers began investigating the construct of teacher self-efficacy in the late 1970s (Berman, McLaughlin, Bass, Pauley, & Zellman, 1977). During that time, social researchers began to recognize the influence efficacy could have on a teacher's effort and its impact on student achievement (Bandura, 1986, 1997). Grounded in Bandura's social cognitive theory (1986), self-efficacy originates from multiple sources of human behavior. Bandura explains that the primary source of efficacy is performance-based accomplishments; therefore, performance mastery of professional tasks is indicative of a teacher's performance. Bandura (1977) further describes that the other sources which can influence performance include observing the success of others, verbal persuasion, and physiological arousal to monitor anxiety and vulnerability. Bandura explored each of these sources throughout a variety of research studies.

Rotter (1954) investigated the impact of internal factors and external factors on a person's perceived self-efficacy. Rotter (1954) determined that a person's self-efficacy is higher when internal factors are understood to be influential factors. Rotter (1954) labeled this

construct the locus of control theory (1954). Rotter's (1954) locus of control theory research regarding teacher efficacy is prolific. There are numerous studies linking teacher efficacy to successful outcomes; however, most research studies focus on factors that hamper teachers' welfare and place emphasis on the negative influences of teacher efficacy (Darshani, 2014; Rose & Medway, 1981). It is necessary to investigate instructional practices that increase individual teacher efficacy while at the same time assisting in improving student learning and achievement (Miller, Ramirez & Murdock, 2017).

Research conducted in the late 1990s and early 2000s has associated instructional quality and the level of student support provided in the classroom to teacher self-efficacy (Coladarci, 1992; Hoy & Spero, 2005; Tschannen-Moran, Hoy, & Hoy, 1998; Wheatley, 2005). Teachers with high self-efficacy skills are more likely to put forth an increased considerable effort, persevere over obstacles, develop challenging lessons, and teach in a variety of ways compared to those with a lower level of self-efficacy (Guo et al., 2014; Holzberger et al., 2013; Miller et al., 2017). It is necessary to investigate instructional practices that increase individual teacher self-efficacy and, at the same time, assist in improving student learning and achievement (Holzberger et al., 2013).

There are numerous studies linking teacher efficacy to psychological well-being; however, the majority of the current research focuses on factors that hinder teachers' well-being. The research tends to emphasize the negative influences of teacher self-efficacy, such as burnout rates and retention (Aloe, Amo, & Shanahan, 2014; Troesch & Bauer, 2017; Wang, Hall, & Rahimi, 2015). Conversely, some researchers have explored the positive influence teacher self-efficacy can have on both teacher well-being and student achievement (Künsting, Neuber, & Lipowsky, 2016; Lee, Walkowiak, & Nietfeld, 2017).

Hattie (2015) conducted a meta-analysis of nearly 200 areas of influence and the impact on student learning and achievement. Hattie (2015) found that collective teacher efficacy is the second most influential factor in student achievement. Since collective teacher efficacy is a combination of the efficacy of individuals, it is essential to understand the influence of individual teacher self-efficacy. While Hattie (2015) investigated collective self-efficacy, earlier researchers, Cho and Shim (2013) and Holzberger, Philipp, and Kunter (2013) began to examine teacher self-efficacy. Cho and Shim (2013) noted that teachers with a higher level of self-efficacy tend to implement a more significant number of mastery-oriented methods and have higher expectations for students. Holzberger, Philipp, and Kunter (2013) found that individual teacher self-efficacy was a precursor and a consequence of instructional practice.

 Miller, Ramirez, & Murdock (2017) linked teacher self-efficacy to teacher success and student achievement. Associated with teacher self-efficacy is the quality of instruction, and the extent of support students receive in their learning (Guo, Dynai, Pelatti, & Justice, 2014). It is necessary to evaluate the challenges facing our educational system and, as such, implement reforms for improvement that have a sustainable impact on student achievement (Wang, Hall, & Rahimi, 2015). Teacher self-efficacy has emerged as a paradigm for studying teacher motivation. This construct has provided an avenue for examining the relationship between instructional practices and a teacher's belief in his or her capability (Kilday, Lenser, & Miller, 2016).

Zee and Koomen (2016) found that the impact of teacher efficacy is broad in scope and has direct and indirect instructional implications. They also concluded that teacher self-efficacy has more significant influence and direct impacts at the elementary level than at the secondary level. A teacher's self-efficacy impacts the effort he or she puts into the craft of teaching and

professional goal-setting. Additionally, it impacts his or her desire to attain a higher level of

professionalism (Durksen, Klassen, & Daniels, 2017; Ford, Sickle, Clark, Fazio-Brunson, &

Schween, 2017; Jansen in de Wal, Brok, Hooijer, Martens, & van den Beemt, 2014). Various

instructional practices influence teacher efficacy. Several studies have emerged in the last five

years, which suggest a correlation between teacher efficacy and teacher motivation (Durksen et

al., 2017; Han & Yin, 2016; Wang et al., 2015). A critical factor that impacts student

motivation, general teaching practices, teachers' psychological fulfillment, and educational

reform is teacher motivation (Han & Yin, 2016).

  The attitudes and beliefs of teachers can have a powerful impact on student success.

Teachers who demonstrate a high level of self-efficacy regarding their ability to impact student

success can have a positive effect on student achievement and influence student growth (Miller,

Ramirez, & Murdock, 2017). Conversely, those teachers who have a low level of self-efficacy

toward their ability to influence student achievement can cause a decline in student achievement

and negatively impact the academic growth of students (Miller et al., 2017). It is essential that

those in education, especially in leadership roles, have an understanding as to the influence

teacher self-efficacy has on the motivation of teachers to remain in the profession (Sutcher et al.,

2016).

  Teacher motivation is grounded in Deci and Ryan's (1985) self-determination theory.

Self-Determination theory postulates the judgement of choice motivates individuals over their

actions (Deci & Ryan, 2008). Deci and Ryan (2008) suggest there are two types of motivation,

autonomous and controlled, both of which "energize and direct behavior" (p. 182). Teacher

motivation impacts both individual teacher goals, but also the goals of the educational

organization equally at the building and district-level (Durksen et al., 2017; Jansen in de Wal et

al., 2014). Intrinsically, teachers develop personal and professional goals; however, extrinsic goals based on student growth and teacher performance are becoming more significant as a result of high-stakes assessments that are being tied to funding and accreditation (Sutcher et al., 2016).

Within the organization, what is valued is derived from the experiences teachers have in the workplace (Skaalvik & Skaalvik, 2017). Teacher attrition rates within the first five years of teaching vary between 20% and 30% (Gray, Taie, & O'Rear, 2015). Those leaving the profession attribute their decision to some workplace conditions, including quality of instructional leadership, the culture of the school, opportunities to make decisions, and collegial collaboration (Sutcher et al., 2016).

Problem Statement

There is a growing problem in education regarding teacher recruitment and retention. According to the Learning Policy Institute, approximately 55% of teachers who left the profession in 2012 cited dissatisfaction as a reason for leaving (Sutcher et al., 2016). The reasons provided ranged from teaching conditions to administrative practices (Sutcher et al., 2016). Teacher self-efficacy has been linked to student achievement; however, there is limited research investigating the relationship between teacher self-efficacy and internal motivation (Han & Yin, 2016; Sekaalvik & Skaalvik, 2017). Researchers who examined teacher self-efficacy found a strong correlation between both student achievement and teacher retention (Kilday et al., 2016; Künsting et al., 2016; Wang et al., 2015). Researchers also found that positive internal behaviors, such as intrinsic and extrinsic motivation, should increase self-efficacy and teacher effectiveness (Han & Yin, 2016; Skaalvik & Skaalvik, 2017).

Although researchers have studied teacher motivation, there is limited research investigating the construct of teacher intrinsic and extrinsic motivation and the measures

instructional leaders can take to positively impact teacher motivation (Chesnut & Cullen, 2014; Durksen et al., 2017; Han & Yin, 2016). Chesnut and Burley (2015) recommended that further research takes place on the conceptualizations of self-efficacy, teacher commitment, and motivation. A study that investigates such a relationship could lead to the formulation of strategies and educational practices aimed at increasing teacher motivation and thus impacting teacher retention and student achievement (Chesnut & Cullen, 2014; Durksen et al., 2017; Han & Yin, 2016).

Therefore, the problem is that low teacher efficacy is impacting teacher motivation as measured by the WTMST and in turn is impacting the overall retention of teachers and thus affecting student achievement

Purpose Statement

The purpose of this quantitative, correlational study was to investigate the relationship between teacher self-efficacy and teacher intrinsic and extrinsic motivation. The dependent variable of self-efficacy is an individual's belief in his or her capabilities to organize and implement the action needed to produce given achievements (Bandura, 1997). The independent variable of teacher motivation was measured through various domains, including class preparation, pedagogical practices, teacher evaluation of student achievement, administrative tasks, and complementary tasks. Researchers note that professional responsibilities such as class preparation, teaching, evaluation of students, administrative tasks, and complementary tasks are essential indicators of teacher motivation (Durksen et al., 2017). Motivation is the energy or drive to move people to do something in nature (Han & Yin, 2016). The purpose of this study was to determine if there was a statistically significant relationship between teacher efficacy and

intrinsic and extrinsic motivation. The study included elementary schools from two school districts in a southeastern state and a sample of 130 participants.

Significance of the Study

The implications of a predictive relationship between self-efficacy and intrinsic and extrinsic motivation are far-reaching. This research has implications beyond the educational landscape and can influence the general workforce by guiding the influence motivation plays on an employee's perceived self-efficacy. Various industry studies have determined a significant relationship between an employee's perceived self-efficacy and the motivation to complete work tasks (Gawke, Gorgievski, & Bakker, 2017; Mills & Fullagar, 2016). Mills and Fullagar (2016) investigated the relationship between self-efficacy and engagement as well as the proposed impact on a teacher's commitment to the chosen profession. Mills and Fullagar supported the concept of motivation being a significant and positive influence of self-efficacy. Both the social environment (school climate, school resources, and student behavior) and dispositional factors (motivation and temperament) impact teacher burnout (Wang et al., 2015).

As school districts deal with budgetary constraints and rigorous accreditation standards, districts must incorporate low-cost, high-yield practices focused on teacher retention and motivation (Sutcher et al., 2016). Approximately 8% of teachers leave the profession annually, and of those two-thirds leave before their scheduled retirement age (Sutcher et al., 2016). Aloe et al. (2014) found that emotional exhaustion, depersonalization, and lowered personal accomplishment were the three dimensions to teacher burn-out. An increase in teacher self-efficacy can guard against teacher burn-out (Aloe et al., 2014). There is a substantial cost to replacing teachers who leave the profession; therefore, many policy decisions are leaning

towards creating compensation packages that are competitive and devising incentive packages that may entice teachers to stay in the profession (Sutcher et al., 2016).

Yaffe (2016) specifies both micro- and macro- causes to the growing teacher shortage the United States is currently experiencing. One of the micro causes is the lack of support, and professional development teachers are receiving; therefore, attrition rates are increasing as teachers leave the profession in droves (Yaffe, 2016). For the educational system to be successful, there must be an understanding of teacher needs, the impact funding has on obtaining and reaching those needs, and the impact teacher motivation has on student achievement (Durksen et al., 2017; Wang et al., 2015). The educational community must determine avenues to empower teachers with low-cost strategies to support academic achievement and increase teacher satisfaction (Durksen, Klassen, & Daniels, 2017). Without the implementation of appropriate strategies and support, teachers will continue to leave the profession, and student achievement will continue to decline (Han & Yin, 2016; Sutcher et al., 2016). It is challenging to determine how a school organization can positively impact the academic success of students; however, research indicates increasing teacher efficacy, in turn, influences student achievement (Han & Yin, 2016).

Research Questions

This study adds to the body of knowledge by investigating the statistical relationship between elementary teachers' intrinsic and extrinsic motivation and the individual teacher's perception of personal self-efficacy. Specifically, the researcher answered the following:

RQ1: Is there a relationship between teacher self-efficacy and intrinsic and extrinsic motivation?

RQ2: Is there a relationship between teacher self-efficacy and intrinsically motivated work responsibilities as measured by WTMST?

RQ3: Is there a relationship between teacher self-efficacy and extrinsically motivated work responsibilities as measured by WTMST?

Definitions

1. *Extrinsic Motivation* – The motivation necessary to engage in an activity based on the influence of an external incentive (Gultekin & Acar, 2014).

2. *Intrinsic Motivation* – The motivation necessary to engage in an activity based on internal, personal factors (Gultekin & Acar, 2014).

3. *Motivation* – The energy or drive to move people to do something in nature (Han & Yin, 2016).

4. *Self-Efficacy* – The belief in one's capabilities to organize and implement the action needed to produce given achievements (Bandura, 1997).

5. *Teacher Self-Efficacy* – A teacher's efficacy belief is a judgment on personal capabilities to influence student achievement (Bandura, 1977).

6. *Work Tasks* – Tasks as designated through WTMST to include six specific work task domains: class preparation, teaching, evaluation of students, classroom management, administrative tasks, and complementary tasks (Fernet, Senecal, Guay, Marsh & Dowson, 2008).

   6a. Class preparation – A teacher's determination of instructional topics, choice of material, presentation form, and work procedure.

   6b. Teaching – A teacher's presentation of instruction and collaboration with the students to answer questions.

6c. Evaluation of students – A teacher's construction of assessments and grading practices.

6d. Classroom management – A teacher's management of student conflict, addressing discipline issues, and application of the rules.

6e. Administrative tasks – A teacher's participation in meetings with stakeholders and accuracy in recording attendance and discipline.

6f. Complementary tasks – A teacher's involvement in extracurricular activities, professional development, and involvement in committees.

CHAPTER TWO: REVIEW OF THE LITERATURE

Overview

This chapter reviews the theories and history of teacher self-efficacy by presenting the conceptual framework which guided this study and reviewing current literature. Furthermore, the chapter addresses the principles, definitions, and theories of self-efficacy and motivation. The review expands on Rotter's locus of control theory, Bandura's social learning theory, and Deci and Ryan's self-determination theory. The literature review provides an overview of recent research and addresses topics to include instruments that measure self-efficacy and motivation. Additionally, the literature review addresses each of the domains found in the WTMST. The chapter concludes with a summary and possible future implications regarding the impact of self-efficacy on motivation.

Conceptual Framework

The study of teacher self-efficacy and motivation is grounded in the theoretical framework of three distinct theories. In the 1960s, Julian Rotter's locus of control theory expanded social learning theory to encapsulate the notion that environmental stimuli result in an automatic response (Rotter, 1966). Rotter (1966) attributes peoples' automatic response to either internal or external factors depending upon their locus of control. In the 1970s, Albert Bandura's social learning theory was behavioral-based, but as Bandura's research evolved, he married schools of thought from behavioral theorists with cognitive theorists to develop several assumptions (Bandura, 1979). Within those assumptions, Bandura began to focus on goal-setting and environmental interactions. He assumed goal-directed behavior encompassed setting goals to assist in directing action (Bandura, 2001). Bandura (2001) also assumed that within a social setting, there are shared interactions of behavior, environment, and people to assist in the

learning. Finally, in the 1980s, Edward Deci and Richard Ryan's self-determination theory

outlined the role choice has on the motivation of actions. Deci and Ryan (1980) determined that

efficacious behaviors improve well-being. Researchers continue to purport the correlation

between internal locus of control and intrinsic motivation, which is a component of self-

determination theory (Slate & Slate, 2014).

Each of these theories is essential when analyzing the impact self–efficacy has on

motivation. Self-efficacy is a construct of motivation. Within Bandura's social cognitive theory,

people are influenced both through intrinsic factors such as personal and behavioral, as well as

external factors such as the environment (Bandura, 1986; Rotter, 1966). It is necessary to

believe in one's capabilities and personal influence to be goal-oriented, implement action, and

demonstrate accomplishment (Durksen et al., 2017). The self-determination theory postulates

intrinsic motivators and teachers' resources can influence teacher well-being (Durksen et al.,

2017). Teacher motivation has a significant influence on teacher effectiveness and student

motivation (Han & Yin, 2016).

Locus of Control Theory

Rotter's locus of control theory stated that the perceived source of influence over

behavioral outcomes is either internal or external (Rotter, 1966). Those with an internal locus of

control view greater control over their results, while those individuals with an external locus of

control perceive fate or outside factors have more significant influence (Mearns, 2017).

Therefore, those with an internal locus of control have stronger self-efficacy as they believe their

actions control the outcome (Slate & Slate, 2014). In contrast, those with an external locus of

control have weaker self-efficacy as outside influences control the outcome (Slate & Slate,

2014). Rotter attributes specific cognitive activities to those individuals with internal control

orientation; therefore, a person's intelligence and achievement level is an indicator of how he will most likely perceive himself (Lefcourt, 1982). Research continues to support the role locus of control plays in the quest for achievement (Ford et al., 2017).

Rotter's theoretical research continued to influence and intertwine with other theories, including Bandura's thoughts on self-efficacy (Zee & Koomen, 2016). When applied to teaching, Rotter's locus of control theory states a teacher will attribute student outcomes to either internal factors, such as instructional ability, or external factors, such as student ability. Bandura (1982) surmised that not all individuals with an active internal locus of control would have a strong self-efficacy, and the type and degree of locus of control are specific to the task at hand.

Seminal research conducted by the Research and Development Corporation (RAND) applied the locus of control theoretical framework as a guide to study the relationship between efficacy and locus of control (Armor et al., 1976). RAND based the description of the locus of control theory on Rotter's research stating that locus of control is the degree to which a person believes independent, individual behavior determines a specific outcome (Rotter, 1966). The RAND research looked to assess student learning and motivation and link them to teacher efficacy.

The format of the RAND survey included a Likert-scale to assess the degree of agreement or disagreement with various statements. The first statement was as follows: "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment" (Tschannen-Moran & Hoy, 2001, p. 784). Teachers agreeing with the statement endorsed a sense of external control and, to some degree, relinquished their ability to impact student achievement. Research indicated that outside factors have a substantial impact on student achievement (Tschannen-Moran & Hoy, 2001).

Those outside factors include the home environment, but that the influence of a teacher has an equal effect (Tschannen-Moran & Hoy, 2001).

The second statement in the RAND research assessed the degree of internal control a teacher has regarding personal confidence to impact student achievement despite external factors. "If I try hard, I can get through to even the most difficult of unmotivated students" suggested the ability of the teacher is more significant in influencing student success than environmental factors (Tschannen-Moran & Hoy, 2001, p. 785). Those in agreement with the statement endorsed a sense of internal control and confidence in their capability to implement actions to influence student motivation and growth.

A person's locus of control has a strong correlation to stress (Darshani, 2014). Darshani (2014) noted that while no type of locus of control is right or wrong, people do have varying abilities to handle stress and manage conflict. Despite these predispositions to regulate stress and conflict, Darshani found a person's tendencies altered through experience and exposure to strategies. During stress, those who have an external locus of control demonstrate more cynical moods, while those with an internal locus of control perceive less stress and exhibit enhanced coping skills (Arsenault, Dolan, & Ameringen, 1991). The level of stress experienced by a teacher can have a direct influence on the motivation to perform (Steinhardt, Jaggars, Faulk, & Gloria, 2011).

Researchers over the past 50 years have used the construct of locus of control to ascertain answers to both scientifically technical questions, as well as social science questions. In a review of the research, Rotter (1990) proposed four propositions which account for the heuristic value of the locus of control theory. The first proposition suggests the utilization of the locus of control theory is due to its precise definition (Rotter, 1990). The development of acceptable

measurements has occurred due to this precise definition. The second proposition embeds the locus of control construct in the social learning theory (Rotter, 1990). Providing a level of specificity regarding construct characteristics can take place by aligning locus of control theory with social learning theory. In the third proposition, Rotter (1990) stressed the importance of aligning a measurement tool with social/cognitive theories but to consider behavioral theories. One can attain a higher degree of generalization when looking at the characteristics across academic areas of study. The fourth proposition concerns the importance of disseminating information. Rotter (1990) stressed the need to ensure both theoretical and empirical research is published promptly and through appropriate publications. In 1966, a synthesis of the locus of control theory took place from previous theories and research; therefore, it is necessary to have publications that scrutinize and publish up-to-date research (Rotter, 1990).

Social Cognitive Theory

Albert Bandura defined self-efficacy as "perceived abilities for learning or performing actions at designated levels" (Wentzel & Wigfield, 2009, p. 35). Bandura's construct of social learning theory is at the forefront of self-efficacy. The three core concepts framing the social learning theory include the following: (a) people learning through observations, (b) mental status is essential to learning, and (c) learning does not necessarily change behavior (Bandura, 1982). As Bandura continued his research within the realm of behavioral theory, he expanded to connect the social learning theory to additional cognitive traits (Bandura, 2012).

Grounded in Bandura's social cognitive theory (1982), self-efficacy derives from multiple sources of information. Bandura explained the primary source of information is performance accomplishments based on personal mastery experiences; however, other sources include observing the success of others, verbal persuasion, and physiological arousal to monitor anxiety

and vulnerability (Bandura, 1982). Bandura explored each of these sources throughout a variety of research studies.

The first source, mastery experiences, is centered on a teacher's perception of past performance and experiences. If a teacher does not feel past teaching experiences have been successful, he or she will assess all future experiences through that lens (Ford et al., 2017). Teacher observation, which is the second source, is often limited to pre-service teachers during practicums and student-teaching or administrators using observation as an evaluative tool. Bandura noted that observing the success of others can be a means to enhance personal success (Bandura, 2012). Bandura's (1994) research affirmed that useful observations must be conducted by teachers observing those who are competent and successful in their craft. Verbal and social persuasion is the third source, and teachers enhance their self-efficacy through the professional development and evaluation process. Teachers must sense the value of both professional development and the evaluation process, as participating in one or the other is not enough to impact a teacher's practice. Participation in both must take place for a teacher's practice to be impacted (Sutcher et al., 2016). The ultimate source of self-efficacy, psychological and emotional arousal, affect a teacher's sense of competency and confidence. Tschannen-Moran and Hoy (2007) stated, "The feelings of joy or pleasure a teacher experiences from teaching a successful lesson may increase her sense of efficacy, yet high levels of stress or anxiety associated with a fear of losing control may result in lower self-efficacy beliefs" (p. 945). Sources note mastery experiences to have the most significant influence on teacher self-efficacy (Tschannen-Moran & Hoy, 2007).

Given the framework and sources of Bandura's social cognitive theory, teachers need to have opportunities for positive mastery experiences, affirmative and constructive observations,

beneficial professional development and collegial conversations, and successful student outcomes to be efficacious (Ford et al., 2017). In doing so, Ford et al. (2017) noted that teachers who demonstrate a stronger sense of efficacy tend to participate in more planning and organization, show greater flexibility and openness to the ideas of others, display persistence when confronted with stressful tasks/situations, and exhibit positivity with students.

Hattie (2012) conducted a meta-analysis of research covering the past ten years and purported the impact of teachers on student learning outcomes are the single most significant factor in education. As such, professional development provides the most effective route by which to increase the quality of teaching (Eun, 2018). The effectiveness of professional development falls under the characteristics of social cognitive theory, as self-efficacy is a strong predictor of the influence professional development can have on a teacher (Eun, 2018).

Self-Determination Theory

Deci and Ryan's (1985) self-determination theory encompasses human motivation, development, and health. The implications of this theory impact a variety of fields to include sports, education, and healthcare. The self-determination theory postulates intrinsic motivators, and the resources teachers have at their disposal influence the well-being of teachers (Durksen et al., 2017). Addressed in the theory is the suggestion that efficacious behaviors improve well-being. Additionally, previous studies suggest elements of self-determination theory can assist in the identification of job resources designed to positively impact teacher self-efficacy beliefs (Durksen et al., 2017; Ford et al., 2017).

Teacher motivation is grounded in Deci and Ryan's (1980) self-determination theory. Self-determination theory postulates discrimination of choice motivates individuals in the selection of their actions (Deci & Ryan, 2008). Deci and Ryan (2008) suggested there were two

types of motivation, autonomous and controlled, both of which "energize and direct behavior" (p. 182). Teacher motivation impacts both individual teacher goals and the objectives of the educational organization, both at the building and district-level (Ford et al., 2017). Intrinsically, teachers develop personal and professional goals; however, funding, linked to achievement, academic performance, accreditation, and extrinsic goals, is becoming more of a significant factor (Ford et al., 2017). The Every Student Succeeds Act (ESSA) of 2015 includes provisions for accountability and accreditation based upon both teacher performance and student achievement (U.S. Department of Education, 2018).

Deci and Ryan (2008), the originators of self-determination theory, recognized the role motivation played in psychological processes and behaviors. Deci and Ryan noted the "energy for action comes either directly or indirectly from basic psychological needs" (p. 184). They found that self-determination theory contradicted previous research, which had suggested behavioral self-regulation to be energy-draining, and instead proposed autonomous regulation and actions leading toward the pursuit of a goal can augment energy.

Deci and Ryan (2008) claimed that long-term goals guide people to complete specific activities. Intrinsic and extrinsic aspirations can be linked-to goal alignment. Research studies have concluded intrinsic goals, as opposed to extrinsic goals, lead to higher performance and well-being (Jansen in de Wal et al., 2014). Additionally, research has demonstrated the influence achievement goals have on the psychological well-being of teachers (Cho & Shim, 2013; Retelsdorf & Gunther, 2011).

Understanding the relationship between teachers' perceived motivation and teachers' self-efficacy and beliefs will extend the theories above. "Self-determination theory has been extensively employed as the framework in studies of the influence of teacher motivation on

students' motivation" (Han & Yin, 2016, p. 9). It is necessary to determine if one's beliefs and perceived influence can motivate professional behavior in the areas of goal setting and student evaluation (Han & Yin, 2016).

Self-determination theory endorses the idea that teachers are inherently self-motivated to be successful in their environment (Stupnisky et al., 2018). An increase in best practices and engagement is linked to intrinsic motivation. A means of increasing teaching quality and student learning is assisting teachers to master their environment and develop their skills (Stupnisky et al., 2018). Stupnisky et al. (2018) postulated that best practices are derived through motivation; however, an educator must have three psychological needs meet as a precursor to motivation - autonomy, competence, and relatedness. Ryan and Deci (2000), define *the need for autonomy* as the ability to have an opinion and options regarding the decisions being made and overall behavior. Ryan and Deci (2000) describe the *need for competence* as a means by which someone interacts with the environment and, additionally, stretches his knowledge beyond their current capacity. The *need for relatedness* is the necessity to build relationships and feel a bond with those in the environment (Ryan and Deci, 2000).

Self-determination theory assumes that educators are inherently self-motivated to become an authority in their craft (Stupnisky et al., 2018). Stupnisky et al. (2018) researched to surmise if the basic psychological needs could be a predictor of teaching best practice. The researchers discovered that optimal teaching is reached when the three basic psychological needs are met (Stupnisky et al., 2018). Additionally, studies note that psychological factors have a more significant influence on intrinsic motivation rather than extrinsic motivation (Stupnisky et al., 2018).
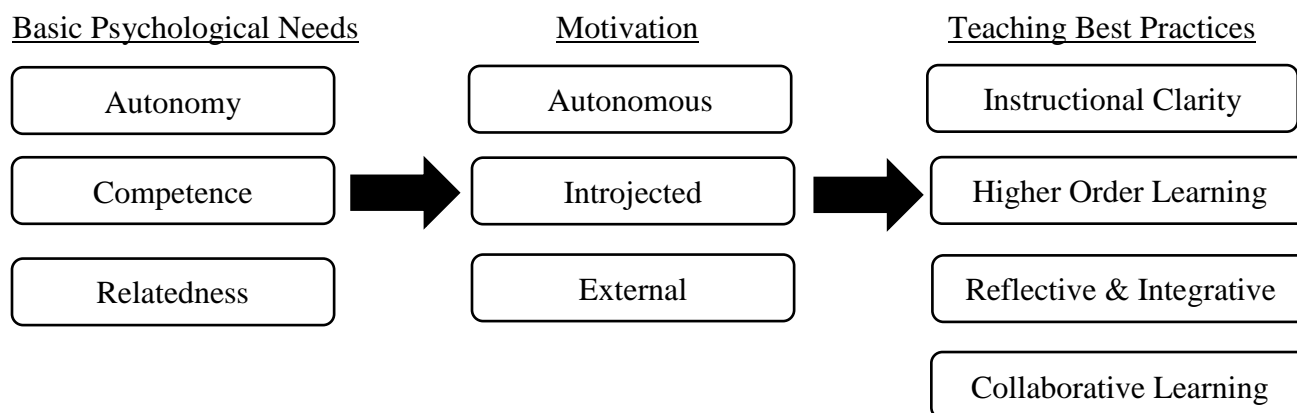
Basic Psychological Needs | Motivation | Teaching Best Practices

Autonomy		Autonomous		Instructional Clarity
Competence	➤	Introjected	➤	Higher Order Learning
Relatedness		External		Reflective & Integrative
				Collaborative Learning

Figure 1. Conceptual model of faculty motivation for teaching best practices.
Notes: Reprinted from "Faculty members' motivation for teaching and best practices: Testing a model based on self-determination theory across institution types" by R. Stupnisky, A. BrckaLorenz, B. Yuhas, and F. Guay, 2018, *Contemporary Educational Psychology,* 53, p. 16

Additionally, there is a positive correlation between the motivational beliefs of teachers and professional development (Durksen et al., 2017). Professional development should evolve with the needs of teachers and solicit the cognitive and emotional involvement of teachers to impact the capacity and beliefs of teachers (Durksen et al., 2017). Durksen et al. (2017) stated, "Overall, efficacy beliefs predicted teacher engagement, which in turn positively predicted teachers' beliefs about professional learning" (p. 59). Designing professional development that fosters positive experiences and toward reaches the collective needs of teachers is essential (Durksen et al., 2017).

Related Literature

The constructs of locus of control theory, social learning theory, and self-determination theory have each had an impact on the study of self-efficacy and motivation. Each of these theories has broadened the understanding of self-efficacy and motivation, and the effect each has on teachers. Self-efficacy, a construct of motivation, is influenced by personal, behavioral, and environmental factors (Kilday et al., 2016). The idea of human agency and the ability of teachers to exercise control over their actions frame the foundational tenets of teacher self-

efficacy (Zee & Koomen, 2016). The complexity of the construct has led researchers to examine both the benefits and consequences of self-efficacy.

Julian Rotter's (1966) locus of control theory attributes the automatic responses of people to either internal or external factors. The internal factors are practical and include professional beliefs and motivation, while external factors are cognitive and include professional knowledge (Depaepe & König, 2018). Further applied, teachers attribute student outcomes to either their instructional ability, which is an internal control or a student's ability, which is external control. At its basic level, external controls are attributed to luck or fate, while internal controls are based upon the actions of the individual (Zee & Koomen, 2016).

In the early 1980s, Bandura (1982) investigated the connection between knowledge and action. Bandura stressed the necessity to integrate cognitive, social, and behavioral skills to navigate a variety of purposes successfully. Bandura (1982) noted, "Perceived self-efficacy is concerned with judgments of how well one can execute courses of action required to deal with prospective situations" (p. 122). Bandura expanded upon Rotter's theory and argued that not only are behaviors influenced by internal and external factors, but also through an individuals' perceived capabilities (Zee & Koomen, 2016). Through his research, Bandura discovered regardless of the mode of influence, the higher the perceived self-efficacy, the greater the successful outcome. As a result, Bandura (1982) determined perceived efficacy can impact motivation and subsequent behavior. Additionally, Bandura surmised that teacher self-efficacy is task or situation-specific rather than generalized, as Rotter initially claimed (Zee & Koomen, 2016).

Deci and Ryan (2008), the originators of self-determination theory, recognized the role motivation played in psychological processes and behaviors. They determined that specific

activities align with either intrinsic or extrinsic goals (Deci & Ryan, 2008). Ryan and Deci (2017) purported self-determination theory is focused on examining the social conditions which facilitate a person in either succeeding or failing. Additionally, they examined which conditions either optimized development or deprived growth (Ryan & Deci, 2017). Han and Yin (2016) extended the self-determination theory to determine that teacher self-efficacy can motivate professional behavior and reinforce goal setting; however, a myriad of external factors influence motivation. Those factors include educational reform, teaching practice, psychological well-being, and student motivation (Han & Yin, 2016).

Han and Yin (2016) stressed the importance of both initiating motivation and sustaining motivation. Furthermore, Han and Yin stated, "Motivation specifies the reason why people decide to do something, how long people are willing to sustain the activity and how hard they are going to pursue the activity" (p. 3). In reference to teaching, the conception of motivation is the motivation to teach and the motivation to remain in teaching (Han & Yin, 2016). To influence educational reform, organizations need to know how to recruit and retain qualified teachers.

Theoretical and empirical research has established teacher self-efficacy as being complicated and affecting numerous aspects of classroom ecology (Zee & Koomen, 2016). Research has focused on several educational aspects and the interaction of each with teacher self-efficacy. Research has explored areas such as the quality of the classroom process, students' academic adjustment, and teachers' well-being (Zee & Koomen, 2016). It is essential to gain an understanding as to those factors that can have a positive impact on teacher self-efficacy given the influence teacher self-efficacy has on student and teacher outcomes (Zee & Koomen, 2016).

Self-Efficacy Instruments

The variety of instruments utilized in research, both previous and current, is a cause for critical analysis (Zee & Koomen, 2016). It is vital to make comparisons between research studies carefully as self-efficacy instruments hone in on different aspects of efficacy, teacher characteristics, and the ecology of education (Zee & Koomen, 2016). As it relates to education, teacher self-efficacy encompasses a belief in one's ability to plan, organize, and follow through on activities required to achieve educational goals; therefore, a multi-dimensional instrument is needed to assess the complexity of teacher self-efficacy (Ford et al., 2017).

As research expanded, it was necessary to develop measurement tools to quantify self-efficacy. The RAND Corporation developed the first measure of teacher self-efficacy and used it to determine the relationship between teacher self-efficacy and student achievement (Armor et al., 1976). Additional efficacy instruments were designed to assess predictive qualities. Some of those instruments included the Teachers' Locus of Control (Rose & Medway, 1981), Responsibility for Student Achievement (Guskey, 1981), The Teacher Efficacy Scale (Tschannen-Moran & Hoy, 2001), Teachers' Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001), and the Webb Efficacy Scale (Ashton, Buhr, & Crocker, 1984). Each instrument varied according to the aspects of self-efficacy that were measured and the perspective of the respondent.

Initially, the RAND Corporation included only two focus items embedded within a lengthy survey (Tschannen-Moran & Hoy, 2001). The purpose of the assessment tool was to determine if teachers believed that internal or external factors controlled their effort. Respondents had a strong agreement with the first item which stated a student's motivation and performance is based upon the home environment. This item equates to a belief that external

factors overpower the impact of the teacher (Tschannen-Moran & Hoy, 2001). The second item, stating effort influences a teacher's ability to be successful with difficult or unmotivated students, is based on internal factors, including confidence and ability (Tschannen-Moran & Hoy, 2001). Initial studies, conducted by the RAND Corporation, determined teacher efficacy is a predictor of teacher success (Tschannen-Moran & Hoy, 2001). Further studies indicated a definite link between teachers' sense of efficacy and student achievement, goal sustainability, and continual professional development (Tschannen-Moran & Hoy, 2001).

Constructed of 28-items, the Teachers' Locus of Control instrument solicits a response as to which items are responsible for student achievement (Tschannen-Moran & Hoy, 2001). The tool assesses the teachers' beliefs by having participants assign responsibility for student outcomes (Rose & Medway, 1981). Rose and Medway (1981) designed the scale to generalize expectations for both internal and external control. The Teachers' Locus of Control instrument helps to assess teachers' perception of control and classroom teaching behavior by presenting several example situations in a forced-choice instrument (Rose & Medway, 1981). The sample situations depicted both student success and failure and seeks the teacher to choose between an internally controlled outcome or an externally controlled outcome (Teacher Locus of Control, n.d.).

The Responsibility for Student Achievement assesses three distinct variables: student performance, student ability, and the scope of influence (Guskey, 1981). The questionnaire is composed of positive and negative item stems that describe student achievement as it occurs within the classroom (Guskey, 1981). Responses for each item were ranked on a continuum designed to indicate internal or external influence (Tschannen-Moran & Hoy, 2001). The results of the initial study showed that the perceptions of teachers are dependent upon both an individual

student and a group of students (Guskey, 1981). Teachers accept less personal responsibility for individual students than that of a group of students (Guskey, 1981). Overall, success and failure fell within the confines of four explanations: task difficulty, individual teaching abilities, teaching effort, and luck (Tschannen-Moran & Hoy, 2001).

The Webb Efficacy Scale was an attempt to expand the RAND efficacy questions to increase reliability. The scale provides a variety of vignettes for which teachers must respond using a forced-choice format (Ashton et al., 1984). Although the assessment extended the original concept, it provided a narrower view of the construct. The results suggested that teachers evaluate their performance based upon the limited knowledge regarding the effectiveness of their peers (Ashton et al., 1984). The initial results indicated that teachers with higher self-efficacy have fewer negative interactions (Tschannen-Moran & Hoy, 2001).

The foundation of the RAND studies developed The Teacher Efficacy Scale (Tschannen-Moran & Hoy, 2001). Developed by Gibson and Dembo, this tool included 30-items to measure both self-efficacy and outcome expectancy (Tschannen-Moran & Hoy, 2001). Gibson and Dembo's expectation for the tool was to be able to measure self-efficacy beliefs through evaluating teachers' beliefs regarding their abilities to impact positive student change (Tschannen-Moran & Hoy, 2001).

Several aspects of the studies mentioned above were derived from the TSES; however, the measurement considered both competence and performance (Tschannen-Moran & Hoy, 2001). The TSES is based upon Bandura's premise of task demands (Tschannen-Moran & Hoy, 2001). The scale is based on three discreetly correlated factors, including student engagement, instructional practices, and classroom management (The Web Efficacy Scale, nd).

Tschannen-Moran and Hoy (2001) created a list of teacher capabilities and developed a 24-item (long form) and 12-item (short form) measurement tool which categorizes questions into three distinct categories: instructional strategies, classroom management, and student engagement. Respondents use this self-reporting measure to evaluate their impact on questions dispersed throughout the assessment and classified in each of the categories (Tschannen-Moran & Hoy, 2001).

Each of the measures above was limited in scope; however, the TSES was multi-dimensional and assessed instructional practices, classroom practices, and student engagement (Tschannen-Moran & Hoy, 2001). Both the 24-item form and the 12-item form have been proven to be reasonably valid and reliable (Tschannen-Moran & Hoy, 2001). Unlike other measurements, the TSES covers a broader range of teaching tasks and assesses a broad range of teacher capabilities (Tschannen-Moran & Hoy, 2001). The TSES was designed to closely align with the theory of self-efficacy (Durksen et al., 2017). A comprehensive assessment tool must be utilized given that a teachers' sense of self-efficacy is one of the most influential factors on motivation and, thus, professional behaviors (Durksen et al., 2017). Durksen et al. (2017) stated, "Teacher self-efficacy influences a teacher's persistence, enthusiasm, job satisfaction, and successful teaching behaviours, and has been found to influence student achievement" (p. 56).

Research has been conducted to determine the impact self-efficacy has on the functions of being a teacher (Künsting, Neuber, & Lipowsky, 2016). Self-efficacy is linked to instruction, teacher motivation, the ability to adapt to the educational setting, student discipline, cooperation with those within the organization, and the ability to grow in the profession. Tschannen-Moran, Hoy A., and Hoy W. (1998) conceptualized self-efficacy (Figure 2). Teacher beliefs in self-

efficacy is a personal feature which has been proven to remain stable over long-term periods of time (Künsting et al., 2016).
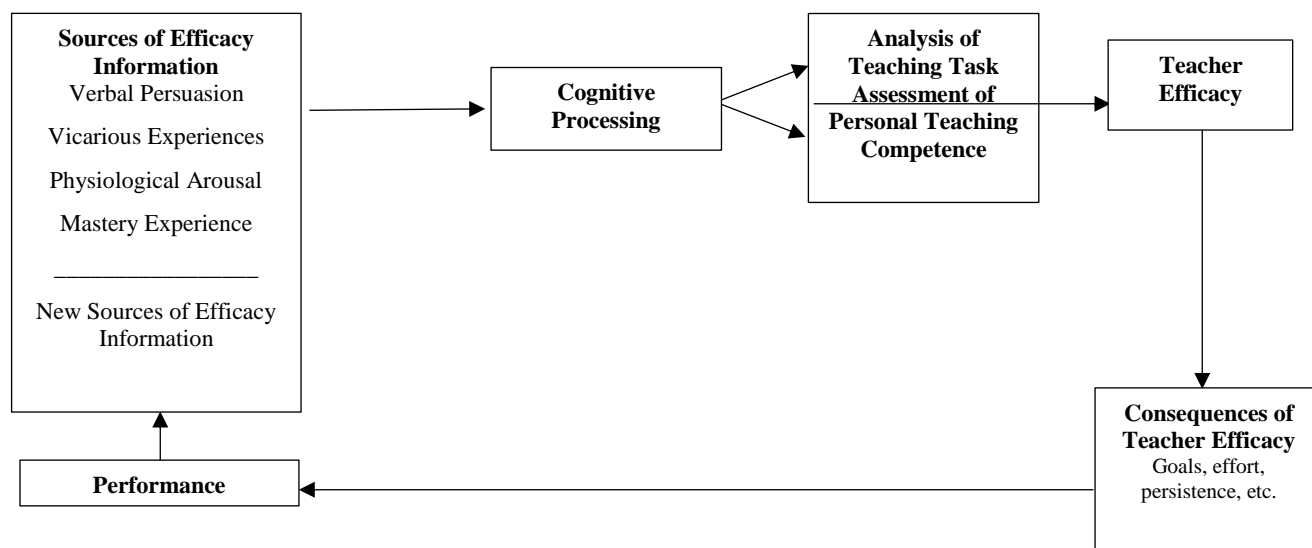

Figure 2. Multidimensional Model of Teacher Efficacy
Notes: Reprinted from "Teacher Efficacy: Its meaning and measure" by M. Tschannen-Moran, A. Hoy, and W. Hoy, 1998, *Review of Educational Research,* 68, p. 228

Tschannen-Moran and Hoy (2001) assert that the TSES is superior to previous measures as it considers an analysis of teaching tasks and an assessment of personal teaching. They suggest that the impact of this tool is far-reaching and may change current practices both in teacher preparation and the recruitment and retention of teachers (Tschannen-Moran & Hoy, 2001). Tschannen-Moran and Hoy (2001) were hopeful that their research will lead to teacher preparation programs that may become more experience-based rather than classroom-based. Additionally, the previous educational practice has led to placing veteran teachers in classrooms designed to promote success rather than giving novice teachers a more comfortable class based on a status of hierarchy. Efficacy research suggests that veteran teachers often have a higher degree of self-efficacy and, therefore, can find success in challenging classrooms (Tschannen-Moran & Hoy, 2001). Finally, Tschannen-Moran and Hoy (2001) suggested that the TSES

would assist in structuring professional development to improve student learning and build teachers' self-efficacy.

Teacher Self-Efficacy

Two seminal researchers whose theories were pivotal in self-efficacy were Bandura and Rotter. Both theories intertwined with differentiating between self-efficacy and outcome expectancies (Zee & Koomen, 2016). While Rotter's (1966) research provided a generalized framework surrounding self-efficacy, Bandura's (1982) was more reciprocal. Rotter (1966) assumed that external control or internal control determined outcomes. Bandura (1982) expanded on Rotter's theory of locus of control, and determining efficacy was not only generalized but also influenced by an individuals' perceived capabilities. For example, a teacher may know that a strategic intervention may assist a student in closing the academic gap; however, if the teacher perceives he does not possess the knowledge, skills, and capabilities to teach the intervention accurately, it may not be initiated. Bandura asserted that personal self-efficacy is the natural cause of human behavior (Ford et al., 2017).

Additionally, Bandura conceptualized self-efficacy as being task or situational specific. Bandura's definition of self-efficacy reinforces that notion as he states self-efficacy is "an individual's conviction about his or her capabilities to accomplish a task when faced with a challenge" (Troesch & Bauer, 2017, p. 390). There are varied types of self-efficacy as it differs according to career tasks; therefore, teacher self-efficacy is specific in its application to teaching tasks (Chang & Engelhard, 2016). Researchers have analyzed the impact teacher self-efficacy has on job satisfaction, student performance, the use of differentiated instructional methods, and classroom management (Zee & Koomen, 2016).

Self-efficacy is a social-cognitive concept. Researchers have identified four sources that influence a teacher's self-efficacy, including previous individual experiences, secondhand experiences, verbal persuasion, and self- or group-level emotional states (Bandura, 1997). Repeated exposures can enhance a teacher's self-efficacy; however, domain-specific efficacy beliefs can strengthen efficacy even further (Zee & Koomen, 2016). Teacher self-efficacy influences and is influenced by several domains to include the quality of classroom processes, students' academic performance, and teachers' well-being (Zee & Koomen, 2016). The domain of classroom processes includes behavioral management, expectations, classroom organization, and responsiveness to the learner. The academic performance domain includes a teacher's ability to advance students' knowledge base and skills, the ability to teach students to apply their thinking and expand their understanding (Zee & Koomen, 2016). The final domain, the teachers' well-being, is derived from the student-teacher relationship, classroom dynamics, and the culture and climate of the classroom. Each of these directly relates to teacher self-efficacy to some degree (Zee & Koomen, 2016).

The perspectives on self-efficacy have developed and evolved since the 1960s, and there is greater understanding as to the impact teacher self-efficacy has on student achievement and teacher retention (Künsting et al., 2016). Zee and Koomen (2016) reviewed several research studies that provided empirical evidence as to the relevance between self-efficacy beliefs and job satisfaction. Zee and Koomen reviewed 165 eligible articles spanning 40 years of research, which suggests that self-efficacy can be linked to both positive and negative associations. Additionally, research findings connected teacher self-efficacy to indirect effects in the areas of instructional support and classroom organization (Zee & Koomen, 2016).

It is essential to determine the factors which influence teacher self-efficacy to assist with teacher retention and decrease attrition rates (Miller et al., 2017). When focusing on teachers' feelings of self-efficacy, Tschannen-Moran and Woolfolk Hoy purported, "This self-efficacy is often considered to be aimed at a specific task or context, focusing for example on instructional strategies, classroom management, and student engagement" (Klaeijsen, Vermeulen, & Martens, 2017, p. 771). Tschannen-Moran and Woolfolk Hoy (2001) implied that a teacher's sense of self-efficacy might fluctuate depending on the circumstances influencing the teacher's position.

Self-Efficacy and Motivation

In his work, Bandura addressed the link between self-efficacy and motivation through both the cognitive evaluation theory (Deci, 1980) and the social learning theory (Bandura, 1982). Bandura (1982) stated that cognitive evolution theorists believe motivation is innate while social learning theorists believe motivation grows from fulfilling internal ideals, as well as efficacious external influences. Motivation researchers assert that self-efficacy is a personal resource that can advance teachers' engagement (Bakker et al., 2011).

Research indicates there are various factors which assist in teacher motivation, to include compensation, work environment, performance and evaluation system, and professional development and training (Rasheed, Asad, Awan, & Affan, 2016). Teacher compensation should align with qualifications and experience (Rasheed et al., 2016). Additionally, teachers should have minimized workloads, and the learning environment should be one of respect (Rasheed et al., 2016). The performance and evaluation system should recognize the efforts of teacher achievements and accomplishments (Rasheed et al., 2016). Lastly, professional development and training should provide opportunities for teachers to broaden their knowledge base and maximize their chances for career development (Rasheed et al., 2016).

Recent research has centered on teacher self-efficacy and its impact on job satisfaction, attrition, stress, and burnout (Troesch & Bauer, 2017). However, there is a gap in the research regarding the relationship between teacher self-efficacy and the variables of teacher perception and teacher work experience (Skaalvik & Skaalvik, 2017). An analysis of teachers' perception and the relationship to workload, self-efficacy, emotional exhaustion, job satisfaction, and motivation determined self-efficacy magnifies possible problems and insecurities (Skaalvik & Skaalvik, 2017).

Teacher motivation, as demonstrated through teacher commitment and influence, has been linked to self-efficacy (Kilday et al., 2016). Efficacious teachers display a greater sense of professional responsibility and positivity towards the organization (Barouch Gilbert, Adesope, & Schroeder, 2013). Tschannen-Moran and Hoy (2001) determined the persistence, enthusiasm, career fulfillment, and effective teaching performance of teachers can positively influence student achievement. Additionally, teachers with stronger self-efficacy tend to remain in the classroom (Ware & Kitsantas, 2011).

Teachers' perceived sense of self-efficacy is predictive of teachers' achievement goals for teaching (Cho & Shim, 2013). Cho and Shim (2013) assessed a total of 221 teachers from the Midwestern United States using the TSES and the Achievement Goal Orientations for Teaching instrument. They found that efficacious teachers sustain personal goals for teaching regardless of conflicting goals within the organization. In contrast, teachers with low self-efficacy tend to adapt goal setting to comply with the school (Cho & Shim, 2013).

It is possible to increase a teacher's sense of self-efficacy by providing experiences that support personal mastery experiences, giving the opportunity to observe the success of others, allowing for verbal persuasion, and strengthening physiological arousal (Zee, Jong, & Koomen,

2016). Teachers can grow their belief systems by participating in modeling and meaningful conversations with colleagues (Ford et al., 2017). It is necessary to improve teacher confidence and hopefulness about teaching expectations to increase both self-efficacy and motivation (Han & Yin, 2016).

Deci and Ryan (2008) suggested that individuals have three intrinsic psychological needs: competence, autonomy, and relatedness. Teachers need to feel productive and competent for there to be a positive impact on intrinsic motivation (Klaeijsen et al., 2017). Klaeijsen et al. (2017) suggest that motivated teachers are innovative and carry tasks beyond creativity to implementation. Based upon Deci and Ryan's theories, Klaeijsen et al. explained, "Being intrinsically motivated means doing something for its inherent satisfaction, and is frequently measured by self-reports of interest and enjoyment in performing the activity at hand" (2017, p. 770). Teachers' intrinsic motivation has been linked to student achievement, student persistence, and student motivation (Klaeijsen et al., 2017).

Motivation Instruments

There are a variety of instruments to measure the factors which influence teacher motivation. Research has shown that motivated teachers experience greater well-being, support positive student outcomes, and experience an increase in self-efficacy (Collie & Martin, 2017). Gleaning a better understanding of the barriers and challenges of motivation can assist in creating solutions to overcome those obstacles. Multiple research studies have employed a variety of tools to measure motivation.

The WTMST assesses five motivational constructs and the relationship to six work tasks. WTMST consists of 30 factors which are rated on a 6-point Likert scale. WTMST is associated

with the self-determination theory as research had demonstrated an association with efficacy and

well-being (Fernet et al., 2008).

The Teacher Motivation Assessment Scale (TMAS) is like the WTMST in that it also

measures five motivational constructs. The instrument consists of twenty-two items, which are

rated on a 4-point Likert scale (Obunadike, 2013). Each item is analyzed according to five

categories to include attitude, commitment, reward, punishment, and interest (Obunadike, 2013).

The Teacher Motivation Theoretical Framework assists in determining the threats to

motivation as well as indicating the categories that influence teacher motivation (Durksen et al.,

2017). Using different theoretical frameworks, such as the social cognitive theory, researchers

can analyze professional development opportunities to ensure effectiveness (Durksen et al.,

2017).

The Teacher Motivation Diagnostic Tool (TMDT) is a tool that assesses what influences

and interacts with teacher motivation and performance. The purpose of the tool is to increase the

fidelity and efficiency of programs and policies relating to teachers (Guajardo, 2016). The

assessment can be administered alone or in conjunction with student assessments to gather

further data on issues involving teacher motivation (Guajardo, 2016). The tool includes several

components that assess motivation, including challenges and support, self-efficacy, beliefs,

professional development needs, and teacher background (Guajardo, 2016). The format of the

tool includes open-ended questions and quantitative questions (Guajardo, 2016).

Teacher Self-Efficacy and Student Engagement

A precursor for learning is engagement; therefore, much research has focused on the

relationship between teacher self-efficacy and student engagement. Research has been

conducted, which targets a variety of types of engagement to include behavioral, emotional, and

cognitive, and a proposed correlation between student engagement and teacher self-efficacy (Kilday et al., 2016). Several factors impact student engagement, some of which include teacher-student ratio, the type of relationship a student has with a teacher, the overall learning environment, and the level of student autonomy (Kilday et al., 2016). The factors above all focus on student impact; however, additional research has been conducted to evaluate the impact teacher behavior has on student engagement (Kilday et al., 2016).

A positive learning environment can foster student engagement, but an antecedent to the creation of that environment is the teacher's likelihood to develop such an environment (Kilday et al., 2016). The domain of student engagement is designed to garner a teacher's perceived ability to initiate the academic interest of a student (Zee et al., 2016). Early studies assessed the role student behaviors play on teacher self-efficacy (Coolahan, Fantuzzo, Mendez, & McDermott, 2000). Many of the studies concluded that positive student behaviors result in a mastery experience for teachers; therefore, it reinforces a definite sense of self-efficacy (Coolahan et al., 2000; Kilday et al., 2016). Conversely, additional research purports students with challenging behavior can lead to an adverse learning climate, an increase in teacher stress, and can result in teacher burnout (Zee et al., 2016). The ability of a student to cognitively engage in learning is linked to the effectiveness of the teacher (Pianta, Hamre, & Allen, 2012).

Extensive self-efficacy research has attributed a teacher's ability to positively manage student behavior to a definite sense of self-efficacy (Miller et al., 2017). While this research has broad implications for working with students who have behavioral challenges, additional research has been conducted to determine the role self-efficacy plays in a teacher's ability to manage the behaviors of a specific student. Zee et al. (2016) examined the individual domains of teacher self-efficacy and the link to individual students presenting with social-emotional

behaviors. They found that teachers' self-efficacy about domain-specific functions varied depending on an individual student. For example, a teacher may doubt his or her effectiveness in providing appropriate behavioral support when attending to the challenging behaviors of an individual student. Zee et al. identified three areas as attributing to this fluctuation in self-efficacy: externalizing behavior, empathetic behavior, and challenging social-emotional behavior.

Uden, Ritzen, and Pieters (2014) concluded that perceived interpersonal teacher behavior is related to all three types of engagement. They also noted that the level of student disengagement increased as relationships and connections falter. It is extremely difficult to alter a teacher's feeling of self-efficacy as teachers need to hone their interpersonal skills and behavior to impact student engagement positively. Interventionists also note the importance of interactions between the student and the teacher. Cook et al. (2016) determined that a 5:1 ratio of positive to negative interactions can increase the engagement time of students. They also sought to determine the perceptions of teachers as to the acceptability, feasibility, and effectiveness of such an intervention strategy (Cook et al., 2016). Teachers who participated in the study agreed with the impact of the intervention and were encouraged to use the strategy to increase student engagement (Cook et al., 2016). Additionally, the authors felt by providing a qualitative experience, teachers may be willing to implement the strategy and change their instructional practices and behavior as a result (Cook et al., 2016).

Teacher Self-Efficacy and Instructional Strategies

A great deal of research is devoted to the impact teachers have on teaching and student achievement (Schleicher, 2016). Teaching is a complex task that takes place in a demanding environment. The assessment of the attitudes and behaviors of teachers is complex. As such, two

different research traditions have evolved, one of which being observation and the other linking

teacher effectiveness to student outcomes (Blazar & Kraft, 2017). Through observational

research, several instructional domains have emerged. Studies have focused on the areas of

student and teacher interaction, classroom organization, the integration of critical thinking, and

supporting the social, emotional, and behavioral needs of students (Blazar, Braslow,

Charalambous, & Hill, 2017; Hamre et al., 2013). Additionally, the utilization of student

outcomes to predict teacher effectiveness has developed through recent research (Chetty,

Friedman, & Rockoff, 2017). The impact of teacher self-efficacy extends beyond students' test

scores, and the influence on both teachers and students is significant (Blazar & Kraft, 2017).

Research has noted the impact of self-efficacy on classroom instruction and the link to

various instructional practices (Kilday et al., 2016). Among those instructional practices,

efficacious teachers are more likely to be compliant with conceptual change and instructional

methods (Lee, Cawthon, & Dawson, 2013). Additionally, efficacious teachers have been found

to utilize data in instructional decisions and demonstrate an increased willingness to collaborate

with colleagues (Dunn, Airola, Lo, & Garrison, 2013). As differentiated instruction continues to

be a focus on closing academic gaps and extending students' body of knowledge, efficacious

teachers have also proven to be more willing to implement intervention-based instructional

practices within the classroom (Lakshmanan, Heath, Perlmutter, & Elder, 2011).

Research focusing on teacher self-efficacy has demonstrated that a teacher's instructional

behavior is based upon a self-assessment of competency (Kilday et al., 2016). Therefore,

instructional practices must solicit positive student outcomes. Kilday et al. (2016) asserted that

instructional practices, which include content relevance and student ownership, assist in

obtaining effective outcomes in teaching. Kilday et al. surmised that a teacher's sense of self-

efficacy shifts from self-centered to student-centered as a teacher gains more practice and experiences increase competency. Additionally, research has indicated that teachers who believe they can carry out teaching tasks successfully experience a lower level of job tension and work-related stress (Helms-Lorenz & Maulana, 2015).

Zee and Koomen (2016) noted that teachers with a high level of self-efficacy feel more capable in the implementation of new instructional methods. Additionally, efficacious teachers are more likely to implement strategies acquired from professional development and in-service opportunities (Zee & Koomen, 2016). Zee and Koomen (2016) cited several studies that have determined that teachers with a high level of self-efficacy are more learner-centered and use less criticism within the classroom. They found that "the instructional behaviors, practices, and strategies teachers employ to encourage students' cognitive development may, in part, be determined by their self-efficacy" (p. 990). Additional studies stressed the importance of teachers feeling capable of implementing instructional strategies, as there is evidence that while some teachers are aware of the effectiveness of instructional practices, teachers may lack the self-assuredness to implement such practices (Zee & Koomen, 2016).

Predicated on being successful, the craft of teaching is dependent on being successful when completing a variety of professional responsibilities. The implementation of effective instructional strategies is based on external control or internal control; however, if a teacher cannot discern which instructional strategies are appropriate or believe in his ability to implement the strategy, then students will find limited success (Matteucci, Guglielmi, & Lauermann, 2017). Efficacious teachers are more apt to provide instructional and motivational support for the students in their classrooms as they perceive a sense of responsibility to students (Matteucci et al., 2017). That sense of responsibility has been linked to the teachers' perception

of the social climate within the school, the belief of student intelligence, and their sense of self-efficacy (Matteucci et al., 2017).

The quality of instruction is paramount to student achievement. Teachers' beliefs regarding their level of effectiveness have been found to influence the instructional strategies used when teaching (Rubie-Davies, 2012). Additionally, the use of cognitively, stimulating instructional strategies has been linked to efficacy (Künsting et al., 2016). "Teachers must be able to challenge students by providing tasks which call on students' prior knowledge, provokes cognitive conflicts, and emphasize basic concepts, solutions, and interpretations" (Künsting et al., 2016, p. 302).

Efficacious teachers tend to feel a more personal sense of responsibility for student success; therefore, they tend to select instructional practices that are directed toward providing higher quality instruction and are invested in the implementation of those practices to produce successful student outcomes (Matteucci et al., 2017). Content-specific research also demonstrates that effective and efficacious teachers are better facilitators when developing math skills and literacy skills (Cantrell, Almasi, Carter & Rintamaa, 2013; Guo et al., 2012). One of the numerous tasks teachers must accomplish is the evaluation of students. While previous research has indicated a link between teacher self-efficacy and student achievement, more recent research has specified academic climate and perceived performance to be impacted by teacher efficacy (Chong, Klassen, Huan, Wong, & Kates, 2010; Jimmieson, Hannam, & Yeo, 2010). Efficacious teachers are more likely to be successful in supporting the student's achievement due to the teacher's perceived support within the organization (Wang et al., 2016).

Ciampa and Gallagher (2016) propose that teachers with a high level of efficacy often shift the assessment of instruction from product-based to that of process-based. Efficacious

teachers tend to focus their energies on modeling, practicing, and applying their knowledge toward learning goals (Ciampa & Gallagher, 2016). Ciampa and Gallagher (2016) urged the use of the reflective practice as a tool to move teachers away from less effective teaching methods to those that are more effective.

Teacher Self-Efficacy and Classroom Management

The classroom environment has a substantial impact on both student and teacher success. Several key factors contribute to teacher burnout and job satisfaction. The classroom environment, specifically student disciplinary concerns, contributes significantly to teacher success and career retention (Miller et al., 2017). Research has indicated that one of the most critical challenges for prospective teachers is effective classroom management (Peters, 2012). However, studies have determined prospective teachers, who have a higher sense of efficacy, are better equipped to provide proactive measures when addressing behavior management and are more adept at grouping students adequately to solicit higher student outcomes (Lee, Walkawiak, & Nietfeld, 2017).

Researchers have recently examined the impact teacher self-efficacy plays in the classroom environment. Bulut and Topdemir (2018) surmised the physical conditions of the classroom vary in relationship to a teachers' level of self-efficacy. The arrangement of the classroom should be made in a way that promotes student comfort (Bulut & Topdemir, 2018). Statements such as, "I arrange the classroom as a teaching environment" (Bulut & Topdemir, 2018, p. 646) and "I make a seating arrangement according to students' physical features" (Bulut & Topdemir, 2018, p. 646) garner a response from teachers and suggests that teachers are giving forethought and planning when creating a classroom conducive to learning (Bulut & Topdemir, 2018).

According to research cited by Zee and Koomen (2016), teachers with a high level of self-efficacy demonstrate a better ability to cope with students who have challenging behaviors and who are experiencing low achievement. Additional cited research suggested that efficacious teachers are more likely to create a learning environment where students feel secure to take risks and have a sense of emotional security (Zee & Koomen, 2016). Conversely, less efficacious teachers tended to experience more conflict with students and failed to create quality student-teacher relationships (Zee & Koomen, 2016). Additionally, practicing teachers who perceive a high level of student misbehavior in the classroom tends to have an increase in emotional exhaustion, which hurts teacher self-efficacy (Zee et al., 2016).

Positive interactions between teachers and students promote a climate that is supportive and can increase student engagement (Künsting et al., 2016). According to Bandura (1997), it can be assumed that highly efficacious teachers provide an environment that is calm and less threatening to students. Additionally, teachers with stronger self-efficacy beliefs tend to offer more support and employ strategies and resources to meet the needs of students (Künsting et al., 2016). While self-efficacy beliefs are subjective, it is essential to invest in those practices, which will increase the self-efficacy of teachers and ensure instructional quality.

<div align="center">**Summary**</div>

Teacher effectiveness is a critical factor in student achievement, and research indicates that it is more influential than student economic backgrounds, demographics, class size, or previous achievement (Staiger & Rockoff, 2010). As such, it is necessary to identify which teacher characteristics impact teacher effectiveness to a higher degree. Early research set the stage to consider psychological attributes as having a powerful impact on teacher effectiveness (Bandura, 1982; Deci & Ryan, 2008; Rotter, 1966). Current researchers have determined a

strong correlation exists between both student achievement and teacher retention (Kilday et al., 2016; Künsting et al., 2016; Wang et al., 2015). Chesnut and Burley (2015) recommended that further research takes place on the conceptualizations of self-efficacy, teacher commitment, and motivation. A study that investigates such a relationship could lead to the formulation of strategies and educational practices aimed at increasing teacher motivation and thus impacting teacher retention and student achievement (Chesnut & Cullen, 2014; Durksen et al., 2017; Han & Yin, 2016).

The present study attempted to discern the predictive relationship between perceived teacher motivation and teacher self-efficacy. Each of these has an impact on a teacher's psychological well-being and, subsequently, performance. The purpose of this study was to investigate the relationship between teacher self-efficacy and teacher intrinsic and extrinsic motivation. While self-efficacy is linked to student outcomes such as student achievement and motivation, it is also related to teacher outcomes; however, the growth in this body of knowledge has been to a lesser degree.

Additional research is necessary to determine the link between teacher motivational beliefs and teacher effectiveness (Han & Yin, 2016). Understanding how teacher motivation impacts overall teacher quality and, subsequently, student outcomes will assist in structuring the educational climate and culture to be more supportive of inspiring and retaining teachers. Current research is limited in scope and often focuses on the negative impact low self-efficacy has on student achievement and job satisfaction.

CHAPTER THREE: METHODOLOGY

Overview

The purpose of this quantitative, predictive, correlational study was to determine if there was a relationship between teacher self-efficacy and teacher intrinsic and extrinsic motivation. The research surrounding teacher self-efficacy suggests a strong relationship exists between both student achievement and teacher retention (Aloe et al., 2014). Likewise, positive dispositional behaviors, such as motivation, should increase self-efficacy and teacher effectiveness (Han & Yin, 2016).

What follows is an overview of the study's research design, research questions, sample population, instrumentation, methods for data collection, and analysis of data. A synopsis of the research design and rationale are provided to assist in framing the study. A summary of the participants, setting, and sampling methods are provided to assist with study replication. The third section outlines the selection criteria for the instruments used as well as inclusionary information regarding construct validity and reliability. Provided are the procedures followed for conducting the research, and the collection of data. The final section reviews the rationale for the methodology selected and the data analysis used to address the hypotheses for each research question.

Correlational Design

The researcher used a correlational design to determine if a relationship existed between elementary school teachers' perception of self-efficacy and perceived motivation. A correlation design is a quantitative research procedure that "measures the degree of association between two or more variables using the statistical procedure of correlation analysis" (Creswell, 2008, p. 60). The correlation research design was chosen because it attempts to examine possible relationships

between the independent variable (motivation) and the dependent variable (self-efficacy) in a situation in which the researcher does not influence the independent variable (Gall et al., 2007). The quantitative study design was appropriate for this research project as quantitative research is theory-based and contributes to the knowledge and advancement of education (Gall et al., 2007). Additionally, this correlational study was used to determine the strength of the relationship between two variables shown to have a logical connection (Gall et al., 2007).

The dependent variable of self-efficacy is the belief in one's capabilities to organize and implement the action needed to produce given achievements (Bandura, 1997). The independent variable of teacher motivation was measured through various professional responsibilities to include class preparation, teaching, evaluation of students, administrative tasks, and complementary tasks. Motivation is the energy or drive to move people to do something in nature (Han & Yin, 2016). Additional work tasks such as class preparation, teaching, evaluation of students, administrative tasks, and complementary tasks are essential indicators of teacher motivation (Fernet et al., 2008).

Data were analyzed to examine the results of two surveys to assess the proposed hypothesis. By evaluating the hypothesis, the researcher sought to determine if the results of two surveys indicated a statistical relationship between elementary teachers' motivation and the teachers' perception of personal self-efficacy. The two survey instruments utilized in this study were the TSES and WTMST. The research hypotheses were assessed to determine the relationship between overall motivation and teacher self-efficacy.

Research Questions

This study adds to the body of knowledge regarding the statistical relationship between elementary teachers' motivation and the teachers' perception of personal self-efficacy. Specifically, the study was designed to answer the following:

RQ1: Is there a relationship between teacher self-efficacy as measured by the TSES and intrinsic and extrinsic motivation as measured by WTMST?

RQ2: Is there a relationship between teacher self-efficacy as measured by the TSES and intrinsically motivated work responsibilities as measured by WTMST?

RQ3: Is there a relationship between teacher self-efficacy as measured by the TSES and extrinsically motivated work responsibilities as measured by WTMST?

Null Hypotheses

H$_0$1: There is no statistically significant correlation between teacher self-efficacy as measured by the TSES and intrinsic and extrinsic motivation as measured by WTMST.

H$_0$2: There is no statistically significant correlation between teacher self-efficacy as measured by the TSES and intrinsically motivated work responsibilities as measured by WTMST.

H$_0$3: There is no statistically significant correlation between teacher self-efficacy as measured by the TSES and extrinsically motivated work responsibilities as measured by WTMST.

Participants and Setting

The two school systems included in this study were in a suburban area located in a southeastern state. The first school system included in this study was composed of 31 schools: 17 elementary schools, eight middle schools, and five high schools. Additionally, the first school

system had one alternative education program, two public day school programs, and a Head Start program. At the time of this study, the first school system served approximately 28,000 students and over 3,500 employees. All 17 elementary schools served students in grades kindergarten through fifth grade and had varied demographics. Seven of the 17 schools were considered Title 1 with free/reduced meal percentages ranging from 35% to 58%.

The second school system was composed of four schools: one lower-elementary, one upper-elementary, one middle school, and one high school. The total enrollment for the district was approximately 3,763 students. The two schools that served elementary students were considered Title 1 with free/reduced meal percentages averaging 45%. One of the elementary schools served students in grades kindergarten through second-grade while the other served students in third through fifth-grade.

Recruitment for participants for this study was completed through a convenience sampling from the elementary schools within the two school divisions. According to the United States Department of Education (2019), collectively, the two districts within this state reported 41.5% of teachers hold a bachelor's degree, 55.5% hold a master's degree, 1% hold a doctoral degree, and 2% hold another degree.

The researcher obtained 654 emails for licensed elementary teachers who were over 18 years of age. Thirty-one of those emails were omitted using a systematic removal technique within excel; therefore, 623 surveys were distributed via email. The random removal of participants was an agreement made with one of the organizations in order to survey participants within the division. Of those 623 surveys, 275 participants did not respond, 218 surveys were started but not completed; therefore, complete responses were obtained by 130 participants.

According to Gall et al. (2007), 277 participants are the required minimum for a small effect size with the statistical power of N=.5 at α=.10. This limitation will be noted in chapter 5.

Participants received an email that included an overview of the study, a request for consent, and the link to participate in the electronic survey. Reminders were distributed throughout the response window of 15 days. The use of the link ensured only one submission per email address. It provided anonymity by not linking responses to the participants' email addresses and by not recording an IP address for the respondent.

The researcher distributed surveys via email through Qualtrics XM to randomly chosen teachers from the elementary schools. The demographics of each elementary school teacher were examined separately and included gender, age, racial identity, level of education, and the number of whole years taught. The total sample consisted of 4 males and 126 females. The racial demographics of the sample were as follows: 91.5%, Caucasian (Non-Hispanic); 6.9%, African American; 0.8%, Native American/Alaskan Native and Asian; 0.8%, other. Of those who participated, 43.1% held a bachelor's degree, 51.5% held a master's degree, 5.4% held a degree or had credits beyond that of a master's degree. Of the surveyed participants, 1.5% were in their first year of teaching, 41.5% had one to 10 years of experience, 26.9% had 11 to 20 years of experience, and 30.0% had more than 20 years of experience. Demographics are included in the analysis as recent research indicates motivation and self-efficacy may vary between male and female teachers (Collie & Martin, 2017; Yousuf Zai & Munshi, 2016).

Instrumentation

The two instruments used in the study include WTMST and the TSES. Both commonly used instruments measure teacher perceptions. The researcher received permission to use both instruments (See Appendices A and B). The WTMST is an assessment originally published in

the Journal of Career Assessment by SAGE Publishing; therefore, permission to use the

instrument was obtained by SAGE Publishing. The WTMST, which measured motivation and

motivational indicators, is divided into five subcategories to include: class preparation, teaching,

evaluation of students, administrative tasks, and complementary tasks. The TSES was formally

called the Ohio State Teacher Sense of Efficacy Scale originally developed by Megan

Tschannen-Moren and Anita Woolfolk Hoy. Permission to use this instrument was obtained by

Megan Tschannen-Moran who is now a professor at the William and Mary School of Education.

The TSES was used to measure perceived teacher self-efficacy. The two surveys were

distributed to all randomly chosen, licensed, certified teachers working within the elementary

schools in two school districts located in a southeastern state.

Used in numerous research studies, the WTMST was used to obtain information

regarding teachers' perceptions of their motivation (Collie & Martin, 2017; Gorozidis &

Papaioannou, 2014; Perlman, 2013). The WTMST consisted of 75 questions ranked on a seven-

point Likert scale. The questions measure overall motivation; however, they are divided into

five subcategories. The model for the WTMST described motivation by focusing on five

subscales: class preparation, teaching, evaluation of students, administrative tasks, and

complementary tasks. Additionally, five motivational constructs were included for each task.

Those include intrinsic motivation, identified regulation, introjected regulation, external

regulation, and amotivation. The WTMST should have taken no more than 15 minutes to

complete.

The class preparation scale included tasks such as deciding on instructional topics

determining the format of instruction and establishing instructional procedures (Fernet, Senecal,

Guay, Marsh, & Dowson, 2008). The teaching scale included elements such as instructional

presentation, responding to questions, and attending to student needs (Fernet et al., 2008). The

evaluation of students included creating formative and summative assessments, grading

assessments, and providing feedback (Fernet et al., 2008). The administrative tasks included

recording attendance, maintaining files, and participating in meetings (Fernet et al., 2008). The

complementary tasks included involvement in school and district committees, assisting with

extracurricular activities and participating in professional development (Fernet et al., 2008). For

the statements provided for each section, answer choices were as follows: Does not correspond at

all = 1, Corresponds very little = 2, Corresponds a little = 3, Corresponds moderately = 4,

Corresponds strongly = 5, Corresponds very strongly = 6, and Corresponds completely = 7.

Higher composite response scores equate to higher teacher motivation.

Fernet et al. (2008) provided strong reliability and validity for the WTMST. Table 1

provides the reliability and validity of the information.

Table 1

Work Tasks Motivation Scale for Teachers (WTMST) Reliability

Cronbach's alpha coefficient	Range of Values	Pearson r
Intrinsic Motivation	.83 - .96	r=.92
Identified Regulation	.72 - .89	r=.82
Introjected Regulation	.79 - .89	r=.85
External Regulation	.64 - .87	r=.76
Amotivation	.75 - .81	r=.77

In assessing the convergent validity, all 15 correlations were positive and significant for each

type of motivation. Regarding divergent validity, the overall convergent correlations (mean r = .46) were higher than divergent correlations (mean r = .14).

The second instrument, TSES, developed by Tschannen-Moran and Hoy (2001), was chosen to measure teacher self-efficacy. The instrument has been utilized successfully in various studies (Mortensen, Cox, & Satterlee, 2016; Yousuf Zai & Munshi, 2016; Zee & Koomen, 2016). The purpose of the TSES was to measure the attitudes of teachers in their work with students. The TSES is closely aligned with the self-efficacy theory and has proven to be a successful measure in other studies (Durksen et al., 2017). The short-form of the TSES consisted of 12 questions ranked on a nine-point Likert scale. The questions measure overall self-efficacy and are divided into three subcategories. The model for the TSES described self-efficacy by focusing on student engagement, instructional strategies, and classroom management. The TSES should take no more than five minutes to complete.

Table 2

Teacher Sense of Efficacy Scale (TSES) Question Correspondence

Category Title:	Item:
Efficacy in Student Engagement	2, 4, 7, 11
Efficacy in Instructional Strategies	5, 9, 10, 12
Efficacy in Classroom Management	1, 3, 6, 8

For each item, the possible answer choices were as follows: None at all = 1, Very little = 3, Some degree = 5, Quite a bit = 7, and A great deal = 9. Higher composite response scores equate to higher teachers' self-efficacy.

Tschannen-Moran and Hoy (2001) provided strong reliability and validity for the TSES. The resulting Cronbach alpha reliability coefficients are α = 0.905, as noted in Table 3. This information suggested that all scales had acceptable levels of internal reliability (Gall et al., 2007). Table 4 provides the validity and reliability of the information.

Table 3

Teacher Sense of Efficacy Scale (TSES) Reliability

Cronbach's alpha coefficient of 0.90	Range of Values	Pearson *r*
Student Engagement	.62 - .75	*r*=.81
Instructional Strategies	.63 - .75	*r*=.86
Classroom Management	.61 - .83	*r*=.86

Procedures

The researcher obtained permission to administer the TSES and the WTMST. Permission for use of the TSES was granted December 18, 2017 (Appendix A) and the WTMST was granted January 12, 2018 (Appendix B). The researcher requested and obtained permission from the first school district's Office of Assessment and Accountability (OAA) through completing an Application to Conduct Research Studies. The second school district required an email and an overview of the study to be conducted. Once both districts granted permission, the research obtained the approval of the Liberty University Institutional Review Board (IRB) (Appendix C). Upon OAA endorsement and IRB approval, data collection began.

The researcher contacted the directors of assessment and accountability for both districts to obtain the email addresses for all licensed elementary teachers over 18 years of age. The researcher randomized participants by using a randomization technique in Excel and omitted 31

participants. Surveys were then distributed via Qualtrics and included a link for survey completion. Data collection was anonymous, and each participant was provided with a unique identifier to ensure anonymity. Data were then downloaded to a flash drive, which was kept in possession of the researcher, and the original data were deleted. The researcher made every effort to protect the identities of participants.

 While anonymous, the participants were offered the option to be entered into a drawing to win one of ten $25.00 gift cards for completing the survey. For those participants wishing to be compensated, an additional screen appeared after completing the survey and directed participants to enter their name, contact information, and mailing address. Of the 130 participants who completed the survey, 103 chose to complete the compensation information.

The electronic survey included an introduction, consent request, and survey questionnaire. The consent form outlined the purpose of the research, the guarantee of participants' anonymity, an explanation of participation being voluntary, and directions for completing the survey. Additionally, the consent form outlined that participation would not impact the relationship with the researcher, local school system, or Liberty University.

The initial email included a review of the introduction, consent form, and survey questionnaire. Within five days of the initial email, a reminder email was sent to participants who had not yet completed a response. The use of a link ensured only one submittal per email address. Data collection concluded at the end of fifteen days.

The researcher determined the return rate and ensured the distribution of incentive gift cards upon receipt of completed surveys. Data were transferred from Qualtrics to Excel to compile the data from each respondent's survey. Qualtrics provided each completed survey with a unique identification code to pair it with the responses. The assignment of codes assisted in

narrowing down data should a discrepancy occur. The WTMST scores were separated from the

TSES scores. Data was reviewed visually before being analyzed to ensure accuracy. Data found

from the 39 incomplete surveys were removed from the study. Data were stored on a secure

flash drive, which was then downloaded and held on a private laptop.

Data Analysis

The researcher used a Pearson product-moment correlation coefficient (Pearson *r*) to

determine the strength of the linear relationship between the dependent variable of self-efficacy

and the independent variable of motivation (Warner, 2013). Using a correlational design was

appropriate for this study because its purpose was "to measure the degree and direction of the

relationship between two or more variables and to explore possible causal factors" (Gall et al.,

2007, p. 336).

Data collected through the two survey instruments, WTMST and the TSES, were

analyzed to determine if a relationship existed between teacher motivation and teacher self-

efficacy. The researcher used a bivariate, correlational design to determine if a relationship

existed between elementary school teachers' perception of self-efficacy and perceived

motivation.

The researcher exported data into SPSS 24.0, the statistical software program used for the

study. The analysis began with data screening to look for unusual scores and inconsistencies

using a scatterplot to look for extreme outliers. Assumption testing was then conducted to check

the assumptions for bivariate outliers, linearity and bivariate normal distribution. These

assumptions were assessed using a scatterplot with the predictor variables on the x-axis and the

criterion variable on the y-axis. Using the scatterplot, the correlation ratio of the two variables

assisted in determining if outliers existed and then were analyzed to determine possible removal

(Gall et al., 2007). The assumption of bivariate outliers utilized a scatterplot to determine extreme bivariate outliers. The researcher assessed independent variables within teacher motivation and the dependent variable of self-efficacy. The assumptions of linearity and outliers were assessed through the creation of both a scatterplot to determine if there were outliers for the primary study variables. A scatterplot was used to determine linearity between the predictor variables (x) and the criterion variable (y). A scatterplot was used to observe the presence or absence of the classic "cigar shape" to ensure normal distribution between the predictor variables (x) and a criterion variable (y).

Next, the researcher conducted reliability analyses for each of the respective scales (e.g., self-efficacy, overall work task motivation, class prep related work task motivation, teaching-related work task motivation, administratively related work task motivation, and complimentary work task motivation). Once the scale reliability was confirmed, descriptive analyses were conducted to determine means and standard deviations for each of the study variables.

Descriptive statistics were calculated for both surveys as well as the subcategories (Gall et al., 2007). The Pearson product-moment correlation coefficient (Pearson *r*) was utilized to calculate the correlation coefficients for the cumulative scores between the WTMST and the TSES (Gall et al., 2007). Lastly, the cumulative of the TSES was compared with each subcategory of the WTMST. Based on the results, the Pearson product-moment correlation coefficient was assessed to determine if a statistical significance exists for each of the relationships outlined in the hypotheses (Gall et al., 2007).

CHAPTER FOUR: FINDINGS

Overview

The purpose of this study was to ascertain the correlations between teachers' perceived self-efficacy and intrinsic, extrinsic and overall motivation. There were three research questions which guided this study. Each question was examined using a correlation analysis. An examination of each question, hypotheses, and descriptive statistics are discussed in this chapter.

Research Questions

RQ1: Is there a relationship between teacher self-efficacy as measured by the TSES and intrinsic and extrinsic motivation as measured by WTMST?

RQ2: Is there a relationship between teacher self-efficacy as measured by the TSES and intrinsically motivated work responsibilities as measured by WTMST?

RQ3: Is there a relationship between teacher self-efficacy as measured by the TSES and extrinsically motivated work responsibilities as measured by WTMST?

Null Hypotheses

$H_0 1$: There is no statistically significant correlation between teacher self-efficacy as measured by the TSES and intrinsic and extrinsic motivation as measured by WTMST.

$H_0 2$: There is no statistically significant correlation between teacher self-efficacy as measured by the TSES and intrinsically motivated work responsibilities as measured by WTMST.

$H_0 3$: There is no statistically significant correlation between teacher self-efficacy as measured by the TSES and extrinsically motivated work responsibilities as measured by WTMST.

Descriptive Statistics

The study's participants consisted of 130 teachers in two school districts in a southeastern state. Of the 130 participants in the sample, 126 were female (96.9%). Although age responses varied among participants, the most frequent responses were 20-29 (24.6%), 40-49 (26.9%) and 50-59 (23.8%). The bulk of participants indicated White as their ethnicity (91.5%). Over half the participants in the sample held a master's degree (51.5%). Additionally, a few participants have earned credits beyond that of a master's degree (5.4%). The majority of participants have taught for 2-10 years (41.5%); however, participants in the 11-20 years of teaching range (26.9%) and 20+ years of teaching range (30.0%) were also notable. Table 4 presents the demographic characteristics of the sample.

Table 4

Frequency Counts for Selected Demographics (N = 130)

Variable	Category	n	%
Gender	Male	4	3.1
	Female	126	96.9
Age group	20-29	32	24.6
	30-39	23	17.7
	40-49	35	26.9
	50-59	31	23.8
	60-65	9	6.9
Ethnicity	White	119	91.5
	African American	9	6.9
	Native American/Alaskan Native	1	0.8
	Asian	1	0.8
Educational level	Bachelor's Degree	56	43.1
	Master's Degree	67	51.5
	Master's Degree +30	7	5.4
Years teaching	1	2	1.5
	2-10	54	41.5
	11-20	35	26.9
	20+	39	30.0

The TSES consists of 12 teacher belief scores which use a 9-point Likert scale to rate the questions. The highest and lowest rated belief scores were the ability to craft good questions for students (*M* = 7.93, *SD* = 1.09*)* and ability to calm a student who is disruptive or noisy (*M* = 6.93, *SD* = 1.23*)* respectively. The majority of mean scores were close to the high end of the scale. A positive correlation between the two variables was noted using the collected date, *r* = 0.090, *p* = 0.311 (See Table 5)

Table 5

Teacher Beliefs for the Teachers' Sense of Efficacy Reliability Scores

Variable	N	Mean	Std.
Teacher Sense of Efficacy Scale Item #1	130	7.30	1.36
Teacher Sense of Efficacy Scale Item #2	130	7.24	1.35
Teacher Sense of Efficacy Scale Item #3	130	7.82	1.15
Teacher Sense of Efficacy Scale Item #4	130	7.56	1.17
Teacher Sense of Efficacy Scale Item #5	130	7.93	1.09
Teacher Sense of Efficacy Scale Item #6	130	7.52	1.24
Teacher Sense of Efficacy Scale Item #7	130	6.93	1.23
Teacher Sense of Efficacy Scale Item #8	130	7.89	1.12
Teacher Sense of Efficacy Scale Item #9	130	7.60	1.31
Teacher Sense of Efficacy Scale Item #10	130	7.80	1.12
Teacher Sense of Efficacy Scale Item #11	130	7.24	1.29
Teacher Sense of Efficacy Scale Item #12	130	7.69	1.08

Table 6 displays the reliability statistics for the 12 teacher belief scores as measured by WTMST. The resulting Cronbach alpha reliability coefficients are $\alpha = 0.905$. This information suggested that all scales had acceptable levels of internal reliability (Gall et al., 2007).

Table 6

Teachers' Sense of Efficacy Reliability Scores (N = 130)

Variable	# of items	Mean	Std.	α
Teacher Sense of Efficacy Scale	12	7.55	0.78	.905

Table 7 displays the reliability statistics for the 75 work task scores as measured by WTMST. The resulting Cronbach alpha reliability coefficients are $\alpha = 0.929$. This information suggested that all scales had acceptable levels of internal reliability (Gall et al., 2007).

Table 7

Work Tasks Motivation Scale for Teachers Reliability Scores (N = 130)

Variable	# of items	Mean	Std.	α
Work Tasks Motivation Scale for Teachers	75	3.90	0.66	.929

Table 8 displays the descriptive statistics for all variables assessed in this study. The highest and lowest variable scores were the totality from each survey tool used, to include the TSES ($M = 7.55, SD = 0.78$) and the WTMST ($M = 3.90, SD = 0.66$) respectively.

Table 8

Descriptive Statistics for All Variables

Variable	*N*	Mean	Std.
TSES Total	130	7.55	0.78
WTMST Class Preparation	130	4.12	0.78
WTMST Teaching	130	4.21	0.78
WTMST Evaluation of Students	130	3.83	0.76
WTMST Administrative Tasks	130	3.75	0.84
WTMST Complimentary Tasks	130	3.62	0.77
WTMST Intrinsic Motivation Tasks	130	4.33	0.93
WTMST Extrinsic Motivation Tasks	130	4.43	0.91
WTMST Total	130	3.90	0.66

Results

Data Screening

The data were reviewed for missing values and all were found to be complete. The researcher used SPSS to create a scatterplot for each null hypothesis to test the assumptions of linearity, bivariate normal distribution, and the presence of bivariate outliers.

Assumption Testing

Pearson product-moment correlations required that certain assumptions be met. For null hypothesis one, the researcher visually inspected the scatterplot found in Figure 3, and found the assumption of linearity and the assumption of no bivariate outliers tenable. Additionally, the assumption of bivariate normal distribution was met as illustrated in the classic cigar-shaped data points observed in the scatterplot in Figure 3.
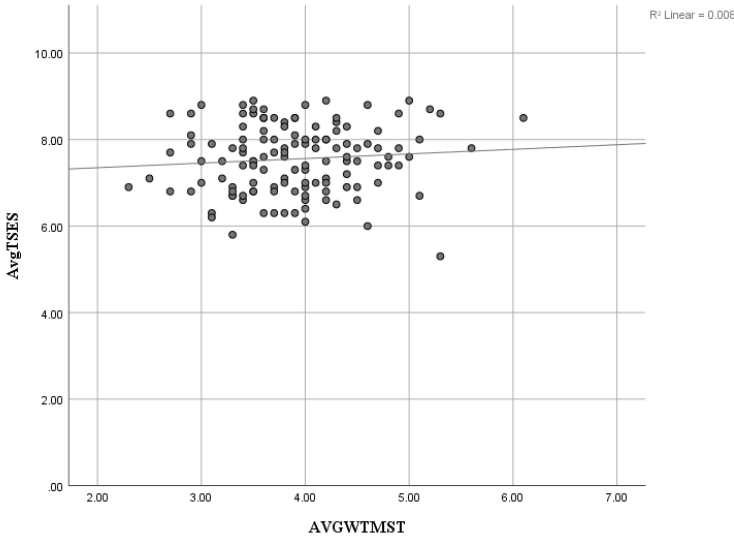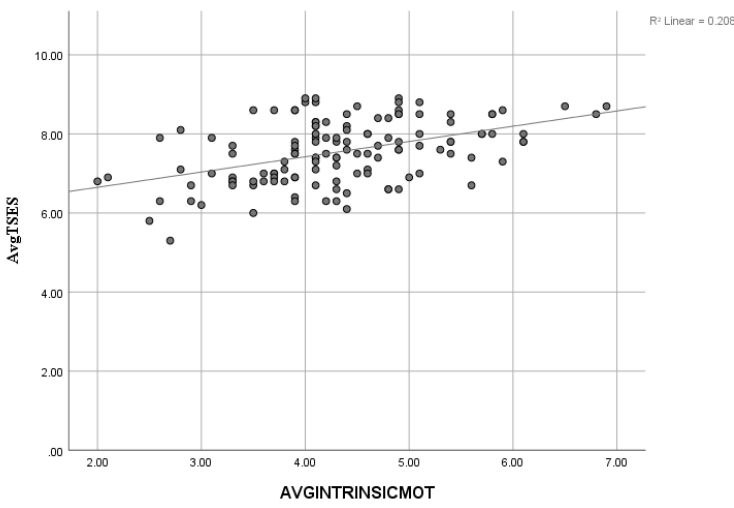
Figure 3. Scatterplot of the Average WTMST

For null hypothesis two, the researcher visually inspected the scatterplot found in Figure 4, and found the assumption of linearity and the assumption of no bivariate outliers tenable. Additionally, the assumption of bivariate normal distribution was met as illustrated in the classic cigar-shaped data points observed in Figure 4
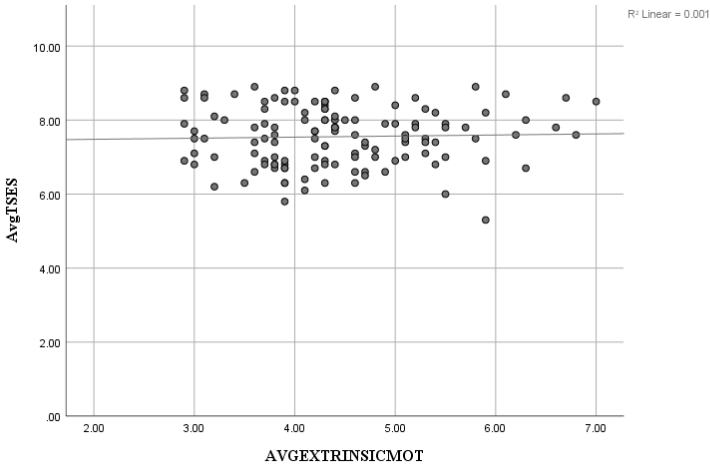

Figure 4. Scatterplot of the Average Intrinsic WTMST

For null hypothesis three, the researcher visually inspected the scatterplot found in Figure 5, and found the assumption of linearity and the assumption of no bivariate outliers tenable.

Additionally, the assumption of bivariate normal distribution was met as illustrated in the classic

cigar-shaped data points observed in Figure 5.

Figure 5. Scatterplot of the Average Extrinsic WTMST

Null Hypothesis One

A Pearson correlation was calculated to determine the strength of the relationship

between perceived teacher self-efficacy as measured by the TSES and motivation as measured

by the WTMST from the surveys administered to 130 teachers. For each participant, questions

pertaining to the TSES composite scores obtained an average score ranging from 1 to 9 points;

questions pertaining to the WTMST survey obtained an average score ranging from 1 to 7 points.

A weak and positive correlation between the two variables was found using the collected data, *r*

= .090, *p* = .311 (see Table 9).

Table 9

Correlations

Teacher Sense of Self-Efficacy	Value of *r*	P-Value	*N*
WTMST Average	.090	.311	130
WTMST Intrinsic Average	.456**	.000	130
WTMST Extrinsic Average	.034	.704	130

Thus teachers' perceptions of the TSES composite do not have a direct ~~strong~~ correlation with teachers' perceptions of the WTMST; therefore the researcher failed to reject null hypothesis one.

Null Hypothesis Two

A Pearson correlation was calculated to determine the strength of the relationship between perceived teacher self-efficacy as measured by the TSES and motivation as measured by the WTMST from the surveys administered to 130 teachers. For each participant, questions pertaining to the TSES composite scores obtained an average score ranging from 1 to 9 points; questions pertaining to the WTMST survey obtained an average score ranging from 1 to 7 points. A strong positive correlation between the two variables was found using the collected data, $r =$ .456, $p = .000$ (see Table 9).

Thus teachers' perceptions of the TSES composite directly correlate with teachers' perceptions of the WTMST, and null hypothesis two is rejected in the study.

Null Hypothesis Three

A Pearson correlation was calculated to determine the strength of the relationship between perceived teacher self-efficacy as measured by the TSES and extrinsic motivation as measured by the WTMST from the surveys administered to 130 teachers. For each participant, questions pertaining to the TSES composite scores obtained an average score ranging from 1 to 9 points; questions pertaining to the WTMST survey obtained an average score ranging from 1 to 7

points. A weak and positive correlation between the two variables was found using the collected

data, $r = .034$, $p = .704$ (see Table 9).

Thus teachers' perceptions of the TSES composite do not have a direct strong correlation

with teachers' perceptions of the WTMST; therefore the researcher failed to reject null

hypothesis three.

CHAPTER FIVE: CONCLUSIONS

Overview

The purpose of this quantitative, correlation study was to examine the relationship between teacher self-efficacy and motivation in elementary teachers in schools in northern Virginia. The constructs of teacher efficacy and motivation are two areas deemed as influential on both teacher qualification and effectiveness (Perlman, 2013). The investigation of the factors that increase elementary teacher self-efficacy is necessary as doing so may influence the structure of schools and assist in retaining teachers. Recruiting and retaining quality teachers is paramount to the success of the public education system and student achievement. Additional research was needed to determine if the motivation was correlated with self-efficacy so that teacher preparatory programs and school organizations can work to develop supports to increase self-efficacy and, in turn, positively impact recruitment practices and teacher retention.

Discussion

Based on the findings of the present study and the findings of previous literature, intrinsic motivation can have a positive impact on teacher self-efficacy. Conversely, the present study findings do not indicate a positive correlation between the direct influence of self-efficacy with extrinsic motivation and overall. According to Fernet et al. (2008):

> because self-determination is associated with optimal psychological adjustment to work, it is expected that intrinsic motivation and identified regulation would be positively correlated with teachers' perception of efficacy and negatively correlated with job burnout and the controlling style of the school principal. (p. 261)

Additionally, Fernet et al. (2008) surmise elementary teachers should present with higher levels of intrinsic motivation and lower levels of extrinsic motivation than that of secondary teachers

based on a variety of evidence. They further suggest that elementary teachers would also have an increase in self-efficacy and a lower burnout rate than their secondary counterparts.

As the United States continues to face a teacher shortage and the stressors of teaching continue to increase, research must continue to focus on the influence of retention and recruitment. Given the impact teacher self-efficacy has on instruction and teacher well-being, it is essential to determine the impact teacher efficacy has on positive factors of teaching, such as increased job satisfaction and motivation (Han & Yin, 2016).

Additional research is needed to determine if motivation can have a positive impact on teacher self-efficacy. Researchers should continue to confirm the relationship between intrinsic motivation and teacher self-efficacy. Analyzing the work tasks within each sub-section of WTMST comparative to self-efficacy may reveal supplementary correlational relationships.

Research Question One

Is there a relationship between teacher self-efficacy as measured by the Teacher Sense of Efficacy Scale (TSES) and intrinsic and extrinsic motivation as measured by WTMST (WTMST)?

The researcher found no significant relationship between teachers' perceptions of self-efficacy average scores and overall motivation. Mills and Fullagar (2016) supported the concept of motivation being a significant and positive influence of self-efficacy. Teacher motivation has been linked to self-efficacy, as demonstrated through teacher commitment and influence (Kilday et al., 2016). Likewise, researchers suggest that positive internal behaviors, based on intrinsic and extrinsic motivation, should increase self-efficacy and teacher effectiveness (Han & Yin, 2016; Skaalvik & Skaalvik, 2017).

Research indicates there are various factors which assist in teacher motivation, to include compensation, work environment, performance and evaluation system, and professional development and training (Rasheed, Asad, Awan, & Affan, 2016). Recent research has centered on teacher self-efficacy and its impact on job satisfaction, attrition, stress, and burnout (Troesch & Bauer, 2017). However, there is a gap in the research regarding the relationship between teacher self-efficacy and the variables of teacher perception and teacher work experience (Skaalvik & Skaalvik, 2017). An analysis of teachers' perception and the relationship to workload, self-efficacy, emotional exhaustion, job satisfaction, and motivation determined self-efficacy magnifies possible problems and insecurities (Skaalvik & Skaalvik, 2017). Teachers with stronger self-efficacy tend to remain in the classroom (Ware & Kitsantas, 2011). While Cho and Shim found that efficacious teachers sustain personal goals for teaching regardless of conflicting goals within the organization, in contrast, teachers with low self-efficacy tend to adapt goal setting to comply with the school (Cho & Shim, 2013). Additionally, Wang et al. (2015) concluded that both the social environment (school climate, school resources, and student behavior) and dispositional factors (motivation and temperament) impact teacher burnout.

Research Question Two

Is there a relationship between teacher self-efficacy as measured by the Teacher Sense of Efficacy Scale (TSES) and intrinsically motivated work responsibilities as measured by WTMST (WTMST)?

The purpose of this questions was to determine if there was a statistically significant relationship between teachers' perceived self-efficacy average scores and the effect on intrinsic motivation. After the analysis of the data, the researcher found that teachers' perceived self-efficacy directly correlates with teachers' intrinsic motivation.

The findings of the present study are grounded in a seminal study, conducted by the RAND Corporation, which was initially used to determine the relationship between teacher self-efficacy and student achievement. A by-product of the study, the assessment tool assisted in determining if internal or external factors controlled teacher effort. Intrinsic motivation impacts a perceived level of success based on internal factors, including confidence and ability (Tschannen-Moran & Hoy, 2001).

Research supports the link between teacher self-efficacy and intrinsic motivation. According to Klaeijsen et al. (2017), teachers need to feel productive and competent for intrinsic motivation to be positively impacted. Klaeijsen et al. (2017) suggested that motivated teachers are innovative and creative, and conversely, the intrinsic motivation of teachers has been linked to student motivation, student persistence, and student achievement.

Deci and Ryan's (1985) self-determination theory encompasses human motivation. The implications of this theory impacts education as the theory postulates intrinsic motivators, and the resources teachers have access at their disposal have a significant impact on the well-being of teachers (Durkesen et al., 2017). Additionally, Bandura's social cognitive theory analyzes cognitive, behavioral, and environmental factors of self-efficacy. Bandura later expanded on social cognitive theory (1982) and included mastery experiences, observation, verbal and social persuasion, and psychological and emotional arousal. The findings of the present study, in conjunction with previous research, support both Deci and Ryan's self-determination theory, as well as Bandura's social cognitive theory. In turn, research studies have expanded to conclude that intrinsic goals, as opposed to extrinsic goals, lead to higher performance and well-being (Jansen in de Wal et al., 2014).

Research Question Three

The measurement tool for motivation used for this study was the WTMST. The survey questions are comprised of five types of motivation for each of the six teachers' work tasks. This study extrapolated all questions from the survey, which were identified to be associated with extrinsic motivation to find there was no statistical connection between teacher self-efficacy and extrinsic motivation.

Previous research noted that psychological factors have a more significant influence on intrinsic motivation rather than extrinsic motivation; however, the findings of the present study do not align with a correlation between extrinsic motivation and self-efficacy. Han and Yin (2016) extended the self-determination theory to include the notion that teacher self-efficacy can motivate professional behavior and reinforce goal setting; however, concerns were expressed as a myriad of external factors influenced motivation. The current study measured extrinsic motivation through WTMST. The survey measures three types of extrinsic motivation to include external regulation, introjected regulation, and identified regulation (Fernet, Senecal, Guay, Marsh, & Dowson, 2008). Deci (1980) did surmise that less self-determined types of motivation, to include introjected and external regulation, lead to adverse outcomes regarding motivational consequences.

Deci and Ryan (2008) claimed that long-term goals guide people to complete specific activities. Additionally, intrinsic or extrinsic objectives can be linked to specific goal alignment. Previous research has concluded intrinsic goals, as opposed to extrinsic goals, lead to more exceptional performance and well-being (Jansen in de Wal et al., 2014). However, extrinsic goals are becoming more of a significant factor as funding is linked to achievement, academic performance, and accreditation (Ford et al., 2017).

Implications

The present study has implications for both theory and practice. Firstly, findings

confirmed that intrinsic motivation has a positive impact on teacher self-efficacy. As a result,

additional research is needed to determine factors that can influence intrinsic motivation.

Secondly, the findings did not support a correlation between self-efficacy and extrinsic

motivation nor overall motivation. This indicates an inconclusive correlation and may necessitate

additional and varied research.

Practical implications of the findings indicate that it is imperative that organizations and

administrators determine strategies and professional development opportunities to influence an

individual's intrinsic motivation positively. Subsequently, once those strategies and

opportunities are determined and implemented, they may increase an individual's self-efficacy.

For example, administrators should develop opportunities to tailor professional development for

teachers, which is suitable for the individual needs of the learner.

Limitations

This research, however, is subject to several limitations. The first two limitations pertain

to the research design. The first limitation was the inability to determine a causal relationship

between the variables as the researcher did not use an experimental design. The second

limitation was the researcher did not randomly assign participants to groups. Other limitations

were the sample size and the self-reporting of data via a survey model. The sample size was

limited due to the researcher's access to only two districts' elementary school teacher population.

Additionally, the research relied on self-reporting measures via two surveys requiring responses

given a Likert-scale. The next limitation was the response rate to the surveys disseminated for

this study. Specifically, out of 623 invitations sent to a variety of elementary teachers, 218

began to respond; however, only 169 submitted a response, and of those, only 130 provided a completed survey.

A possible final limitation of this research was the COVID-19 pandemic. The survey was disseminated to teachers following over two months of remote teaching. Teachers were not present in their building and increased the likelihood they would demonstrate frustration as they completed the survey.

Recommendations for Future Research

In this study, an analysis was conducted examining the correlational relationships concerning teachers' perceived self-efficacy average scores, overall motivation, intrinsic motivation and extrinsic motivation. The findings of the present study confirmed the relationship between teacher self-efficacy and intrinsic motivation is statistically significant.

Based on the findings, more research is recommended to further the understanding of the relationship between teacher self-efficacy and motivation. The following recommendations should be considered for further study:

1. A qualitative study would assist in assessing the beliefs and attitudes of participants regarding their ability to perform their working tasks and sources of motivation.

2. A quantitative study would assist in analyzing the work tasks within each sub-section of WTMST comparative to self-efficacy, which may reveal supplementary correlational relationships.

3. This study could benefit from having a larger sample size either at the elementary level or include secondary level as well. Also, this student could be replicated in different geographical regions to determine similarities and differences in possible locations.

4. The demographic factors of this study could be useful in analyzing the categories of gender, age range, race, level of education, and the number of years teaching and the effects on teacher self-efficacy and/or motivation.

5. A longitudinal study could assist in capturing the changes in self-efficacy over time and if the motivation is impacted by the experience.

6. Different research methods, measurement tools, and research designs would yield varied results and could assist in broadening the understanding of how motivation and teacher-efficacy impact recruitment and retention.

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APPENDIX A: Permission to Use the Teacher Sense of Efficacy Scale (TSES)

William & Mary
School of Education

MEGAN TSCHANNEN-MORAN, PHD
PROFESSOR OF EDUCATIONAL LEADERSHIP

December 18, 2017

Sallie,

You have my permission to use the Teacher Sense of Efficacy Scale (formerly called the Ohio State Teacher Sense of Efficacy Scale), which I developed with Anita Woolfolk Hoy, in your research. You can find a copy of the measure and scoring directions on my web site at http://wmpeople.wm.edu/site/page/mxtsch . Please use the following as the proper citation:

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

I will also attach directions you can follow to access my password protected web site, where you can find the supporting references for this measure as well as other articles I have written on this and related topics.

I would love to receive a brief summary of your results.

All the best,

Megan Tschannen-Moran
The College of William and Mary
School of Education

APPENDIX B: Permission to Use the Work Tasks Motivation Scale for Teachers (WTMST)

APPENDIX C: Institutional Review Board Application Approval

IRB-FY19-20-323 - Initial: Initial - Exempt

irb@liberty.edu <irb@liberty.edu>
Mon 5/11/2020 11:29 AM
To: Gorman, David Andrew (School of Education) <dagorman@liberty.edu>; Johnakin-Putnam, Sallie <sjohnakinputnam@liberty.edu>

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

May 11, 2020

Sallie Johnakin-Putnam
David Gorman

Re: IRB Exemption - IRB-FY19-20-323 The Impact of Teacher Intrinsic and Extrinsic Motivation on Teacher Self-Efficacy

Dear Sallie Johnakin-Putnam, David Gorman:

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:
101(b):

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Your stamped consent form can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. This form should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office