

THE RELATIONSHIP BETWEEN TEACHER SELF-EFFICACY AND THE
QUANTITY OF OFFICE DISCIPLINE REFERRALS THEY WRITE

by

Brian Patrick Conary

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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ABSTRACT

Teachers' levels of self-efficacy affect not only how they view themselves, but also how they view their students. Some students receive more discipline referrals than others, leading to higher retention and dropout rates for those students with a significant number of discipline referrals. Discipline referrals are subjective. Therefore, each person's viewpoint attributes to how student behavior is perceived and reported. In addition to a disproportionate number of referrals received by certain students, some teachers are more prone to write a large number of referrals. Social cognitive theory states that an individual's self-efficacy influences his or her actions. Individuals with a more positive self-efficacy are much more likely to achieve more favorable results. Those with a less positive self-efficacy are much less likely to achieve the desired outcome. This quantitative correlational study examined the overall self-efficacy and self-efficacy in the areas of classroom management, student engagement, and instructional strategies of 72 high school teachers across three high schools in the southeastern United States and the number of office discipline referrals they write. Each teacher was administered the short form of the Teacher Self-Efficacy Scale (TSES). A Spearman's Rank Order was used to evaluate the relationship between the composite and subscale scores (classroom management, student engagement, and instructional strategies) on the TSES and each teacher's number of office discipline referrals. The results indicated a weak negative relationship between teacher self-efficacy and the number of discipline referrals written. However, the relationship was not statistically significant. By understanding the connection between teacher self-efficacy and discipline referrals, administrators and district personnel may be able to improve student retention and dropout rates by identifying and providing additional capacity to teachers with lower self-efficacy.

Keywords: social cognitive theory, self-efficacy, classroom management, instructional strategies, student engagement, office discipline referrals

Dedication

I would not have pursued this degree if it were not for the gospel of Jesus Christ teaching me that I should improve myself and gain as much intelligence as possible. I am also grateful to my first principal as a first-year assistant principal, Mr. Steven Fitch, who encouraged me to pursue my doctorate while I am still young and recommended Liberty University. I would be remiss if I did not thank my dissertation chair, Dr. Jessica Talada, for her continual advice and support. Thank you for encouraging me. Also, a big thanks to Dr. Rebecca Lunde for your statistical expertise and quick feedback. Finally, I dedicate this to my wife and four children. My wife, Kandra, is my help meet, confidante, support, and eternal love. You truly are my best friend and I thank the good Lord for you every day. You are my greatest blessing in this world.

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List of Abbreviations

Office Discipline Referrals (ODR)

Self-Efficacy (SE)

Social Cognitive Theory (SCT)

Statistical Analysis Software Package (SPSS)

Teachers' Sense of Efficacy (TSE)

Teachers' Sense of Efficacy Scale (TSES)

CHAPTER ONE: INTRODUCTION

Overview

Student discipline is an indicator of not only how safe a school is but also of academic progress (Ehiane, 2014). Social cognitive theory states that people act according to how they view themselves. In addition, how they view themselves influences how they perceive others and therefore how they interact with others (Bandura, 2001). Fewer discipline referrals leads to a minimized loss of instructional time due to removals, thereby augmenting student performance (Skiba & Rausch, 2014). The proposal that teachers who view themselves as more efficacious or have a greater self-efficacy will better manage student discipline inside the classroom resulting in fewer discipline referrals is the focus of this dissertation. Chapter one will discuss the background of the study followed by the problem statement. Next, the purpose and significance of the study will be defined. Finally, the four research questions and definitions of terms related to the research questions will be provided.

Background

Some students are more likely to receive discipline referrals than others (Smolkowski, Girvan, McIntosh, Nese, & Horner, 2016). Male students, students with disabilities, minority students, and low-income students are disciplined at school at a disproportionate rate (Sullivan, Norman, & Klingbeil, 2014). Students that receive more discipline referrals are less likely to progress academically and or graduate high school (Okilwa & Robert, 2017). These discrepancies have created a disproportionality of office discipline referrals. Various subgroups such as students with disabilities and minority students have achieved lesser academic performance while accumulating more disciplinary removals from the educational environment through out-of-school suspension, referral to alternative programs, and expulsion (Anyon,

Lechuga, Ortega, Downing, Greer, & Simmons, 2017; Morris & Perry, 2017; Martinez, McMahon, & Treger, 2015). Logically, a student will not be as successful as possible if his or her time in the educational environment is limited.

Many referrals are subjective. The perceptions of the teacher can influence whether or not a discipline referral is written and for what level of infraction. Teachers who view themselves as not efficacious classroom managers tend to view class disruptions as a personal attack on them and something that they cannot control. When teachers feel that they cannot manage a behavior, they write referrals (Smolkowski et al., 2016). The same student could perform an offense with one teacher and not receive an office referral but perform the same action with another teacher and have an office disciplinary referral submitted. How teachers view their students and their students' behavior is directly related to how teachers view themselves and their personal sense of efficacy (Miller, Ramirez, & Murdock, 2017). This potentially contributes to the disproportionate number of referrals submitted by the same teachers. The teacher's judgement of the student could reflect how the teacher views himself or herself. Fullan (2014) pointed out that in most schools the staff can predict who will write the greatest number of office discipline referrals that school year. This occurs prior to the staff knowing their teaching schedules or class rosters. Certain teachers are more prone to writing referrals.

Bandura (1977) originated social cognitive theory (SCT). His research focused on the ability of an individual to affect change based on his or her self-perception. This was termed *self-efficacy*. Efficacy refers to the ability of an individual to perform an action or produce a desired result. Self-efficacy is the belief or inner thought processes of an individual of how he or she perceives his or her ability level. Individuals with positive self-efficacy view themselves as

competent. Self-efficacy does not refer to actual competency, rather the level of competency with which an individual views him- or herself as possessing. Those with high self-efficacy envision themselves as capable of great feats and are able to change their environment, improve, and cause changes in others. Individuals that suffer from a low sense of self-efficacy view themselves as unable or unlikely to influence their environment, others, or themselves. Those with low self-efficacy also tend to see others as less efficacious, just like they see themselves. This means that an individual that feels he or she is highly efficacious is more likely to feel the same way about others. Vice versa, those that feel they are less efficacious are more likely to feel the same way about others. Efficacy beliefs are essential to performance. The greatest byproduct of personal agency is the belief that individuals can affect a change or exercise dominion over themselves or their environment (Bandura, 1977). Therefore, teachers' self-efficacy has the potential to influence how many discipline referrals their students receive.

Highly efficacious teachers are better organized, possess superior instruction skills, provide feedback to struggling students, and keep students on task (Wolff, Bogert, Jarodzka, & Boshuizen, 2014). Teachers on the opposite end of the spectrum are more custodial in their approach to classroom management, are more likely to become angry or feel threatened by student misbehaviors, and are less likely to keep students on task (Mojavezi & Tamiz, 2012). Teachers with higher self-efficacy suffer from less anxiety (Wossenie, 2014) and are much less likely to burn out and leave the profession (Lauermann & Konig, 2016). Teachers with a high level of self-efficacy not only experience a higher rate of job satisfaction, they are also more likely to try new instructional strategies and enjoy more motivated students (Caprara, Barbaranelli, Steca, & Malone, 2006). These attributes of highly self-efficacious teachers could

be the key to lowering student referrals, maximizing instructional time, and ultimately improving student academic performance.

Bandura's social cognitive theory proclaims that humans all possess agency. This agency is their ability to act intentionally. These intentions spawn from the mind. Therefore, humans behave how they think (Bandura, 2001). A byproduct of a positive perception of students is that the teacher is more likely to be effective because he or she believes success is forthcoming (Jamil, Downer, & Pianta, 2012). The modalities utilized by teachers are affected by teacher self-efficacy. Teachers with a more positive self-efficacy use dynamic instructional practices (Caprara et al., 2006). Research has shown that those with higher teacher self-efficacy suffer less anxiety (Wossenie, 2014). This reduction in anxiety allows the teachers to think more clearly and stimulates a positive affective environment in the classroom. Those with higher self-efficacy are less likely to leave the teaching profession (Lauermann & Konig, 2016) and produce higher levels of student academic achievement (Mojavezi & Tamiz, 2012) including higher scores on standardized tests due to higher collective teacher self-efficacy (Tschannen-Moran & Barr, 2004).

Teachers that have higher levels of self-efficacy view their students in a more positive light than those with lower levels of self-efficacy. Those with higher levels of self-efficacy are less disturbed by student misbehaviors and are able to concentrate on multiple variables when making decisions about how to best manage student behavior. In contrast, teachers with a low sense of efficacy are only able to focus on a single student characteristic and are less capable of adapting their expectations as student behavior changed (Tournaki & Podell, 2005).

Problem Statement

Recent research has focused on teacher self-efficacy and its relationship to teacher burnout and job satisfaction (Skaalvik & Skaalvik, 2017). In addition, recent research has focused on teacher self-efficacy and its influence on student perception of teacher-to-student relationships (Summers, Davis, & Hoy, 2017). Others have elected to explore the relationship between teacher self-efficacy and student academic achievement (Mojavezi & Tamiz, 2012; Wossenie, 2014). Discerning the potential strength of the teacher-to-student relationship prior to hiring a teacher could be very valuable. As referenced previously, students with a greater quantity of discipline referrals are less likely to achieve the level of academic success of students with fewer discipline referrals (Ethiane, 2014). This has led researchers to examine what characteristics are most common among students with a larger number of office discipline referrals. The existing research on the characteristics of students that receive a large number of discipline referrals have identified commonalities among these students such as socio-economic status, gender, and race (Sullivan et al., 2014). Less research has focused on the correlation of teacher attributes to the number of discipline referrals that they write.

Being aware of traits that correlate with a high number of office discipline referrals is beneficial. This has allowed researchers, practitioners, educators, and administrators to develop techniques to combat this trend. Building relationships with students, being culturally responsive, and exercising a growth mindset are proven methods to better help at risk students (Hymer, Gershon, & Hailstone, 2014; Kafele, 2013). Additional research into why certain teachers write more office referrals than others has the potential to open the door to methods to assist in the transformation of teachers, thereby potentially affecting student performance in a positive manner. Research has suggested that teachers' personal belief systems and sense of

efficacy influence when they write referrals and for whom they write them. How teachers perceive themselves and others also affects the quantity of referrals that they write (Delale-O'Connor, Alvarez, Murray, & Milner, 2017).

The characteristics of students that receive a disproportionate number of referrals have been clearly defined. In contrast, insufficient research exists describing the characteristics that are associated with teachers that disproportionately submit office discipline referrals. Additional research is needed to better identify the specific characteristics of teachers that are more likely to write a disproportionate number of discipline referrals. Exploring the characteristics of teachers and how their personal attributes correlate to discipline referrals and subsequent student disciplinary removals could assist school and district level personnel in increasing student achievement because students that are not being removed from class enjoy better grades and have a higher graduation rate (Marchbanks, Blake, Smith, Seibert, & Carmichael, 2014). The problem of insufficient research that has been conducted in reference to the relationship between teacher self-efficacy and the number of office discipline referrals written is the focus of this dissertation.

Purpose Statement

The purpose of this quantitative correlational study was to ascertain the relationship, if any, of teacher self-efficacy to the number of office discipline referrals a teacher writes. In order to correlate the number of discipline referrals that a given teacher wrote, overall teacher self-efficacy and teacher self-efficacy composites in the areas of classroom management, student engagement, and instructional strategies were used. The predictor variable was teacher self-efficacy as measured by results on the Teacher Sense of Efficacy Scale (TSES). Teacher self-efficacy is how the individual teacher perceives his or ability to plan and carry out change

(Shaalvik & Shaalvik, 2016) and the teacher's attitude toward change (Aldridge & Fraser, 2016). For this study, overall teacher self-efficacy was evaluated. In addition, three sub-areas of teacher self-efficacy were studied: classroom management, student engagement, and instructional strategies. Classroom management consists of the actions taken by the teacher to promote positive academic and socio-emotional learning (Emmer & Sabornie, 2015). Student engagement is the extent to which students are behaviorally and cognitively involved in the content (Sinatra, Heddy, & Lombardi, 2015). Instructional strategies are methods used to deliver instruction (Shoulders & Krei, 2015). The target population for this study consisted of 72 secondary teachers in a large, diverse school district in the southeast United States.

The criterion variable was the number of discipline referrals that each teacher wrote in a semester as recorded in school district data. Discipline referrals consist of when a teacher submits an office discipline request to an administrator for a behavior related infraction (Smolkowski et al., 2016). Referrals for tardiness and all other referrals that did not occur inside a teacher's classroom were not relevant to this study. These kinds of referrals are a reflection on schoolwide issues such as climate and schoolwide support strategies in lieu of a direct reflection on the individual teacher's ability and/or his/her actual and perceived effectiveness.

The participants consisted of 72 public high school teachers in the southeast United States. The study site had a geographically large attendance area that includes rural and suburban settings within three high schools. The student body included approximately 5,700 students.

Significance of the Study

Teacher self-efficacy has been studied for over 40 years with volumes of articles being published. The product of those studies has been a confirmation of the positive correlation of

teacher self-efficacy to student academic performance, teaching best practices, and teacher well-being. Vice versa, a negative correlation to teacher burnout has been an ongoing theme (Zee & Koomen, 2016). Teacher self-efficacy is negatively correlated to anxiety levels (Wossenie, 2014). Separate research has been performed in the area of disproportionate discipline referrals focusing on gender, race, and disability status (Anyon et al., 2017; Girvan, Gion, McIntosh, & Smolkowski, 2016; Smolkowski et al., 2016). Higher student discipline rates are linked to higher drop out and retention rates (Okilwa & Robert, 2017). The aforementioned research establishes that office discipline referrals are assigned disproportionately. This has been linked to student demographics. Other students have explored student perceptions as a predictor of office discipline referrals (Gage, Larson, Sugai, & Chafouleas, 2016).

This dissertation furthers the body of research on teacher self-efficacy, student discipline, and student achievement. This information could be used in a variety of ways. For example, the results will be useful to administrators as they look for ways to limit the amount of instructional time lost to class disruptions and the processing of office discipline referrals. A decrease in office referrals should produce an increase in graduation rate, test scores, and other areas of academic growth (Ehiane, 2014).

Research Questions

RQ1: Is there a relationship between high school teacher *overall self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) composite score and the number of discipline referrals as measured by school discipline records?

RQ2: Is there a relationship between high school teacher *classroom management self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) classroom management subscale and the number of discipline referrals as measured by school discipline records?

RQ3: Is there a relationship between high school teacher *student engagement self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) student engagement subscale and the number of discipline referrals as measured by school discipline records?

RQ4: Is there a relationship between high school teacher *instructional strategies self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) instructional strategies subscale and the number of discipline referrals as measured by school discipline records?

Definitions

1. *Agency* – The use of one’s power to perform an act intentionally (Bandura, 2001).
2. *Efficacy* – The ability of an individual to perform an action or produce a desired result (Bandura, 1977).
3. *Classroom Management* – The actions taken by a teacher to facilitate an affective, socially and academically nurturing environment (Martin et al., 2016).
4. *Instructional Strategies* – The types of practices used to deliver instruction (Shoulders & Krei, 2015).
5. *Social Cognitive Theory (SCT)* – A theory that states humans’ actions are a result of their own cognition and use of agency (Bandura, 1977; Bandura, 2001).
6. *Student Engagement* – Internal or external personal student involvement in the learning process (Kahu, 2013).
7. *Teacher Self-Efficacy (TSE)* – The self-belief that a teacher possesses the ability to perform the actions necessary to promote student achievement (Wossenie, 2007).
8. *Teacher Sense of Efficacy Scale (TSES)* – A 12 (short form) or 24 (long form) questionnaire designed at Ohio State University to analyze teacher self-efficacy in the areas of student engagement, instructional strategies, and classroom management (Tschannen-Moran & Hoy, 2001).

9. *Office Discipline Referrals (ODR)* – Standardized forms that are utilized as a documentation tool of problematic student behavior (Smolkowski et al., 2016).

CHAPTER TWO: LITERATURE REVIEW

Overview

Certain students receive a disproportionate number of office discipline referrals when compared to their same-aged peers (Noltemeyer, Marie, Mcloughlin, & Vanderwood, 2015). These referrals lead to lost instructional time and lower outcomes for these students when compared to their peers. In fact, students that have received more office discipline referrals are more likely to have lower grades, drop out of school, and earn less money (Marchbanks et al., 2014). Poverty, gender, race and other student and/or environmental factors have been associated with lower student performance (Quinn, Cooc, McIntyre, & Gomez, 2016). Others have noted that the classroom teacher is pivotal in shaping student outcomes (Fullan, 2014; Whitaker, 2015). For example, positive teacher self-efficacy is linked to better student performance and having the potential to combat at-risk factors (Vadahi & Lesha, 2015). Student demographics are difficult to change; however, teacher self-efficacy is fluid and can be improved through targeted interventions, support, and professional development opportunities (Chao, Chow, Forlin, & Ho, 2017).

Theoretical Framework

Social Cognitive Theory

Every human being is created in the image of God (Genesis 1:27). Therefore, humans have divine potential and are capable of great accomplishments. What were previously accepted limits are surpassed constantly. There is little that humanity is not capable of accomplishing provided enough time and effort. It can be said that human beings have divine potential and therefore the capacity for much good. However, divine potential does not come to fruition without action. Actions occur based on what is in the mind and

heart of the individual performing the action. Therefore, all actions and resultant accomplishments or failures are directly related to the mindset of the individual (Dweck, 2017). This maintains veracity not only in how the individual perceives self, but also how he or she views others. Johann Wolfgang von Goethe (1801, p. 194) is credited to have said, “If you treat an individual as he is, he will remain how he is. But if you treat him as if he were what he ought to be and could be, he will become what he ought to be and could be.” Interestingly, one’s self-perception can influence how others are perceived (Bandura, 1977). Those that view themselves as more efficacious also tend to utilize that same positive lens when viewing others. Individual perception influences collective perception. Members of a group that view themselves as intelligent and capable readily view other members of their group or organization as intelligent and capable whereas those that are prone to find the negative in themselves also have an aptitude to do the same in others. The potential of the individual or group is perceived quite distinctly by different individuals based on how they self-perceive (Bandura, 2001).

All human beings have agency and are designed to be agents unto themselves and have freedom of choice. Bandura (2001) stated, “To be an agent is to intentionally make things happen by one's actions” (p. 1). It is not the environment that controls the individual, rather it is the individual that controls the environment through his or her actions. Agency and the ability of humans to affect purposeful, planned change is a foundational pillar of social cognitive theory (Bandura, 2018). Social cognitive theory describes three areas or modes of agency: direct personal agency, proxy agency, and collective agency. Personal agency is the ability to affect one’s environment and be an agent of change. Collective agency refers to the ability of individuals to work interdependently. Proxy agency occurs

when a subject does not have full control over his or her circumstances and another individual's agency contributes to a desired outcome (Bandura, 2018). The primary focus of this research is direct personal agency and collective agency. Agency is an essential contributing factor to what motivates individuals to act. Changes in agency can lead to changes in behavior (Bandura, 2001).

For many years, the human psyche was viewed through a behaviorist lens. According to behaviorists, human behavior is a simple equation: input = output. In order to achieve a desired outcome, one need only adjust the input or stimuli. Under this model, human beings and their actions are merely products of environmental stimulus. The work of Jean Piaget is an example of this method of rationalization. Piaget espoused that children's minds simply mature at a set rate and that they acquire knowledge through interaction with their environment (Hoy, 2019). This method of thinking removed humanity from humans and stripped them of agency and their ability to be agents of change. Social cognition and social cognitive theory brought about by Albert Bandura created a paradigm shift in psychology. No longer were human actions the results of equations that can be easily manipulated; rather, human action is shaped by human cognition. Therefore, human behavior is controlled by the thought process. If one controls the thought process, one controls the actions. Agency determines outcomes (Bandura, 1977).

Agency encompasses the ability of an individual to exercise dominion over his or her environment in sharp contrast to the behaviorist ideology that the environment determines the actions of an individual (Bandura, 1977). Humans are distinct from lower forms of life in many ways. One of these distinctions is their ability to change their environment through purposeful action (Bandura, 2001). This purposeful action allows humans to be agents unto

themselves, not to be merely controlled by their environments, but rather to be masters of their environment.

The three modes of agency are direct personal agency, proxy agency, and collective agency (Bandura, 2001). Direct personal agency is exercised when an individual relies on him- or herself in order to carry out an action or a modification to the environment (Bandura, 2018). Those with high levels of direct personal agency usually manifest as independent and highly efficacious. They are also frequently confident and highly motivated (Bandura, 2002). In fact, direct personal agency has a positive correlation to both motivation and self-efficacy (Bandura, 1997). Individuals with high personal agency tend to prefer to act independently without assistance (Bandura, 2002).

Proxy agency occurs when in lieu of exercising personal agency an individual relies on someone else in order to achieve desired outcomes (Bandura, 2002). Individuals that rely on proxy agency do not have the confidence to achieve goals independently. Instead proxy agency is utilized to commission others with more resources and abilities in order to accomplish the necessary task (Bandura, 2001). The disadvantage of proxy agency is that it has a negative correlation with direct personal agency. Members of the group develop confidence in the group as a whole but can subsequently decrease in their individual or personal agency (Ludwig, 2014).

Collective agency occurs when a group of people work together to achieve a common goal that they could not accomplish independently (Bandura, 2002). In other words, collective agency is the shared communal belief in the ability of a group to achieve a desired outcome by working together (Bandura, 2001). This is intertwined with collective self-efficacy or perceived collective efficacy which is the belief of individual members of the

group in their ability as a whole to be successful. This behavior is necessary and even expected in humans because there are tasks that can only be completed when the entire organization collaborates (Bandura, 2002).

In addition to the three modes of agency, there are agentic properties connected to social cognitive theory. Social cognitive theory discusses agency via forethought, self-reactiveness, and self-reflectiveness. Forethought occurs when an individual or agent plans, forms goals, and attempts to predict potential results of his or her actions (Bandura, 2018). Forethought is instrumental in social cognitive theory. People plot their course of action based on predicted likely consequences of their actions. These predictions are shaped by their perceptions and occur due to forethought (Bandura, 2001). What people think becomes what they are (Proverbs 23:7). What they are becomes what they do. Self-evaluative practices become indicative of what a person is likely to do. Nothing is attempted without first the belief that it can be done. Nothing is accomplished that has not been attempted. In order to change outcomes, it is not sufficient to change the stimulus as the behaviorists profess. Long-term changes only occur when a change of thought has been realized.

The next property of agency is self-reactiveness. It is not sufficient for an individual to merely plan. Agents control their own comportment through free will. In social cognitive theory, individuals or agents have the ability to control themselves through standards or a personal value system. Human beings do not have to be capricious or lack self-control; rather, they have the ability to select how they will act or react (Bandura, 2018). Positive or negative self-reactions occur based on the degree to which the agent complied with the self-imposed standards (Bandura, 1991).

Self-reflectiveness inherently implies that an agent has the ability to self-assess. The final property of agency is that individuals self-assess. Through this self-reflection, the individual is able to evaluate his or her efficacy, the worthiness of current pursuits, and determine purpose (Bandura, 2018).

Efficacious individuals must be highly motivated. Results do not present themselves as a cosmic gift to those that have practiced forethought and are capable of high-level results. The exercise of agency must be deliberate and calculated. Once positive self-efficacy is achieved, the individual must continually monitor his or her thought process in order to dispel negative thought processes and encourage positive methods of cognition. Thought processes can be changed through meta-cognition, self-reflection, and willpower (Maillard et al., 2017).

Social cognitive theory naturally evolved into self-efficacy theory (Bandura, 1997). In turn, research on teacher self-efficacy flowed from the springs of social cognitive theory via self-efficacy theory. The creators of the golden standard for measuring teacher self-efficacy, the Teacher Sense of Efficacy Scale (TSES) cite Bandura's theories as the foundation for their research (Tschannen-Moran, Hoy, & Hoy, 1998).

Efficacy

Efficacy beliefs are the crux of the use of agency for positive outcomes. Self-reflection plays a major role in the development of positive self-efficacy. Humans do what they think about and become what they think they are. People also decide which environments to put themselves in based on how they perceive themselves. For example, a teacher that does not believe that he is highly effective would avoid working with more challenging students (Bandura, 2018).

Ironically, many of the best teachers are at the highest-performing schools that least need them while low-performing schools often struggle to recruit highly effective educators. Coping efficacy refers to an individual's confidence in his or her ability to accomplish a task (Laschinger, Borgogni, Consiglio, & Read, 2015). This trait, evident in those with higher levels of self-efficacy, not only combats the stress and depression of difficult situations, but it also allows teachers to view others as capable of success and to view their present situation in a more positive light (Bandura, 2001).

Highly efficacious teachers view their students and other teachers in the building in a more positive light. This collective efficacy is contagious and improves affective climate and school culture. Most school reform programs focus on the symptoms of the low student achievement problem—low morale, poor climate, and low levels of motivation—in lieu of concentrating on the root of the problem. Pajares (1992) stated, “Beliefs are far more influential than knowledge in determining how individuals organize and define tasks and are stronger predictors of behavior” (p. 311).

Most teacher development courses and college programs focus on content knowledge, pedagogy, and how to pass the local state teacher certification process. Perhaps more time should center on the core beliefs of the teacher candidate. In similar fashion, more staff development and professional learning communities geared for practicing teachers should focus on building their belief system and sense of efficacy. Providing someone with the steps to build a lesson plan is futile if the individual either is not capable or merely believes that he or she is incapable of producing quality learning and substantial positive growth in students. Instead, teachers go into survival mode or what Mojavezi and Tamiz (2012) call custodial teaching. In this mindset, teachers limit student-to-student interaction and their

interaction with students to a minimum. At this point, the teacher is simply trying to manage students and is not as concerned with building the relationships necessary for superior academic achievement. The students' lower performance reinforces the less efficacious teacher's negative self-image, thereby damaging teacher self-efficacy which perpetuates the cycle of inferiority, frustration, and burnout (Zee & Koomen, 2016). It appears that many positive outcomes are linked to positive teacher self-efficacy and vice versa.

Self-Efficacy

Efficacy refers to the ability of an individual to perform an action or produce a desired result. For example, a tall person is capable of reaching an item on the top shelf due to his or her physical stature. That person is efficacious. Self-efficacy is the belief or inner thought process of an individual of how he or she self-perceives (Bandura, 2001). This implies that self-efficacy is how an individual view his or her ability or capacity to accomplish certain tasks (Walter, 2015). To use the example of a tall person again, a tall person is able to reach the top shelf and thereby is efficacious in that action. However, a person of sufficient stature who does not believe he or she can in fact reach the top shelf has low self-efficacy. Self-efficacy is not the actual ability to perform and action. Rather, self-efficacy is the inner belief in one's own capabilities. Those with high self-efficacy envision themselves as capable and are able to change their environment, improve, and cause changes in others (Bandura, 2001). High self-efficacy is linked to how confident an individual is that he or she can perform a desired task. The greater the self-efficacy, the higher the level of confidence becomes (Walter, 2015). Not only do perceived potential outcomes improve with higher levels of self-efficacy, the tangible results reflect the same. Teachers with a higher level of self-efficacy are more likely to have favorable student achievement whereas teachers

with lower self-efficacy are more likely to suffer from poor student achievement (García-Ros, Fuentes, & Fernández, 2015; Sivri & Balci, 2015). Major gains in student performance could come to fruition not from professional development on new instructional strategies, but rather by conscientiously and systemically increasing self-efficacy.

Individuals that suffer from a low sense of self-efficacy view themselves as unable or unlikely to influence their environment, others, or themselves. Those with low self-efficacy also tend to see others as less efficacious just like they see themselves. A reflective effect exists in which those with low self-efficacy project their lack of self-assurance on others. For example, a teacher that views himself or herself as having good classroom management skills is more prone to view others in his or her school as also possessing good classroom management skills. This is called collective self-efficacy and can influence how the individual responds to the group as a whole (Bandura, 1997). Low self-efficacy can be a vicious cycle because failure can increase self-doubt thereby lowering self-efficacy (Bandura, 1989). Therefore, it is vital to protect and continue to improve the self-efficacy of groups and individuals in order to accomplish results.

Efficacy beliefs are essential to performance. The greatest byproduct of personal agency is the belief that an individual can affect a change or exercise dominion over themselves or their environment (Bandura, 1997). Self-efficacy leads to the actions that in turn result in higher levels of performance. Self-efficacy has a strong positive correlation to achievement; the higher the self-efficacy of the individual, the higher the performance level (Holden, Moncher, Schinke, & Barker, 1990; Multon, Brown, & Lent, 1991; Stajkovic & Luthans, 1998).

Self-efficacy can be improved through experience. Experience refers to the experience shared by a group, the observed experience of a third party, or the personal experience of an individual. These experiences have been grouped into the categories of enactive mastery, vicarious experience, verbal persuasion, and emotional arousal (Howardson & Behrend, 2015).

Enactive mastery is believed to be the strongest influence on self-efficacy (Bandura, 1982). The logic is that mastering a new task encourages confidence and therefore a greater self-efficacy. The new knowledge, skills, or abilities that a person obtains does not merely make the individual more efficacious in reality, it also enables a better self-efficacy that paves the way for future improvement (Bandura, 1997). Emotional arousal is also linked to past experience such as negative physiological responses (increased heart rate, feelings of anxiety, etc.) to an event (Lunenburg, 2011). Positive responses to an experience are also related to emotional arousal (Tschannen-Moran & Hoy, 2007). Vicarious experience is obtained when an individual improves self-efficacy through experiencing or learning about the success of others. An individual may witness another perform a task and subsequently increase self-efficacy (Goddard, Hoy, & Hoy, 2004). Social interaction and verbal persuasion are not as powerful of stimuli as enactive mastery and vicarious experience (Bandura, 1997). Some individuals that are incapable of self-evaluation rely on others to prescribe their level of self-efficacy for them through verbal persuasion. In addition, social interactions may cause an individual to modify his or her self-efficacy due to the current social environment. For example, a teacher working in a department full of teachers that do not take risks and have low self-efficacy is more likely to have his or her self-efficacy diminished (Kiran & Sungur, 2012)

Self-efficacy influences levels of optimism and what tasks people decide to undertake. Individuals that do not believe that they can successfully perform a task rarely attempt that task. Self-efficacy also affects the level of commitment that an individual will grant to a task and his or her level of resiliency. Those with positive efficacy beliefs are less vulnerable to stress and more likely to overcome adverse conditions (Bandura, 2001). This is a universal truth. Research has shown that those with positive self-efficacy perform better whether from an individualistic or a collectivistic culture often negating environmental factors (Earley, 1993). Improving an individual's sense of efficacy is a way to improve an individual's actual efficacy no matter the culture, age, gender, or socioeconomic status. It is a universal panacea and one of the very few shifts in teacher education and professional development that is effective across cultural, ethnic, gender, and national borders. This has been observed in the increased interest in research performed in the area of teacher self-efficacy theory (Tschannen-Moran et al., 1998).

Related Literature

Psychological Influences on Performance

Learned helplessness. Learned helplessness has been a theory in psychology since the late 1960s. Seligman and Maier (1967) conducted experiments with animals and humans alike. Animals, such as rats, were placed into two groups. Both groups were exposed to electric shock via the floor of the animals' enclosure. One group of rats had no method of escape and was required to endure the shock. A second group was provided the same stimulus of electric shock; however, these rats were provided a lever in their enclosure with which they could turn off the electric shock. The rats in the second group learned to halt their shock by utilizing the lever provided. The first group learned that there was nothing

they could do and that they must simply bear it. Both groups were placed together in an enclosure with an electric floor. There was no lever present, but islands were placed in the cage on which the rats could escape the electricity. The rats from the lever group escaped electric shock by mounting the islands. In contrast, the rats from the first group that did not have a way to prevent being shocked did not attempt to help themselves by scaling to the safety of the islands. These rats had learned not to try. In other words, they learned helplessness and to become and remain victims.

If learned helplessness is indeed a learned response then it must also be true that it can be unlearned. In the 1970s Albert Bandura took a group of people that were deathly afraid of snakes. He put them through a quick lesson on snakes. Next, the subjects watched from a distance and through the safety of glass as a third party handled a large snake. Third, the subjects watched a bit closer as a third party safely handled the snake again, putting the snake on his lap, and petting the snake. The subjects were then asked if they would like to touch the snake. Many opted to participate with protective measures such as gloves and padding. However, by the end of the experiment three hours later, all of the participants with ophidiophobia were able to handle the snake and never regressed to their previously held phobia. Bandura concluded that if helplessness can be learned than its antithesis, self-efficacy, can also be obtained through the correct experiences (Bandura, 1977).

After five decades of research on learned helplessness, it was determined that the theory was actually backward. Previously, it was thought that animals and humans were capable of helping themselves and being motivated by default. However, neuroscience has evolved to believe that animals and humans are helpless by default and have to learn to help themselves. For example, a person told to jump out of a plane with a parachute will react

remarkably differently depending on the individual's prior experience with parachutes. Someone who has never used a parachute would hesitate while an experienced jumper might show eagerness and enjoyment in the opportunity. The unexperienced person's feeling of helplessness can be alleviated through experiences. Confidence and self-efficacy can be learned through experience. When individuals have successful experiences, their self-efficacy grows and they become more confident. People can learn from their mistakes, but a level of success must be achieved in order to acquire more positive self-efficacy (Maier & Seligman, 2016).

Metacognition. Metacognition occurs when an individual explores his or her thought processes. This best occurs when a person is cognizant of what he or she is thinking (Tornare, Czajkowski, & Pons, 2015). The two dimensions of metacognition are knowledge of cognition and regulation of cognition. Combined, these two areas allow individuals to first comprehend and then alter their thought processes (Zepeda, Richey, Ronevich, & Nokes-Malach, 2015). Regulation of cognition comprises three categories: planning, monitoring, and evaluation. The processes performed prior to performing an action such as activating schema, goal setting, and selecting learning strategies fall under planning. Monitoring refers to the process of continuously doing a self-check for understanding. Finally, the evaluation phase is when the individual assesses his or her understanding or progress (González, Fernández, & Paoloni, 2016)

Metacognition can alter emotions. Positive emotions are conducive towards more positive performance and outcomes allowing teachers to gain better performance out of their students. Negative emotions correlate with less positive performance and outcomes. Teachers that do not exercise metacognition and exercise a certain level of control over their

thoughts are not as successful. Literally, how someone feels can influence how he or she performs despite other characteristics such as aptitude or present levels of performance (Sinatra, Broughton, & Lombardi, 2014). An individual that monitors his or her thoughts utilizing metacognition strategies has the potential to change his or her emotions thereby changing actual outcomes and performance not only personally, but also in others (González et al., 2016).

Self-reflection. The manner in which individuals exercise their agency is related to their metacognition. A major component for motivation is the individual's self-assessment. An individual that perceives him- or herself as possessing more efficacy is more likely to be more motivated than those that possess a less positive self-image. Essentially, a person that does not believe that he or she has the possibility of being successful in an endeavor is very unlikely to be motivated or to even attempt to carry out the task at hand. This self-reflection also affects resiliency. When an individual with a negative self-reflection faces challenges or obstacles, he or she is less likely to continue pressing forward and persevere through hardships than those with positive self-reflection (Bandura, 2018). Teachers that fit into this category are more likely to burn out and have lower student performance (Wang, Hall, & Rahimi, 2015). This self-image extends out to the goals that people make for themselves. Again, those that do not believe they are capable of successfully completing a desired task do not make an attempt. These individuals or groups do not think they can so they do not even entertain the thought of achieving something great (Bandura, 2015). This leads to teachers that do not experiment with innovative instructional modalities and are prone to view student behavior as more severe. Behaviors and beliefs are tied to emotion. Major changes do not often occur because of logic, but rather because of emotion. A person who wants to improve

must change the heart, as positive thoughts are linked to positive outcomes via an improved self-efficacy (Whitaker, 2015).

Self-regulation. Recent research in the area of psychology has asserted that self-regulation and executive function require energy. This energy is often spoken of as willpower. Formerly, psychologists did not devote much thought to the energy or effort that is required of an individual to act as an agent and affect change. For example, an individual that is already exercising significant energy in a given area finds it more difficult to self-regulate in another area. The person who attempts a new diet and to quit smoking at the same time is much less likely to be successful because there is not enough energy remaining after the first task in order to achieve the second goal. This lack of energy is often called ego depletion (Baumeister, Tice, & Vohs, 2018).

Motivation and self-regulation are not the same. Likewise, lack of energy or willpower does not necessitate a lack of motivation. Motivation is a desire to engage in effort in order to complete a desired task whereas willpower (self-regulation) is the actual energy expended to complete the desired task. If energy (willpower or self-regulation) was considered a limited resource, then an individual has the potential to be completely motivated but not have the energy available (ego depletion) to actually carry out what he or she desires to do (Inzlicht & Schmeichel, 2012).

A recent study found that schoolchildren perform better on tests when the tests are administered earlier in the day. The theory of the researchers is that the students' energy systems are depleted later in the day, thereby causing poorer performance due to ego depletion or depletion of the self-regulatory energy in their brains (Sievertsen, Gino, & Piovesan, 2016). Another study found that hospital employees skip safety precautions such

as washing their hands more frequently when they work later into a long shift (Dai, Milkman, Hofmann, & Staats, 2015). These employees are healthcare professionals that understand bacteria, contamination, and other health risks. One can assume that they are all highly motivated to comply strictly with proper health care standards; however, they do not comply when their energy to self-regulate has been depleted. This concept applies to students and school personnel even at the beginning of the school day depending on personal circumstances. In discussing the physical and mental fatigue associated with multiple sclerosis, Haynes-Lawrence and West (2018) engaged in a discussion of The Spoon Theory developed by Christina Miserandino (2013). Haynes-Lawrence and West (2018) taught patients that they only have so many “spoons” or energy that they have to accomplish tasks. Once all of the spoons are used, the person is done and no longer has the energy (physical or mental) to accomplish more. Due to mental health, physical health, and/or external factors, many students do not accomplish what they desire to do. This is not necessarily due to lack of motivation but rather due to lack of energy or “spoons.”

Mindset. Mindset is inseparably connected to self-efficacy. An individual’s use of agency forms the structure of the brain in both neurons and function. It is not solely the environment that creates patterns of thought in humans, but how the individual implements personal agency to interact with and even change the environment (Bandura, 2001). Siblings from the same household who attend the same school, have the same parents, live in the same neighborhood, and eat the same meals can choose to exercise personal agency in very different ways. Some select a defeatist attitude when faced with challenges while others with similar personal identifiers view adversity as an opportunity for success. It is the mindset

that is different. Both sets of individuals are capable; however, only one believed (Dweck, 2017).

Individuals that believe they can better their intellect and capabilities progress further and more rapidly than those with a fixed mindset. They produce greater effort, view setbacks in a more positive light, and are less likely to experience burnout or other negative emotional maladies (Dweck, 2017). In addition, these individuals are able to identify their strengths and weaknesses and take advantage of this knowledge (Gardner, 1997). People with a growth mindset are able to capitalize from positive and negative feedback alike because they view both as an opportunity for growth. They seek out challenges, thereby viewing the situations around them in a way that promotes their potential for success (Dweck, 2017).

Those with positive mindsets are very similar to those with positive self-efficacy. These individuals view themselves and others as capable, do not enlarge difficulties, and are able to see the potential in others (Bandura, 2001, Dweck, 2017). These traits lead to higher student achievement. Students with positive mindsets or growth mindsets perform better because they view themselves and others more positively. Growth mindset has been found to be a larger predictor of student achievement than even poverty (Claro, Panunesku, & Dweck, 2016).

Student Achievement

A much wider achievement gap exists between the higher income and lower income children born in the 1990s and those born during the 1970s and 1980s. Although the gap between minority students and majority students has been decreasing (Reardon & Portilla, 2016), the United States is still behind many other first world countries in achievement scores, particularly in the areas of science and math (Woessmann, 2016). These discrepancies have

fathered the birth of many debates and studies leading to conflicting views of how to increase student performance in American public education.

Student growth and academic achievement is the focus of tens of thousands of institutions of education across the world. Every school is continually striving to improve the achievement levels of their pupils. Countless studies and research have been performed on how to increase student outcomes from different aspects such as the practice of teaching behaviors, improving teaching capacity, or the use of technology in the instructional environment (Fisher et al., 2015; Lynch, Smith, Provost, & Madden, 2016; Ronfeldt, Farmer, McQueen, & Grissom, 2015). School districts have spent millions of dollars attempting to hire, train, and retain highly effective teachers and administrators in hopes of improving student achievement. Much focus and emphasis has been placed on the role of transformative leaders and how one person can cause a school to be successful (or not). This oversimplification would only require that a school have an effective leader at the helm and thereby any educational craft would navigate effortlessly the ebb and flow of the academic ocean. Research has shown that leaders can be transformative and stimulate growth. The caveat is that this is only accomplished as far as the leader influences others in his or her organization (Kouzes & Posner, 2012). The key is to discover which aspect of education once modified would provide the greatest return on investment.

Recently, much more emphasis has been placed on student discipline. School-wide programs abound, outside consultants are making a good living, and social/emotional learning (SEL) and restorative justice are hot words in education circles. Simply put, off-task behavior is wasted instructional time. Severe off-task behaviors not only distract the individual student, but also can disrupt the entire class. In fact, one of the eight most common reasons for an office discipline referral is disrupting class (Nocera, Whitbread, &

Nocera, 2014). When office discipline referrals are submitted for a student, he/she loses yet more instructional time being called to the office. Then, if the student receives in- or out-of-school suspension, more instructional time is lost. Students that are suspended are much more likely to have lower grades and less likely to graduate on time (Fasching-Varner, Mitchell, Martin, & Bennett-Haron, 2014).

Possible Solutions to Low Student Achievement

Volumes of literature and research have been performed in the area of student remediation such as response to intervention (RTI), behavioral programs such as positive behavioral interventions and supports (PBIS), school climate systems and reward programs such as Josten's Renaissance, and many more with mixed and varied results (Horner & Sugai, 2015; Nocero & Beckerman, 2014; Stahl, 2016). Others have focused on the influence of environmental factors such as gender, race, and socioeconomic status and their correlational relationship with the achievement gap and a disproportionality of office discipline referrals. Findings indicate that minority, lower income, and male students are more likely to fail classes, drop out of school, and receive discipline referrals (Anyon et al., 2017; Dell'Angelo, 2016; Egalite, Kisida, & Winters, 2015; Peterson, Rubie-Davies, Osborne, & Sibley, 2016).

School Climate and Student Achievement

School climate refers to the five elements identified by the National School Climate Center (2007): safety, teaching and learning, interpersonal relationships, institutional environment, and staff relationships. Safety comprises not only the physical safety of the students but also their social and emotional needs. Teaching and learning encompass the standards-based instruction and social and character learning. Interpersonal relationships not only consist of staff-to-student, but also student-to-student relationships. Social support is

built in these relationships. The institutional environment includes the physical facilities while staff-to-staff relationships indicate how the adults in the building interact with each other. Each of these five elements has a direct impact on the school climate and consequently on student academic achievement (Kutsyuruba, Klinger, & Hussain, 2015).

Student perceptions of the school climate/culture have been linked to both their behaviors and individual achievement (Kutsyuruba et al., 2015). In fact, school climate has been shown to be a larger factor in student achievement than the socio-economic status (Berkowitz, Moore, Astor, & Benbenishty, 2016) or even the family structure (single parent, foster child, etc.) of the student (O'Malley, Voight, Renshaw, & Eklund, 2015). Across studies, the more positive students perceive the climate of their school to be, the greater their academic achievement.

The Mindset of the Classroom Teacher

While all these programs and theories have merit and the above-mentioned factors do indeed affect student performance, the single greatest influence on a student's academic achievement is the classroom teacher (Fullan, 2014). Whether in occupation, sport, or other areas of competition and/or growth, self-efficacy is a central determinant of successful outcomes. Lawyers that think they are going to lose cases probably will. Boxers that believe victory is imminent are on the road to success. The student that has a greater degree of self-efficacy is much more likely to have higher academic performance and a better grade point average (GPA) than those with lower senses of self-efficacy (Drago, Rheinheimer, & Detweiler, 2016). The difference between individuals that accomplish tasks never before attempted or thought possible and those that break records is their mindset (Dweck, 2017). Henry Ford is thought to have said, "Whether you think you can or you can't, you're

right.” The success of students rests in the influence of the classroom teacher on student academic achievement. A single variable that consistently has a positive correlation to student academic achievement is teacher self-efficacy (Caprara et al., 2006; Multon et al., 1991; Wossenie, 2014). Teachers that believe in themselves (self-efficacy) and in their students (teacher self-efficacy projected outward to their students) enjoy greater student achievement.

Teacher Self-Efficacy (TSE)

Teachers with a high level of self-efficacy are more likely to keep students on task, be better organized, utilize more effective instructional strategies, and provide more meaningful feedback to struggling students. In contrast, teachers with lower self-efficacy are more prone to anger when confronted with student misbehaviors, are more custodial in their approach to classroom management, and are less likely to enjoy engaged students (Mojavezi & Tamiz, 2012). Better teacher self-efficacy is associated with higher student achievement and lower levels of anxiety in teachers. In contrast, poorer teacher self-efficacy is associated with less positive student outcomes and increased teacher anxiety (Wossenie, 2014). Teachers with positive self-efficacy provide stability and consistency to schools as they are less likely to suffer from burn out and leave the teaching profession (Lauermann & Konig, 2016). In fact, teachers with a higher level of self-efficacy enjoy a higher rate of job satisfaction, have more motivated students, and are more likely to experiment with new instructional strategies (Caprara et al., 2006).

Teacher Self-Efficacy and Student Achievement

Teacher self-efficacy is the degree to which an educator believes that he or she has the ability to augment student learning. Teachers that possess a higher level of perceived

efficacy are in fact more efficacious. The very beliefs that a teacher has about him- or herself influences the interaction with students and thereby how students perform (Mojavezi & Tamiz, 2012). TSE is positively correlated to student academic achievement. Students of teachers that perceive themselves as being more efficacious perform better than students that have teachers with a less positive self-efficacy (Caprara et al., 2006; Multon et al., 1991; Wossenie, 2014). TSE correlates with student motivation. The higher the teacher self-efficacy, the more motivated the students. This is attributable to a variety of factors including the link to affective climate, teacher enthusiasm, and awareness of students' emotional well-being. A study of 80 high school teachers in Iran and their students revealed that students with teachers with higher self-efficacy reporting having higher levels of motivation in a student motivation questionnaire (Mojavezi & Tamiz, 2012). A study of 39 English teachers and 585 students in Ethiopia again concluded that teachers with higher senses of personal efficacy had students with higher academic achievement levels (Wossenie, 2014). The initial research suggests that raising teacher self-efficacy raises student self-efficacy which in turn increases motivation levels, contentment, and content mastery. In a way, students become what teachers perceive them to be, and students perceive others to be what they perceive in themselves.

Research suggests the increase in student performance that correlates to higher TSE is related to factors such as instructional practices, enthusiasm, commitment, and teaching behavior that are found in those with higher self-efficacy (Tournaki & Podell, 2005; Tschannen-Moran & Hoy, 2001; Wolters & Daugherty, 2007). This indicates that teachers with high levels of self-efficacy possess the instructional and personal skills needed to accelerate student performance. Conversely, teachers with lower levels of self-efficacy

function as stumbling blocks and impede the potential growth that their students possess. Teacher self-efficacy is a strong indicator of other less quantifiable attributes possessed by highly effective teachers such as relationship building and empathy. Measures of TSE have the potential to gauge the personal and professional development of individual teachers and schools as measured by collective self-efficacy because as they perceive themselves as more efficacious, they tend to view their colleagues as more efficacious as well. This higher sense of collective efficacy improves teacher morale and school climate (Bandura, 2001). When teachers have a positive view of the school climate, student achievement is more likely to be positive. Likewise, when students have a positive view of the school climate, student achievement is higher. Again, perception has the ability to shape reality (Maxwell, Reynolds, Lee, Subasic, & Bromhead, 2017).

Office Discipline Referrals

Office discipline referrals are written when a student does not comply with school policy. Office discipline referrals occur for behaviors such as verbal or physical aggression, insubordination, disrespect, and other delinquent behaviors. These referrals can be useful in identifying which students, which behaviors, which locations, and which times of day are experiencing the most behavior-related challenges within the school environment (Predy, McIntosh, Frank, & Fritchcock, 2014). Although comparing office discipline referrals from different schools can be troublesome due to the inconsistencies of reporting practices, patterns that can be generalized do exist (Spaulding et al., 2010). In kindergarten through 12th grade, defiance was found to be the most common behavior triggering an office discipline referral (elementary school, 29%; middle school, 31%; and high school, 24%). Negative peer-to-peer interaction such as fighting (32%) was the most frequent problem

behavior in elementary schools. Middle school behaviors were more commonly directed at adults in the building (31% defiance and 18% disruption). At the high school level, tardiness (24%) and truancy (21%) were the most common maladjusted behaviors (Spaulding et al., 2010).

Office discipline referral data can also be used to evaluate which teachers submit more referrals than others and who may require some additional opportunities for growth. The same students with different teachers do not always experience the same behaviors. It is often startling how administrators, supervisors, and other teachers can predict which teachers will write the most referrals before the school year has begun before evaluating the data (Whitaker, 2015). Proper analysis of office discipline referrals can predict future discipline issues and a subsequent lack of academic achievement (Predy et al., 2014).

Minority students are much more likely to be suspended than their non-minority classmates (Noltemeyer et al., 2015). In fact, black girls are three times more likely to receive an office discipline referral than their white counterparts. This disparity has been attributed to race and gender interpretations meaning that school officials perceive the same behaviors, especially disruptive or disobedient behavior, as more severe in African American girls than when commensurate behaviors are performed by their white female peers (Morris & Perry, 2017). Other research has noted the significantly higher rate of office discipline referrals received by male students. Some have opined that this occurs because male students are more likely to express their frustration externally whereas female students are more likely to internalize discontentment (Martinez et al., 2015). In addition, students that have a disability covered under Section 504 of the Americans with Disabilities Act (ADA) or the Individuals with Disabilities Education Act (IDEA) experience disciplinary removal from

their learning environment at a higher rate than their non-disabled peers (Sullivan, Norman, & Klingbeil, 2014). These disproportionate removals for disciplinary reasons are directly associated with higher rates of incarceration and student dropout (Delale-O'Connor et al., 2017; Fasching-Varner et al., 2014).

Students of color are no more likely to have an office discipline referral for events outside of the classroom (bathrooms, halls, etc.) than their white peers (Anyon et al., 2017). As aforementioned, there is a large disproportionality for events that occur inside the classroom. There appears to be something else besides the gender, race, or socio-economic status of the student that contributes to a higher number of office discipline referrals.

Disproportionate Student Achievement

Students with behavioral or emotional disorders often manifest behaviors that are contradictory to teacher expectations and impede the learning environment of themselves and others (Banks, 2014). These negative behaviors not only create a blemish on the record of the students that could endanger collegiate and other post-secondary opportunities, they also reduce the amount of instructional/learning time students receive (Holbein & Ladd, 2017). Positive student behavior is more conducive to positive learning experiences than negative student behavior. Students that misbehave do not tend to do as well in school as their same ability-level peers (Martinez, McMahon, Coker, & Keys, 2016).

Students in Texas who receive office discipline referrals are 24% more likely to drop out of high school. The related economic impact is believed to be between \$750 million and \$1.35 billion a year (Marchbanks et al., 2014). Students that are disengaged and subsequently drop out are much more likely to be socially maladapted and live in poverty (Girvan et al., 2016). Office discipline referrals are linked to high school drop outs which are

linked to lost wages and earning potential. Those who earn lower incomes also require more government assistance. Avoidable office discipline referrals are not only bad for the individual, but also have a malevolent effect on the communities in which these students reside. Suspensions in the 10th grade directly and significantly contributed to approximately 67,000 drop outs in the United States. These drop outs cause more than \$35 million in economic loss (Rumberger & Losen, 2016).

TSE and Office Discipline Referrals

Teachers with greater self-efficacy are more likely to have motivated students (Wossenie, 2014). This greater self-efficacy in turn should decrease the number of office discipline referrals a student receives because motivated students have fewer behavioral issues and thereby less office discipline referrals (Eagle, Dowd-Eagle, Snyder, & Holtzman, 2015; McCurdy et al., 2016). Teachers with positive self-efficacy in the area of classroom management are less likely to view student misbehaviors as personal attacks and more likely to view misbehaviors as opportunities for student growth. Students of teachers with high self-efficacy report better relationships with their teachers contributing to fewer office discipline referrals (Wentzel & Ramani, 2016).

Classroom Management

The inability of teachers to use tools other than traditional classroom management strategies such as classroom removals has been a deterrent to the academic progress of students (Garrett, 2015). Teachers with strong classroom management enjoy better student academic performance. This is especially true of at-risk students such as those whose parents have not achieved a high level of formal education. In fact, research has suggested that effective classroom management produces a stronger positive correlation to academic

achievement in the form of grades than classroom composition or parental education level (Hochweber, Hosenfeld, & Klieme, 2014).

Unfortunately, many teacher preparation programs offer little instruction in the way of classroom management. In addition, limited opportunities are provided to pre-service teachers to develop classroom management skills through adequate field experience (Pankowski & Walker, 2016). Despite teachers indicating the need for additional professional development in classroom management (Johansen, Little, & Akin-Little, 2011), few empirical studies or teacher development programs address this concern (Gregory, Allen, Mikami, Hafen, & Pianta, 2014).

Classroom Management and Teacher Self-Efficacy

Teacher self-efficacy in classroom management predicts teacher burnout when teacher burnout is related to stress caused by classroom disruptions. Teachers that believe they are capable of successfully managing student behavior, including class disruptions, perceive that they experience less stress and are less likely to experience burnout and leave the teaching profession. In contrast, teachers that do not possess positive self-efficacy in the area of classroom management are more likely to experience burnout and stress related to classroom disruptions. (Dicke et al., 2014). In addition, teachers with higher perceived self-efficacy in classroom management view themselves as more accomplished. In contrast, a negative correlation between classroom management self-efficacy and emotional exhaustion exists. Teachers, especially new teachers, feel unprepared in the area of classroom management. This lack of self-efficacy leads to burnout and negative self-image (Aloe, Amo, & Shanahan, 2014).

Teachers with higher levels of self-efficacy enjoy better classroom management when linked to externalizing behavior such as class disruption, disrespect, and verbal or physical aggression. Interestingly, teachers with higher self-efficacy report a greater sense of ability to combat internalized behavior in students. The level of teacher self-efficacy potentially influences which classroom management strategies and styles and teachers choose to implement. Those with greater levels of self-efficacy tend to utilize more positive interventions (Zee & Koomen, 2016). At the high school level, teacher self-efficacy has been linked to not only positive classroom management strategies, but also positive character traits in teachers such as altruism, courtesy, and conscientiousness (Ngidi, 2012).

Teacher classroom management self-efficacy can be predicted by personality traits such as extroversion and openness to new experiences more accurately than years of teaching experience (Bullock, Coplan, & Bosacki, 2015). If this is true, then it would be wise for school districts to include personality tests as part of the hiring process for teachers, similar to procedures in the corporate world. This would allow employers to predict who will have the highest levels of self-efficacy. The level of self-efficacy could subsequently predict the actual teacher efficacy (Jamil et al., 2012; Mojavezi & Tamiz, 2012).

Student Engagement

Student engagement has been linked to academic success, student persistence, and higher graduation rates. Engagement can be hard to define as it is multifaceted. Behavioral engagement includes positive classroom comportment, task completion, and involvement in classroom activities. Cognitive engagement encompasses the psychological effort of the student. For example, a student that ponders the topic, analyzes, and goes beyond what is

required by the task is heavily engaged cognitively. Cognitive engagement is very internal and is deeply associated with self-regulation (Sinatra, et al., 2015).

As implied by its name, emotional engagement refers to the student's emotional response to the content. Positive emotional engagement relates to positive emotions. Students that experience enjoyment in a lesson are more engaged and thereby more likely to experience deep learning. Negative emotions can lead to emotional engagement; however, positive emotions are more successful in promoting student engagement and learning (Sinatra, et al., 2015).

Student Engagement and Teacher Self-Efficacy

Teachers with high levels of self-efficacy believe that they can impact student engagement while those that have lower levels of self-efficacy do not believe they can successfully engage students (Skaalvik & Skaalvik, 2016). Educators with positive self-efficacy are more likely to employ new instructional strategies and vary their instructional modalities leading to increased student engagement. Teachers with negative self-efficacy are not risk takers in the sense that they are unwilling to try new ideas and use the same lesson plans year after year. They usually have poor attitudes about themselves, their school, and their students (Bandura, 2018; Zee et al., 2016).

In contrast, teachers with positive self-efficacy feel they are important and their lessons are meaningful. This sense of importance compels teachers to gain confidence and to take a more resolute and active role in engaging their students. When the teachers believe they are important and that their lessons are meaningful (positive self-efficacy), the students are more likely to view the teachers as important and their lessons as meaningful (Zee et al., 2016). This has led to higher levels of student engagement in classrooms of teachers with

higher self-efficacy when compared to those with less favorable self-efficacy (Van Uden, Ritzen, & Pieters, 2014).

Instructional Strategies

The individual needs of students are best met when teachers possess a variety of research-based instructional practices (Crider, Johnston, Rutledge, Doolittle, & Beard, 2014). These strategies consist of the way content is arranged, delivery modalities, and how activities are implemented in order to encourage student learning (Rizwan & Khan, 2015). Considering instructional strategies should not be a one-time event. Rather, selecting the appropriate instructional strategies to meet the needs of diverse learners should be a daily occurrence (Lourenco, Goncalves, & Elias, 2015). Effective teachers select the strategies that are most appropriate for their students (Thomas & Green, 2015).

Teachers with a high level of self-efficacy are more likely to utilize current instructional practices and experiment with innovative methods (Shoulders & Krei, 2015). When teachers receive professional development on instructional strategies, their level of self-efficacy improves. Not surprisingly, a positive correlation has been identified between participation in instructional strategy training sessions and the use of innovative teaching practices inside the classroom (Sandholtz & Ringstaff, 2014). This return has been attributed to a rise in interest for professional development in instructional strategies (Lattuca, Bergom, & Knight, 2014).

Instructional Strategies and Teacher Self-Efficacy

A teacher's self-efficacy influences the very instructional practices that he or she chooses to employ. Teachers that believe they are efficacious are more likely to utilize innovative instructional practices when compared to teachers with a lower sense of self-

efficacy (Shoulders & Krei, 2015). Teachers acquire a higher level of self-efficacy in instructional strategies through professional development opportunities. Teachers with an improved sense of efficacy beliefs demonstrate an increased willingness to differentiate instruction in their classrooms. Essentially, the teachers believe that they are capable so they are willing to try instructional strategies that may be less traditional (Dixon, Yssel, McConnell, & Hardin, 2014). This holds particularly true for new and/or pre-service teachers. The more professional development and training they receive in areas such as differentiated instruction, the more effective they feel they can become, and the more effective they are in the area of instructional strategies (Neve, Devos, & Tuytens, 2015).

Empirical Research

Research in Teacher Self-Efficacy

Research on teacher self-efficacy began with the Rand group. This group conducted research into the cause of the success of an elementary level reading program in the Los Angeles area (Armor et al., 1976). Rand researchers built upon Rotter's Locus of Control (1966) and delved into teacher efficacy. Later, teacher self-efficacy was defined as the perception that a teacher has regarding his or her control over the learning environment (Tschannen-Moran & Hoy, 2001).

The first two questions to evaluate teacher self-efficacy were inside of a much longer questionnaire fabricated by Rand (Tschannen-Moran, & Hoy, 2001). These two questions measured whether the teacher believed he or she controlled student learning and motivation (Henson, 2002). The higher the level of teacher self-efficacy, the better the students performed in their reading assessments in Armor et al.'s (1976) study. The first question measured general teacher self-efficacy while the second question honed into the teacher's

self-perception personal capacity to overcome challenges and increase student achievement (Lamorey & Wilcox, 2005).

The two Rand questions were linked to the teachers' personal self-efficacy (Ashton, 1984) and overall sense of teacher efficacy (Henson, 2002). This led the way for additional research into teacher self-efficacy (Henson, 2002).

Gap in the Research

The results of multiple research efforts have come to the same conclusion: teachers with higher reported instances of self-efficacy expressed more job contentment and their students reported higher levels of motivation. Of greatest interest is the fact that in every study, student achievement experiences a positive correlation with TSE. Much of the research into the relation between TSE and student achievement has been conducted outside of the United States of America. In addition, participants were often in specialized schools. Earlier research (Meissel & Rubie-Davies, 2016) has suggested that the correlation between TSE and student achievement is consistent across cultures. Tschannen-Moran and Barr (2004) compared collective teacher self-efficacy and standardized test scores. This was an improvement in the research because standardized measurements for student achievement, test scores, were used in lieu of grade point averages (GPA) that are often subjective.

Research in Ethiopia (Wossenie, 2014) and Iran (Mojavezi & Tamiz, 2012) found clear, statistical evidence of the correlation between teacher self-efficacy and student achievement. However, a gap exists in the location of TSE research. There have been many cultural, demographical, and ideological shifts in the past decades. Therefore, a current study in a public American school would be a much-needed addition to the body of research on self-efficacy. Furthermore, a correlational study that could effectively predict future

numbers of office discipline referrals based on TSE would not only further TSE research but also research into graduation rate and student retention.

This dissertation investigated TSE as measured by the Teacher Sense of Efficacy Scale (TSES) Short Form developed by researchers at The Ohio State University. This instrument has excellent validity (Tschannen-Moran et al., 2001). A valid measurement of the number of office discipline referrals that teachers write is located in the database at each school that houses all of the referrals that teachers have submitted.

Conclusion

Recent research has focused on teacher self-efficacy and its relationship to teacher burnout and job satisfaction showing that teachers with a greater self-efficacy are less likely to leave the teaching profession (Skaalvik & Skaalvik, 2017). Other research has focused on teacher self-efficacy and its influence on student perception of teacher-to-student relationships demonstrating that teachers with higher self-efficacy also have students that perceive their relationships with their teachers as being positive (Summers et al., 2017). The relationship between teacher self-efficacy and student academic achievement is a strong positive correlation (Mojavezi & Tamiz, 2012; Wossenie, 2014). Additional studies have demonstrated the disproportionate number of referrals of specific demographic groups such as African American males and those with disabilities (Okilwa & Robert, 2017; Smolkowski et al., 2016; Sullivan et al., 2014). School level data and individual data can predict who is most likely to receive office discipline referrals and whether physical aggression (high teacher-to-student ratio) or insubordination (low teacher-to-student ratio) will be the largest percentage of referrals predicted from the school level characteristics (Martinez et al., 2015).

Additional research is needed in the area of teacher self-efficacy and its relationship with the quantity of office discipline referrals. Student at-risk factors are widely known in academia. Existing research has indicated which students are more statistically likely to receive office discipline referrals and for what types of referrals. Data can clearly indicate who is at risk of disciplinary removal and not completing a high school diploma. The ability to predict which teachers are more likely to disproportionately write discipline referrals has the potential to prevent problems before they arise; this is the logical next step, and an area in which research is not ample.

Insufficient research has been conducted in American schools about TSE and student behavior. Research has instead focused on other factors such as job satisfaction, teacher retention, and staff morale. These are worthwhile studies; however, the ultimate focus of any school is academic achievement. Students that miss school due to discipline removals (out-of-school suspension, expulsion, homebased instruction, and alternative placements) are more likely to drop out and less likely to have high grades (Melton, 2014). The additional capability of the TSES to differentiate between TSE in the areas of classroom management, instructional strategies, and student engagement is paramount. The results of this study have the potential to not only show the predictive ability of TSE to student discipline referrals, but also which of these three areas has the most effect. This information would prove very useful to instructional coaches, administrators, and district personnel working with the teachers at the selected site. A plan of action for staff development based on the results of the TSES could be formed for the staff at the selected sites. Purposeful and truly differentiated staff development would be obtainable. Future administrations of the TSES could then be utilized in order to assess the effectiveness of the provided staff development

in the form of benchmark testing. This process of tracking data could help steer subsequent staff development topics and foci.

Current professional development and professional learning communities (PLCs) in many schools and school districts focus on instructional delivery methods. Despite this emphasis on instructional modalities, American students continue to be outperformed by their international peers. A student retention, subsequent drop out, and ergo poverty problem exists in the United States. The current status quo has proven ineffective. The implications of this study have the potential to shape practice. If TSE is as important as hypothesized, then staff development and professional learning communities should reflect this. It would also signify that staff meetings should focus more on building up teachers' confidence and thereby self-efficacy instead of merely a forum to disseminate information that could be communicated through other means.

This study also has the potential to influence the teacher hiring process. Mojavezi and Tamiz (2012) opines that academic institutions are behind other professions that incorporate personality testing. With additional research, the personality characteristics needed to be a successful teacher can be identified and then tested for in teacher candidates before hire (Mojavezi & Tamiz, 2012). This would help to eliminate time and resources wasted in development of teacher candidates that are more likely to experience a higher rate of attrition and turnover. Certain personality tests and specific aspects of personality that most closely correlate with TSE are a proven predictor of teacher quality and therefore potential for student achievement (Jamil et al., 2012). For example, out of the five-factor model of personality, it was determined that neuroticism and extraversion would most likely predict TSE. Neuroticism is typified by moodiness and a poor attitude that would negatively

correlate with TSE. In addition, extraversion is characterized by friendliness and a positive view of others which is indicative of positive TSE. School districts could implement hiring practices similar to the corporate sector in which candidates for jobs are screened based on their responses to personality tests. If it is important for a retailer to ensure that a new hire has the appropriate personality traits for success in its company, it is much more important that the people that are working directly with children and shaping the future of generations through the educational process should be subject to at least as rigorous a screening process as a salesperson. This modification in hiring practices could better select the best candidates for teaching positions saving money, increasing teacher retention, decreasing student retention, lowering student removals, improving graduation rate, and augmenting student performance.

CHAPTER THREE: METHODS

Overview

This quantitative correlational study was designed to evaluate the relationship between an individual teacher's level of overall self-efficacy and self-efficacy in the specific areas of classroom management, student engagement, and instructional strategies and the number of discipline referrals that he or she wrote. In order to determine the strength of correlation of the predictor variable, teacher self-efficacy, to the criterion variable, number of discipline referrals, 72 teachers were evaluated using the Teacher Sense of Efficacy Scale (TSES). Those scores were linked to the number of discipline referrals submitted by each teacher. The data was aggregated, checked for normality, and a correlation was performed. Chapter three will begin with an explanation of the design of the study and four research questions. Next, the four null hypotheses will be identified. Finally, a description of the participants and setting of the study will be provided.

Design

A quantitative, non-experimental, correlational design with a non-random convenience sample was used. The predictor variable was teacher self-efficacy. Teacher self-efficacy is how the individual teacher perceives his or her ability to plan and carry out change (Shaalvik & Shaalvik, 2016). For this study, overall teacher self-efficacy was evaluated. In addition, three sub-areas of teacher self-efficacy were studied: classroom management, student engagement, and instructional strategies. Classroom management consists of the actions taken by the teacher to promote positive academic and socio-emotional learning (Emmer & Sabornie, 2015). Student engagement is the extent to which students are behaviorally and cognitively involved in the content (Sinatra et al., 2015). Instructional strategies are methods used to deliver instruction

(Shoulders & Krei, 2015). The criterion variable is the number of discipline referrals that each teacher wrote in a semester. Discipline referrals consist of when a teacher submits an office discipline referral to an administrator for a behavior related infraction. Referrals for late to class and all other referrals that did not occur inside a teacher's classroom were not relevant to this study.

A convenience sample was utilized for this dissertation. This access is due to the researcher's role as a building-level administrator inside the same school district used as the research site. A non-random sample was selected to obtain a larger sample size in order to generate a greater effect size (Warner, 2013). A correlation was the most appropriate design because the study examined the relationship between the predictor variable of teacher self-efficacy and the criterion variable of number of referrals. A correlational study is used to analyze the relationship of a predictor variable to a criterion variable. In this case, a comparison was sought making a correlational design the logical choice (Gall, Gall, & Borg, 2007). In this study, multiple variables are being compared. An advantage of a correlational study is it has the ability to analyze the relationship between multiple variables (Gall et al., 2007).

The predictor variable in this study was teacher self-efficacy which was measured in four areas: overall self-efficacy, classroom management self-efficacy, student engagement self-efficacy, and instructional strategies self-efficacy. These variables were all measured by the Teachers' Sense of Efficacy Scale (TSES) (Tschannen-Moran, & Hoy, 2001). There is limited data on the relationship between the selected predictor variables and the criterion variables. Correlational designs are limited in the fact that they do not establish a causal relationship between variables. Correlational studies can demonstrate quantitatively if a significant relationship exists (or not) but cannot determine what causes that relationship (Gall et al., 2007).

Currently, limited research exists evaluating the strength of the relationships between the chosen criterion and predictor variables. A correlational design adds to this research and has the potential to discover possible areas for future experimental and/or predictive studies (Gall et al., 2007).

Research Questions

RQ1: Is there a relationship between high school teacher *overall self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) composite score and the number of discipline referrals as measured by school discipline records?

RQ2: Is there a relationship between high school teacher *classroom management self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) classroom management subscale and the number of discipline referrals as measured by school discipline records?

RQ3: Is there a relationship between high school teacher *student engagement self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) student engagement subscale and the number of discipline referrals as measured by school discipline records?

RQ4: Is there a relationship between high school teacher *instructional strategies self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) instructional strategies subscale and the number of discipline referrals as measured by school discipline records?

Null Hypotheses

H₀1: There is no statistically significant relationship between *overall self-efficacy* of high school teachers as measured by composite scores of the Teacher Sense of Efficacy Scale and the number of discipline referrals.

H₀2: There is no statistically significant relationship between high school teacher *classroom management self-efficacy* as measured by the Teacher Sense of Efficacy Scale classroom management subscale and the number of discipline referrals.

H₀₃: There is no statistically significant relationship between high school teacher *student engagement self-efficacy* as measured by the Teacher Sense of Efficacy Scale student engagement subscale and the number of discipline referrals.

H₀₄: There is no statistically significant relationship between high school teacher *instructional strategies self-efficacy* as measured by the Teacher Sense of Efficacy Scale instructional strategies subscale and the number of discipline referrals.

Participants and Setting

The participants for the study were drawn from a non-random convenience sample of high school teachers from a school district located in the southeast United States during the fall semester of the 2018-2019 school year. A convenience sample was used because the researcher has access to the participants and student data due to his role as a building level administrator within the same district. The school district is ethnically and socio-economically diverse with a large attendance area comprising rural and suburban environments. The school district encompasses the entire county which is larger than the state of Rhode Island. Fifty-four schools are divided into nine attendance areas. During the fall of 2016, the total student enrollment in the district was 43,188 students. Of those students, 12,683 were high school students (grades 9-12). The total student population in the district is 64% White, 20% African American, 9% Hispanic, and 7% other. The total number of district employees in fall 2016 was 5,650, 2,708 of whom were classroom teachers. Eighty percent of district employees possess advanced degrees with 91% of employees from the previous year returning. The teacher attendance rate is 98.57% with an average teacher salary of \$52,500 a year (South Carolina Department of Education, 2016).

The school district has 10 high schools with the smallest having an enrollment of approximately 320 students in a rural, farming community and the largest boasting

approximately 2,200 students in a rapidly developing suburban setting. The other eight schools cover a mixture of rural and suburban settings. See Table 1 for enrollment information.

Table 1

School Enrollment Information

Name of School	Approximate Student Enrollment
School 1	900 Students
School 2	1,500 Students
School 3	400 Students
School 4	900 Students
School 5	1,400 Students
School 6	1,400 Students
School 7	1,600 Students
School 8	1,600 Students
School 9	320 Students
School 10	2,200 Students

For this study, the number of participants sampled was 72 (N=72). This exceeds the minimum number of 66 participants needed for a medium effect size with a statistical power of .7 at the .05 alpha level (Gall et al., 2007). The sample came from three different high schools within the same school district. School 1 has an approximate enrollment of 2,500 students in a rapidly growing suburban setting. School 2 has an approximate enrollment of 1,600 students in mixed setting. School 3 has an approximate enrollment of 1,600 students in a rapidly expanding suburban setting. Due to the researcher's supervisory role in the district, selection bias could

have been an issue. In order to prevent this, all high school teachers in the district were provided the opportunity to participate in the study. All teachers that agreed to participate, fully completed the TSES, and taught the entire Fall 2018 semester were included. Out of approximately 640 high school teachers in the district, 82 agreed to participate. Of the 82 that agreed to participate, 80 fully completed the TSES. All of the participants completed the entire first semester of the 2018-2019 school year at the same school as when they agreed to participate in the study thereby meeting the qualifications to participate in this study. All remaining 80 participants' information was utilized in the study.

The demographic breakdown of participants was as follows: 27 (33.8%) of the participants were male. Fifty-three (66.3%) of the participants were female (see Table 2). Seventy-one (88.8%) were White, six (7.5%) were African American, two (2.5%) were Hispanic or Latino and one (1.3%) was Native Hawaiian or Other Pacific Islander (see Table 3). There was a mean of 15.5 years of teaching experience.

Table 2

Participant Gender

Variable	<i>N</i>	% of Number of Participants
Male	27	33.8
Female	53	66.2

Table 3

Participant Ethnic Information

Ethnicity	<i>N</i>	% of Number of Participants
American Indian or Alaska Native	0	0%
Asian	0	0%
Black or African American	6	7.5%
Hispanic or Latino	2	2.5%
Native Hawaiian/Pacific Islander	1	1.3%
White	71	88.8%

Instrumentation

The predictor variables were the overall teacher self-efficacy and teacher self-efficacy in the sub-areas of classroom management, student engagement, and instructional strategies. The criterion variable was the number of discipline referrals submitted. The overall teacher self-efficacy was measured by the composite score on the Teacher Sense of Efficacy Scale (TSES). The teacher self-efficacy in the areas of classroom management, student engagement, and instructional strategies were measured by the corresponding subscales of the TSES. The number of referrals were a sum of the discipline referrals submitted by each teacher excluding late to class and any referrals that did not take place in that teacher's classroom in order to control for factors beyond the individual teacher's influence.

The TSES is a 12 (short form) or 24 (long form) question questionnaire designed at The Ohio State University to analyze teacher self-efficacy in the areas of student engagement,

instructional strategies, and classroom management. Written permission to use the TSES was obtained (see Appendix A for permission letter and Appendix B for e-mail confirmation).

The TSES was developed by two researchers and eight graduate students. The team researched prior tests on self-efficacy and found them to not be specific to teachers and incapable of retaining validity and reliability across contexts (Tschannen-Moran & Hoy, 2001). The researchers compiled a pool of over 100 questions that eventually narrowed to 24 questions for the long form and 12 questions for the short form. Much of their work was based on Bandura's 30-question scale (1997) as Bandura is one of the pioneers in the study of self-efficacy. In addition, Bandura's research has been widely explored and validated by other researchers providing a reliable platform from which to launch an updated assessment (Tschannen-Moran & Hoy, 2001). Questions regarding activities that teachers do not often participate in like determining class size were removed by the researchers. Questions added by the TSES development team focused on tasks commonly performed by teachers like differentiating instruction for students of different ability levels. An initial study of 224 participants including preservice and in-service teachers reduced the number of questions to 32 (Tschannen-Moran & Hoy, 2001). A second study of 217 participants produced eight factors with values greater than one (Tschannen-Moran & Hoy, 2001). A scree test reduced the selected factors to three (Tschannen-Moran & Hoy, 2001). Construct validity was examined by comparing the TSES against other self-efficacy scales (Tschannen-Moran & Hoy, 2001). A third study with 410 participants solidified the three subscales of classroom management, student engagement, and instructional strategies. The eight questions with the highest loadings for each factor were selected. These questions comprise the 24-question long form. The subscales of

classroom management, student engagement, and instructional strategies have a reliability of .90, .87, and .91 respectively (Tschannen-Moran & Hoy, 2001).

The composite score measures the overall teacher self-efficacy. In addition, three subscale scores in the areas of classroom management, student engagement, and instructional strategies were provided. The TSES utilizes a nine-category rating scale. The following anchor labels were used: nothing, very little, some influence, quite a bit, and a great deal. The highest possible score on the long form is 216 with a lowest possible score of 24. The highest possible score on the short form is 108 with a lowest possible score of 12. Higher scores indicate higher levels of self-efficacy and lower scores indicate lower levels of self-efficacy. The overall alpha on the long form is .94, and the overall alpha on the short form is .91 (Tschannen-Moran & Hoy, 2001). The short form was selected in order to elicit a greater number of participants due to the lessened time commitment required to participate in the study.

Table 4

TSES Short Form Measures of Validity

Score	Mean	SD	Alpha
Composite	7.1	.98	.90
Classroom Management	7.2	1.2	.81
Student Engagement	7.3	1.2	.86
Instructional Strategies	6.7	1.2	.86

TSES has been used successfully in several studies (Miller et al., 2017; Mojavezi & Tamiz, 2012; Shoulders & Krei, 2015). In addition, the validity of the short form was recently affirmed in a study involving 554 teachers across grade levels in the Midwest and a comparison

of their TSES results to that of other reliable instruments. The data was analyzed using the Rasch Analysis of Internal Structure and Model-Data Fit. This data indicated the 12-question short form has a coefficient alpha of .90. It also determined that the questions are invariant to location or level of teaching experience indicating that the TSES is an appropriate instrument for any school location with teachers of any experience level (Chang & Engelhard, 2015). In addition to being reliable, the TSES is available for free through The Ohio State University's website complete with instructions for scoring.

The criterion variable of quantity of discipline referrals was measured by the number of referrals submitted. Discipline referrals consist of formal office referrals that teachers submitted to school administration seeking disciplinary action. All referrals that related to tardies were removed because the study was intended to measure the predictive relationship between teacher self-efficacy and the referrals that were written by those teachers for events that took place in their classrooms. Incidents that occur in non-classroom settings are closely related to the location, number of students present, and the school systems in place (Cash, Bradshaw, & Leaf, 2014). The purpose of this study was to measure the effect of teacher self-efficacy on the student behaviors inside of the corresponding classrooms, not the organization-wide systems that are in place.

Procedures

A prospectus of the research proposal was submitted to the Liberty University Institutional Review Board (IRB). IRB approval was granted (see Appendix C). A formal letter was sent to the site school district in order to gain permission to conduct the study and access archival data. Once IRB and district approval were granted, the researcher contacted the principal of each of the three participating high schools. After consent from each building level

principal was provided, a letter was e-mailed to all of the teachers at the participating high schools. The letter explained the purpose of the study and how the data would be used. It also assured each participant's confidentiality (see Appendix D). It also emphasized that participation was completely voluntary and that any participant could cease participation in the study at any time without reprisal. In order to elicit more participation, all participants were entered into a drawing to win one of twenty \$10 gift cards.

Every teacher in the district already had a district issued Google account and was accustomed to using Google forms. A link was sent to the participants that brought them to a Google Form. The Google Form provided a description of the study, its purpose, confidentiality statement, and how the information would be used. The teachers were then required to type their name and date indicating that they agreed to participate and grant the researcher access to their TSES scores, demographical information, and discipline referral history. Next, the Google Form asked for the teacher's school, number of years teaching, gender, race, and then continued with the 12 questions of the TSES short form (see Appendix E for TSES Short Form and Appendix F for scoring document). The data from these forms was transferred to a Google Sheet. Each teacher's name was then removed and replaced with a number. A separate sheet with which name pertains to each number was kept.

The teacher discipline data was collected from each school's records at the conclusion of the semester. Referrals were accessed through schoolwide referral software by a neutral third party that already had access to this information as part of that individual's work-related responsibilities. All referrals for late to class/tardy were omitted. The sum of the remaining referrals for each teacher were then provided to the researcher. Each teacher's name was assigned a matching number in the TSES score list with the same number on the number of

referrals list. All teacher names were then deleted thereby maintaining teacher confidentiality. The sum of the remaining referrals for each teacher along with the corresponding TSES scores were uploaded to SPSS for further analysis. The raw data was saved in the researcher's Google Drive, which is password protected. In addition to being password protected, no personally identifiable information was saved. Once each teacher's information was linked to a corresponding number, all names were removed. The real names of the schools were also replaced by numbers in order to protect confidentiality. The aggregated data was stored on the researcher's password protected laptop without any personally identifiable information remaining.

Data Analysis

A Spearman's Rank Order was used in this study because it is the most appropriate tool for measuring the strength of the relationship between the criterion variable of number of office discipline referrals and the predictor variables of overall teacher sense of efficacy and efficacy in the subscales of classroom management, student engagement, and instructional strategies (Green & Salkind, 2017). A non-parametric analysis, Spearman's Rank Order, was necessary due to the failure to meet the assumptions of normality (Gall et al., 2007).

First, a scatterplot and box and whisker plots were performed in order to test for outliers. All extreme outliers were removed before continuing as they could artificially skew the results (Warner, 2013). Eight extreme outliers out of the original 80 data points were removed as they were labeled as stars (extreme outliers) in boxplots when analyzing the data via IBM Statistical Analysis Software Package (SPSS). An extreme outlier refers to a participant or unit of analysis that is drastically different from the other scores in a sample or population (Gall et al., 2007). The scatterplot was used to test for the assumption of normal distribution. A Kolmogorov-

Smirnov test was used to assess normality because of the sample size ($N > 50$). The test for normality was necessary in order to determine how to proceed with the statistical analysis. If the data was normally distributed, a Pearson product moment correlation (Pearson r) would be run in order to look for a correlation and correlation strength for each of the null hypotheses. If the data was not normally distributed, a non-parametric tool would be necessary. Since the data is part of a correlational study analyzing relationships, a Spearman's Rank Order was the most appropriate non-parametric tool due to abnormalities (Gall et al., 2007). A scatterplot between the predictor and criterion variables was used to test for the assumption of linearity (Warner, 2013). In addition to the assumption of linearity, the scatterplot was used to check for the assumption of bivariate outliers between the predictor and criterion variables. In a scatterplot that meets the assumption of normal distribution, a classic cigar shape is readily apparent. Cohen's d was utilized to interpret effect size (Gall et al., 2007). All assumptions were checked before continuing with data analysis (Warner, 2013).

For the first null hypothesis, the data was not normally distributed. Therefore, a Pearson correlation was not run in order to evaluate the relationship strength of the null hypothesis. Instead a Spearman's Rank Order, which is a non-parametric tool, was utilized due to abnormalities in the data. An alpha level of .05 was used as it is the standard in educational research (Warner, 2013). Spearman's Rank Order was the most appropriate tool because of the correlational nature of the study and the assumptions of normality not being met not allowing for a parametric analysis (Gall, et al., 2007).

For the second null hypothesis, the data was not normally distributed. Therefore, a Pearson correlation was not run in order to evaluate the relationship strength of the null hypothesis. Instead a Spearman's Rank Order, which is a non-parametric tool, was utilized due

to abnormalities in the data. An alpha level of .05 was used as it is the standard in educational research (Warner, 2013). Spearman's Rank Order was the most appropriate tool because of the correlational nature of the study and the assumptions of normality not being met not allowing for a parametric analysis (Gall, et al., 2007).

For the third null hypothesis, the data was not normally distributed. Therefore, a Pearson correlation was not run in order to evaluate the relationship strength of the null hypothesis. Instead a Spearman's Rank Order, which is a non-parametric tool, was utilized due to abnormalities in the data. An alpha level of .05 was used as it is the standard in educational research (Warner, 2013). Spearman's Rank Order was the most appropriate tool because of the correlational nature of the study and the assumptions of normality not being met not allowing for a parametric analysis (Gall, et al., 2007).

For the fourth null hypothesis, the data was not normally distributed. Therefore, a Pearson correlation was not run in order to evaluate the relationship strength of the null hypothesis. Instead a Spearman's Rank Order, which is a non-parametric tool, was utilized due to abnormalities in the data. An alpha level of .05 was used as it is the standard in educational research (Warner, 2013). Spearman's Rank Order was the most appropriate tool because of the correlational nature of the study and the assumptions of normality not being met not allowing for a parametric analysis (Gall, et al., 2007).

CHAPTER FOUR: FINDINGS

Overview

The purpose of this quantitative correlational study was to determine the strength of the relationship between teacher self-efficacy and office discipline referrals. Participants completed the Teacher Sense of Efficacy (TSES) short form in order to quantify teacher self-efficacy as a whole and in the subareas of student engagement, instructional strategies, and classroom management. The criterion variable, the number of office discipline referrals that each participant wrote during the first semester of the 2018-2019 school year, was compared to the predictor variables of overall teacher self-efficacy and teacher self-efficacy in student engagement, instructional strategies, and classroom management via a Spearman's Rank Order. The research questions, hypotheses, and results of this study will be discussed in this chapter.

Research Questions

RQ1: Is there a relationship between high school teacher *overall self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) composite score and the number of discipline referrals as measured by school discipline records?

RQ2: Is there a relationship between high school teacher *classroom management self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) classroom management subscale and the number of discipline referrals as measured by school discipline records?

RQ3: Is there a relationship between high school teacher *student engagement self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) student engagement subscale and the number of discipline referrals as measured by school discipline records?

RQ4: Is there a relationship between high school teacher *instructional strategies self-efficacy* as measured by the Teacher Sense of Efficacy Scale (TSES) instructional strategies subscale and the number of discipline referrals as measured by school discipline records?

Null Hypotheses

H₀₁: There is no statistically significant relationship between *overall self-efficacy* of high school teachers as measured by composite scores of the Teacher Sense of Efficacy Scale and the number of discipline referrals.

H₀₂: There is no statistically significant relationship between high school teacher *classroom management self-efficacy* as measured by the Teacher Sense of Efficacy Scale classroom management subscale and the number of discipline referrals.

H₀₃: There is no statistically significant relationship between high school teacher *student engagement self-efficacy* as measured by the Teacher Sense of Efficacy Scale student engagement subscale and the number of discipline referrals.

H₀₄: There is no statistically significant relationship between high school teacher *instructional strategies self-efficacy* as measured by the Teacher Sense of Efficacy Scale instructional strategies subscale and the number of discipline referrals.

Descriptive Statistics

Descriptive statistics were calculated for the predictor variables of overall teacher self-efficacy and the three subscales of student engagement, instructional strategies, and classroom management. Descriptive statistics were also explored for the criterion variable of office discipline referrals. The lowest self-efficacy mean score, 6.792, was in the subscale of student engagement and the highest was in instructional strategies, 7.729. This indicates that the majority of participants possesses an average to above-average level of self-efficacy. The largest

standard deviation, 1.054, was in the area of student engagement. The smallest standard deviation, .840, was in the area of overall teacher self-efficacy. These low standard deviations indicate that the data for each predictor variable was closely distributed to the mean (Warner, 2013). The standard deviation for the criterion variable, number of office discipline referrals, was larger at 2.973. This demonstrates that although the criterion variable has a much higher standard deviation than any of the predictor variables, the criterion variable is still closely distributed to the mean (Warner, 2013). The minimum data point for the criterion variable was 0 and the high was only 13.

The variance for the criterion variable was much higher than that of any of the predictor variables. In addition, the mode for office discipline referrals was 0 meaning that the most common response was 0 office discipline referrals. This could help account for the greater variance seen in the criterion variable when compared to the predictor variables. See Tables 5 and 6 for a display of the descriptive statistics.

Table 5

Descriptive Statistics for Predictor Variables on the TSES

	<i>N</i>	Range	Min	Max	Mean	SD	Variance
Composite Score	72	3.5	5.4	8.9	7.431	.8406	.707
Classroom Management Subscale	72	3.8	5.3	9.0	7.670	.9667	.935
Student Engagement Subscale	72	4.8	4.3	9.0	6.792	1.0540	1.111
Instructional Strategies Subscale	72	3.8	5.3	9.0	7.729	.9685	.938
Valid N (listwise)	72						

Table 6

Descriptive Statistics for Criterion Variable

	<i>N</i>	Range	Min	Max	Mean	SD	Variance
Office Discipline Referrals	72	13	0	13	2.25	2.973	8.838
Valid N (listwise)	72						

Results

The data collected from participants taking the Teacher Sense of Efficacy (TSES) short form and the archival office discipline referral data for the first semester of the 2018-2019 school year were used for assumptions testing. The researcher reviewed all collected data prior to and after inputting it into IBM Statistical Analysis Software Package (SPSS). Two participants' data were removed because they were not full-time high school teachers. In addition, two other participants neglected to fully complete the TSES. As a result, their data was not included in the study. This incomplete data was removed in order to avoid Type I or Type II errors (Warner, 2013).

SPSS was utilized in order to perform assumptions testing for each null hypothesis for both the criterion and predictor variables. This was accomplished through the use of scatterplots, boxplots, histograms, and Kolmogorov-Smirnov tests in order to check for the assumptions of normality, linearity, bivariate outliers, and bivariate normal distribution (Warner, 2013). Figures and tables for the assumptions of normality are below.

Data Screening

The researcher began with the original 80 data points; however, six extreme outliers were denoted by stars in the histograms. These six outliers were removed and the histograms were run again. This time, two new extreme outliers were present in the histogram of teacher self-efficacy in instructional strategies. These two extreme outliers were removed and the remaining data was

then analyzed for the results of this study. No more outliers were removed once skewness was brought within an acceptable range while still allowing for enough data points for a medium effect size ($N > 66$). Figures 1 through 4 below show the boxplots of the TSE scores and number of ODRs.

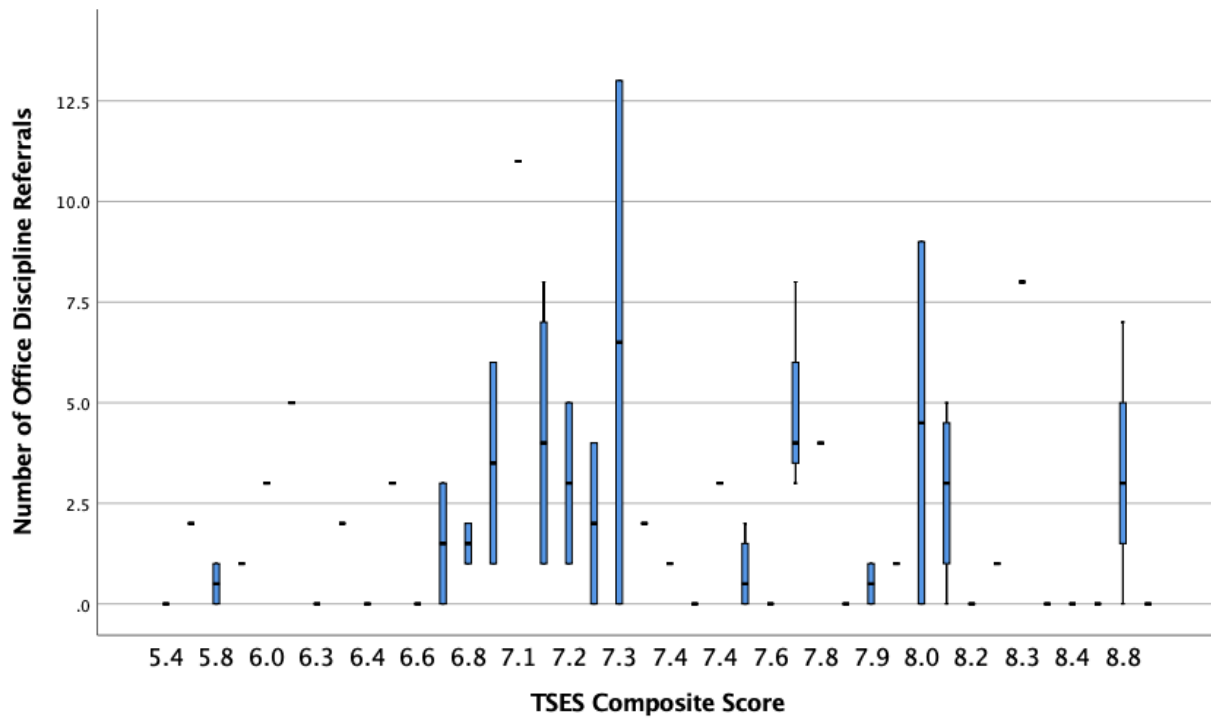


Figure 1. Boxplot of Overall TSE and Number of ODR

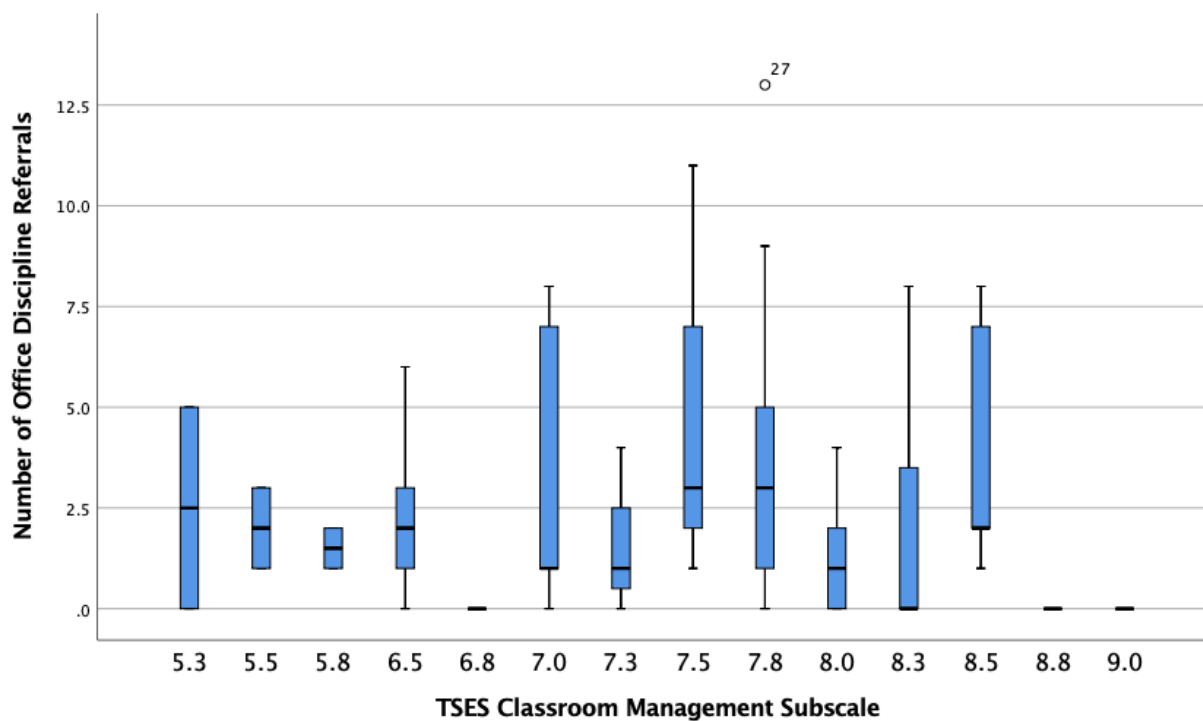


Figure 2. Boxplot of TSE in Classroom Management and Number of ODR

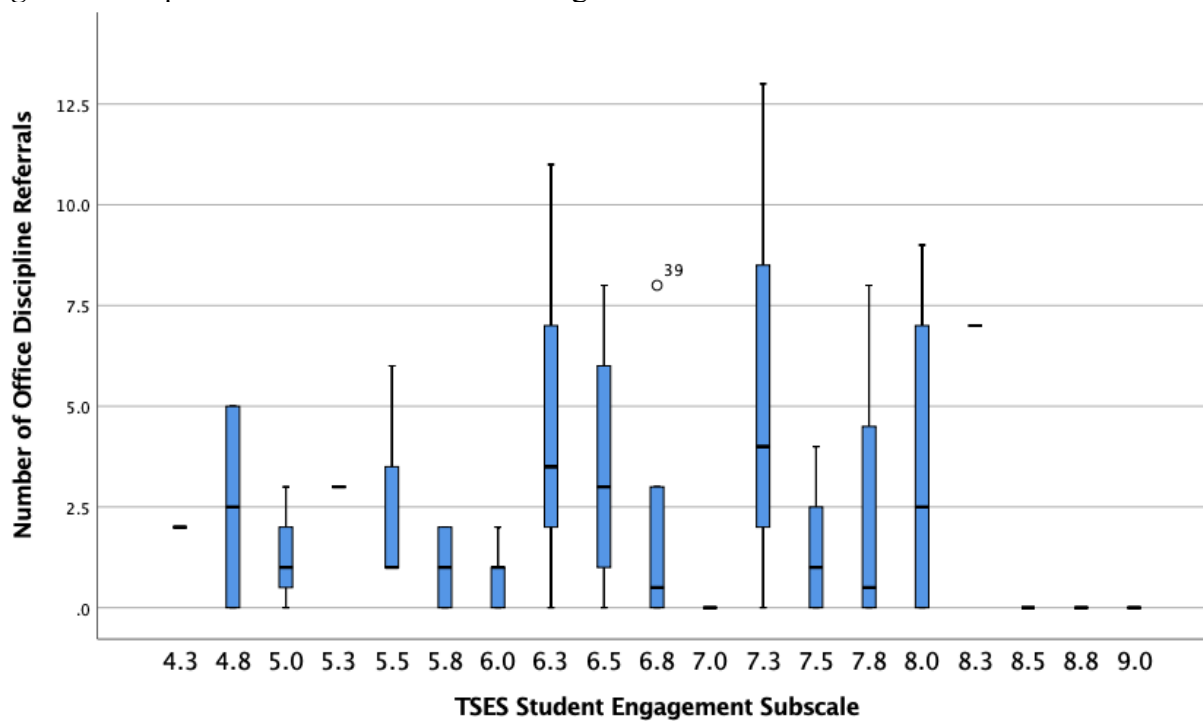


Figure 3. Boxplot of TSE in Student Engagement and Number of ODR

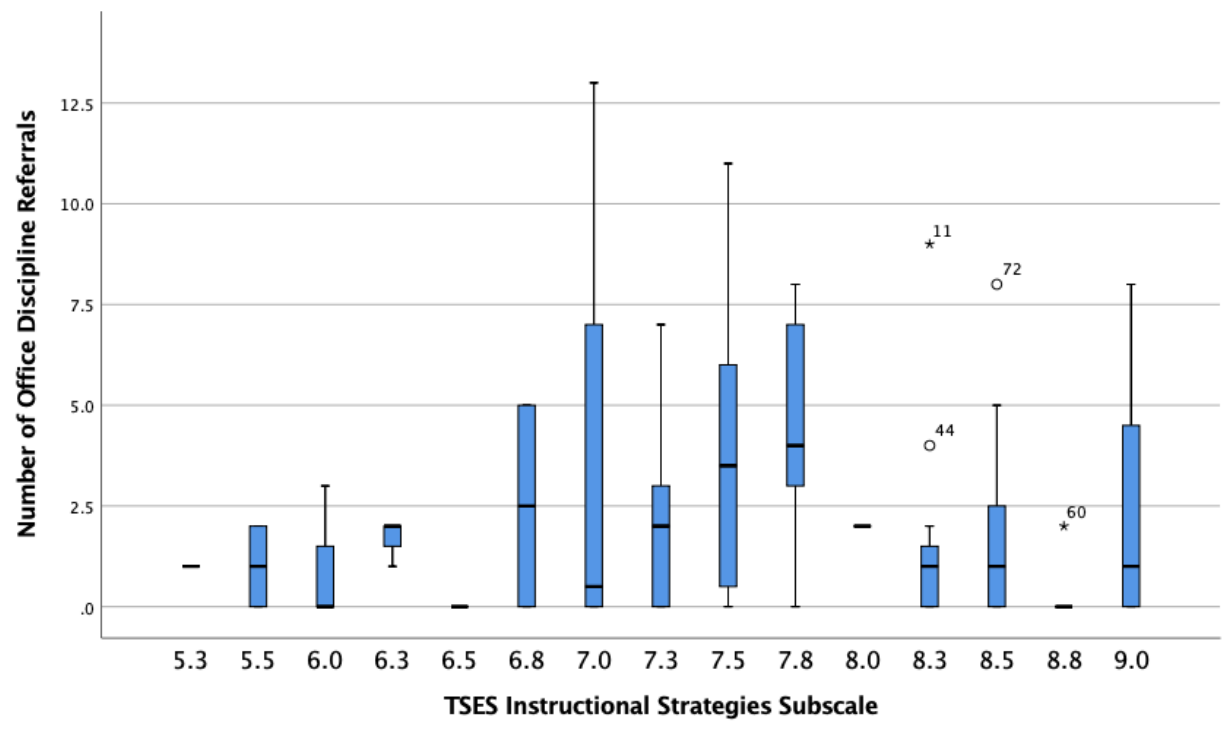


Figure 4. Boxplot of TSE in Instructional Strategies and Number of ODR

Normality

Histograms and Kolmogorov-Smirnov tests were used to determine if the data was normally distributed. It is important to test assumptions before determining how to proceed with data analysis (Warner, 2013).

Results from the histogram (Figure 5) for the criterion variable, office discipline referrals, indicated that the assumption of normality was not met. In a normal distribution, a classic bell curve is evident (Warner, 2013).

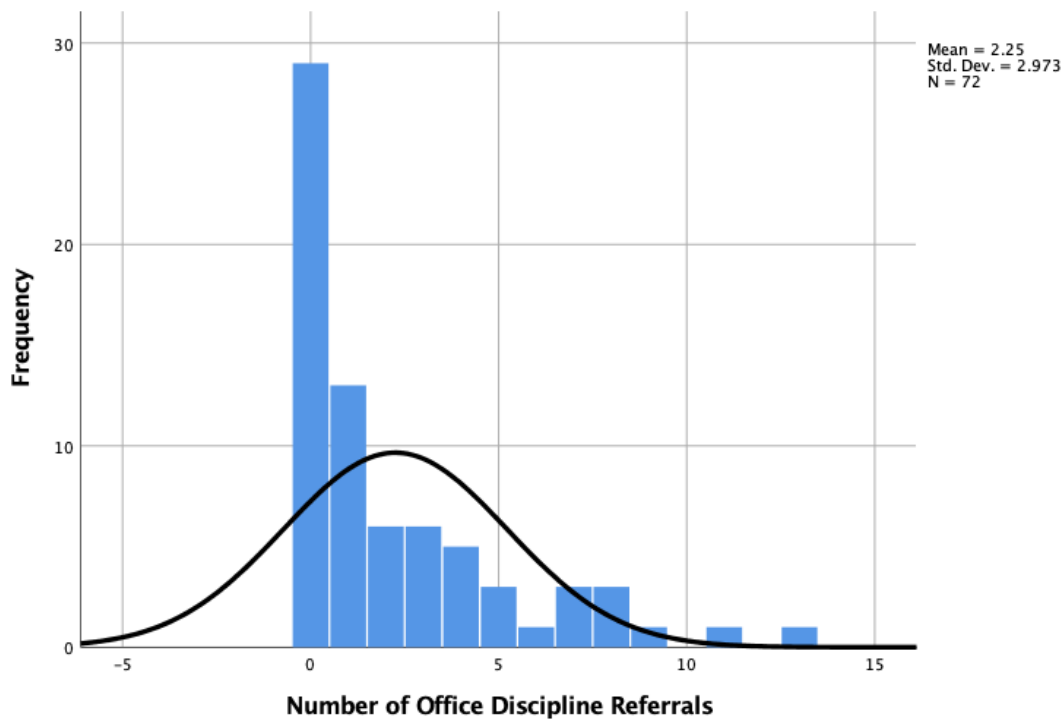


Figure 5. Histogram of Number of Office Discipline Referrals

Next, a Kolmogorov-Smirnov test (see Table 7) for the criterion variable, number of office discipline referrals, was conducted. The p -value was .000 indicating that the assumption of normal distribution was not met.

Table 7

Kolmogorov-Smirnov Test of Office Discipline Referrals

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ODRs	.246	72	.000	.772	72	.000

^a Lilliefors Significance Correction

Results (Figure 6) from the histogram for the predictor variable, overall teacher self-efficacy, indicated that the assumption of normality was not met. In a normal distribution, a classic bell curve is evident (Warner, 2013).

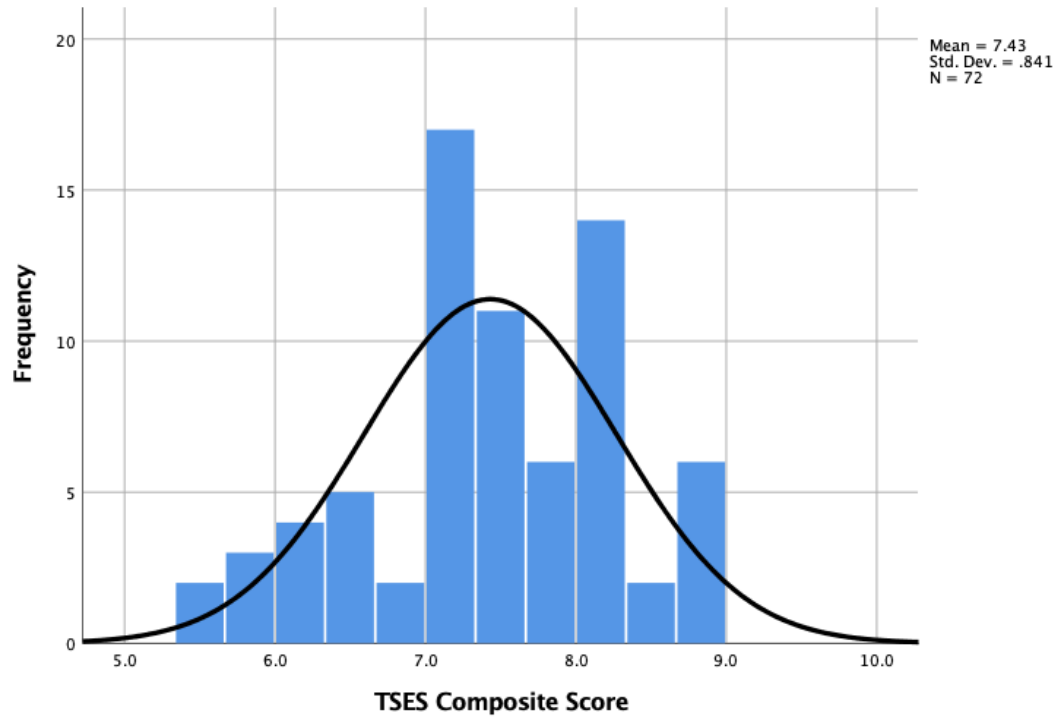


Figure 6. Histogram of Overall Teacher Self-Efficacy

Next, a Kolmogorov-Smirnov test (Table 8) for the predictor variable, overall teacher self-efficacy, was conducted. The p -value was .031 indicating that the assumption of normal distribution was not met.

Table 8

Kolmogorov-Smirnov Test of Overall Teacher Self-Efficacy

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TSES Composite	.110	72	.031	.970	72	.086

^aLilliefors Significance Correction

Results from the histogram (Figure 7) for the predictor variable, classroom management teacher self-efficacy, indicated that the assumption of normality was not met. In a normal distribution, a classic bell curve is evident (Warner, 2013).

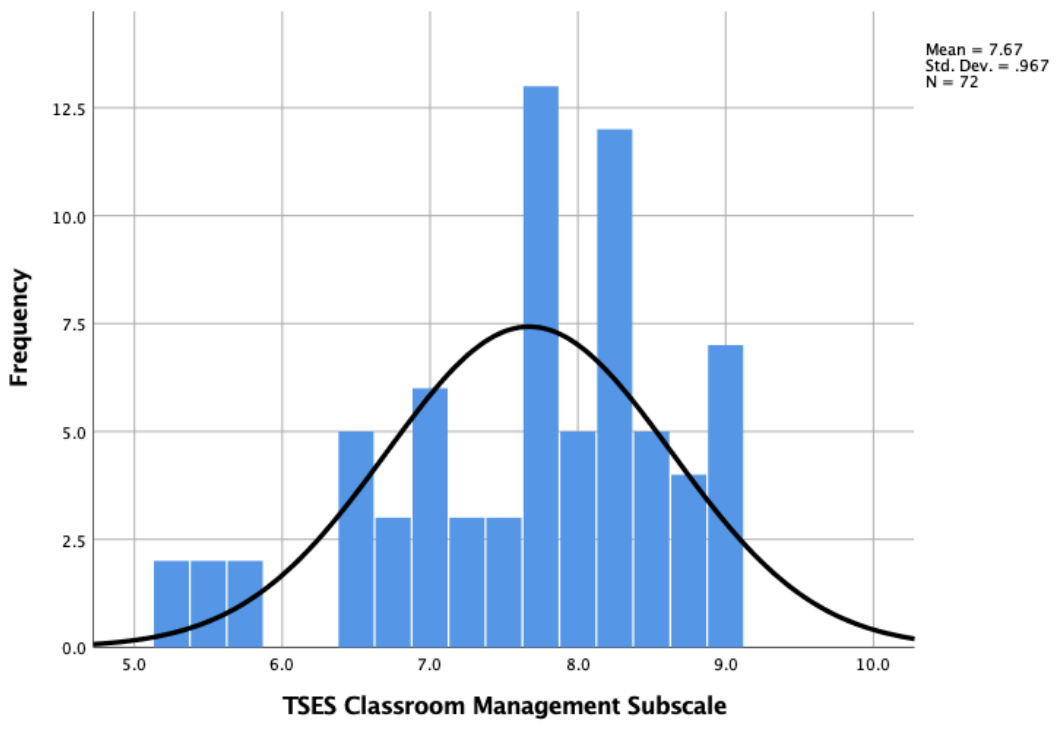


Figure 7. Histogram of Teacher Self-Efficacy in Classroom Management

Next, a Kolmogorov-Smirnov test (Table 9) for the predictor variable, classroom management teacher self-efficacy, was conducted. The p -value was .000 indicating that the assumption of normal distribution was not met.

Table 9

Kolmogorov-Smirnov Test of Classroom Management Teacher Self-Efficacy

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TSES Classroom Management Subscale	.172	72	.000	.930	72	.001

^aLilliefors Significance Correction

Results from the histogram (Figure 8) for the predictor variable, student engagement teacher self-efficacy, indicated that the assumption of normality was met. In a normal distribution, a classic bell curve is evident (Warner, 2013).

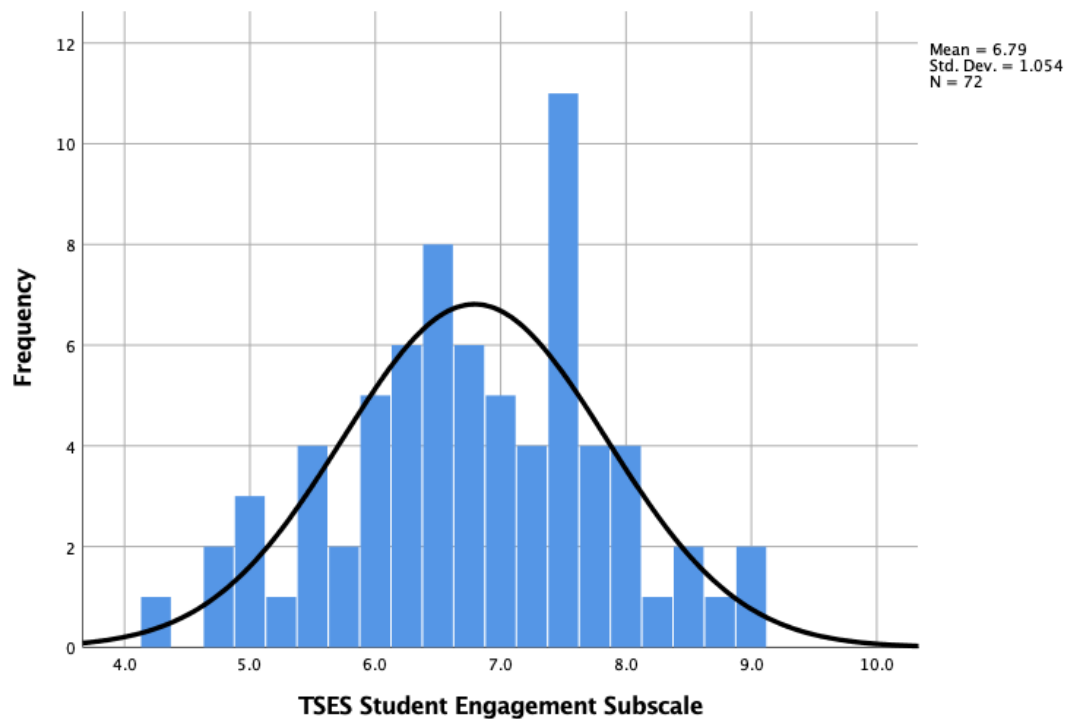


Figure 8. Histogram of Teacher Self-Efficacy in Student Engagement

Next, a Kolmogorov-Smirnov test (Table 10) for the predictor variable, student engagement teacher self-efficacy, was conducted. The p -value was .094 indicating that the assumption of normal distribution was met.

Table 10

Kolmogorov-Smirnov Test of Student Engagement Teacher Self-Efficacy

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TSES Student Engagement Subscale	.096	72	.094	.985	72	.564

^a Lilliefors Significance Correction

Results from the histogram (Figure 9) for the predictor variable, instructional strategies teacher self-efficacy, indicated that the assumption of normality was not met. In a normal distribution, a classic bell curve is evident (Warner, 2013).

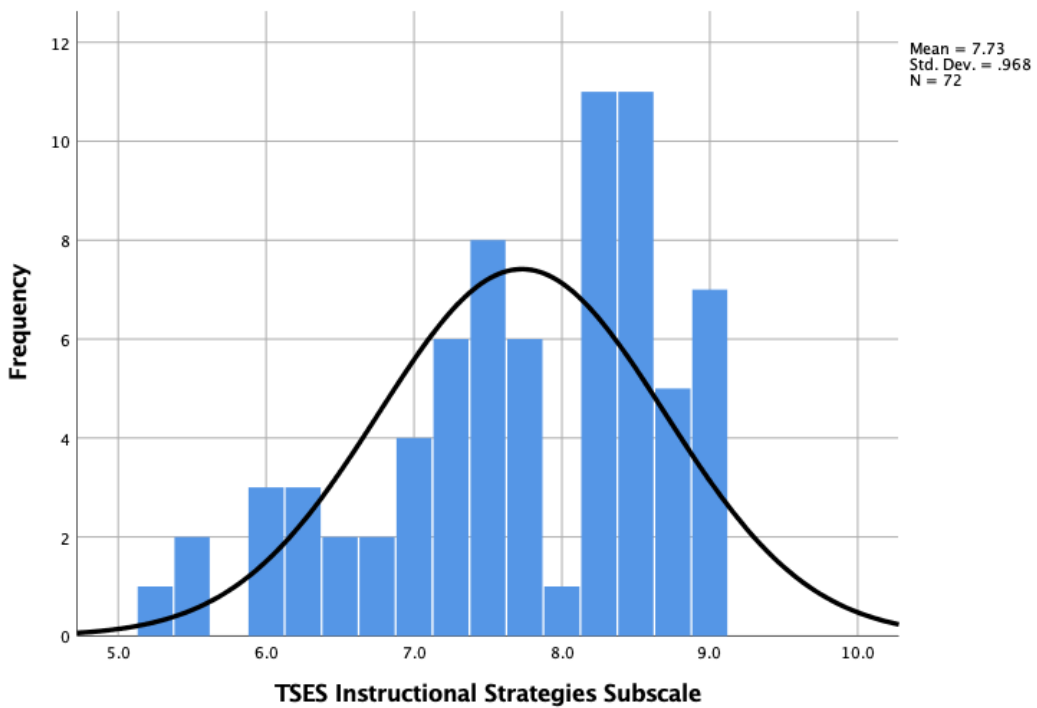


Figure 9. Histogram of Teacher Self-Efficacy in Instructional Strategies

Next, a Kolmogorov-Smirnov test (Table 11) for the predictor variable, instructional strategies teacher self-efficacy, was conducted. The *p*-value was .000 indicating that the assumption of normal distribution was not met.

Table 11

Kolmogorov-Smirnov Test of Instructional Strategies Teacher Self-Efficacy

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TSES Instructional Strategies Subscale	.177	72	.000	.929	72	.001

^aLilliefors Significance Correction

Linearity

The linear relationship between the variables was evaluated through scatterplots. When the assumption of linearity is met, the relationship between variables is represented by a straight line (Gall et al., 2007). This occurs because of the relationship between the criterion variable and predictor variable. When the values of y change as the values of x increase, a strong linear relationship is apparent (Warner, 2013). See Figures 10-13 for a visual output display. None of the variables demonstrated any excessive curvature in its linear relationship. However, with the failure to meet assumptions of normality in all but one variable, the decision was made to use a non-parametric tool, Spearman's Rank Order (Warner, 2013).

Assumption of Bivariate Outliers

Scatterplots between the predictor variables (x) and the criterion variable (y) were utilized to test for bivariate outliers in each of the four null hypotheses. Extreme outliers are defined as data points that vary excessively from the rest of the data (Gall, et al., 2007). No extreme outliers were identified in any of the four scatterplots.

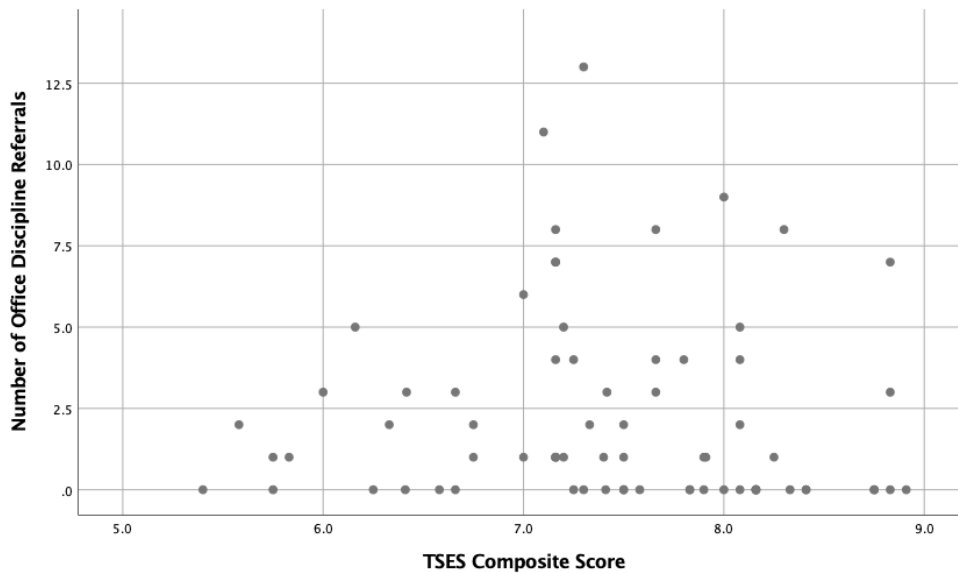


Figure 10. Scatterplot of Overall Teacher Self-Efficacy and Number of ODR

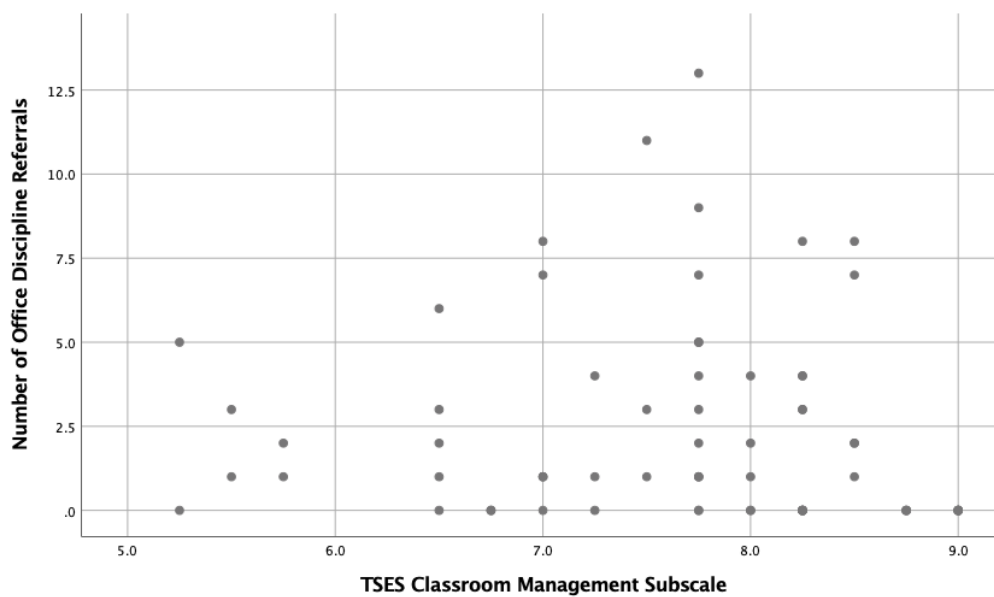


Figure 11. Scatterplot of TSE in Classroom Management and Number of ODR

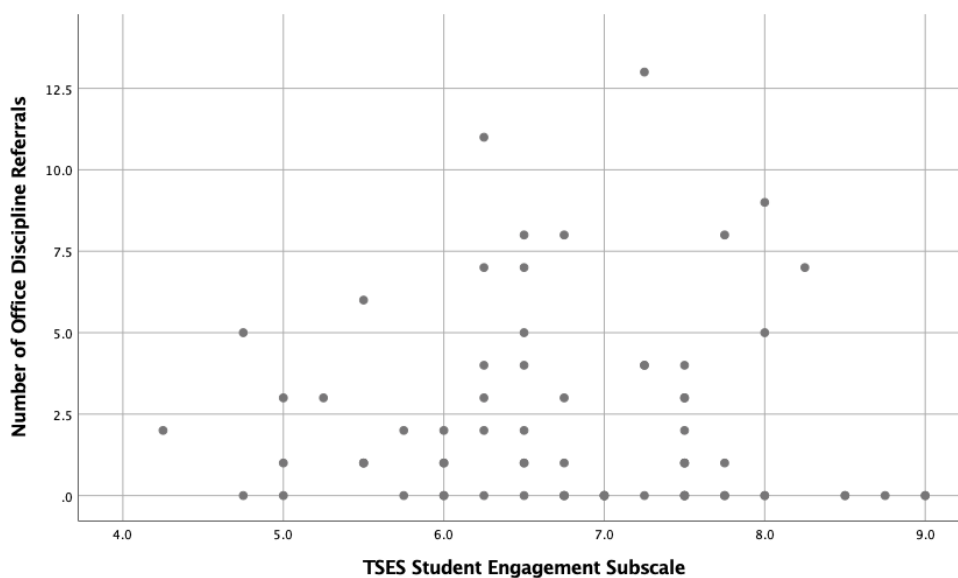


Figure 12. Scatterplot of TSE in Student Engagement and Number of ODR

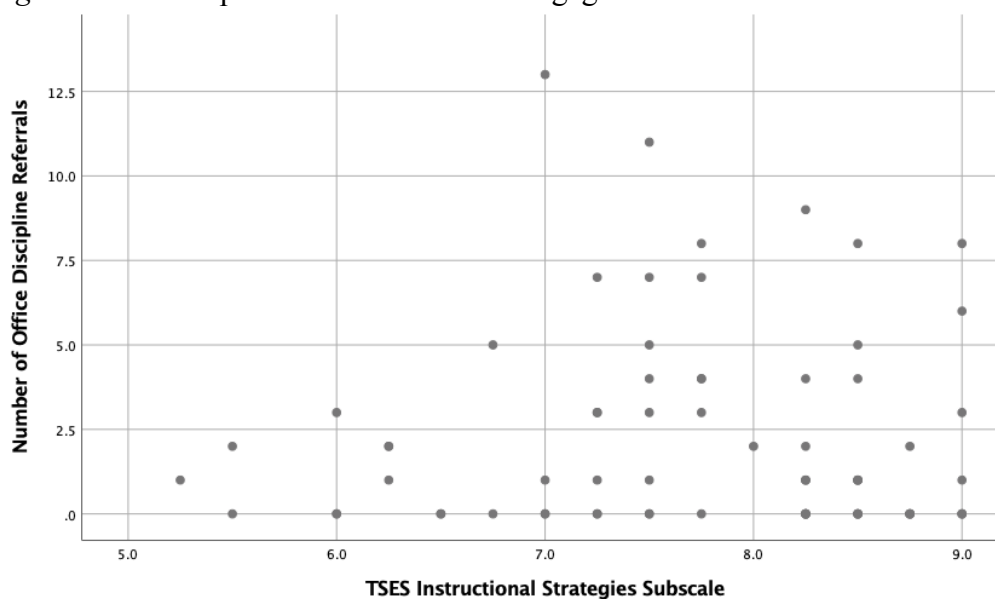


Figure 13. Scatterplot of TSE in Instructional Strategies and Number of ODR

Assumption of Normal Distribution

Data that are normally distributed between the predictor variable (x) and the criterion variable (y) display a classic “cigar shape” (Warner, 2013). None of the scatterplots between the four predictor variables and the criterion variable (See Figures 10-13) produced a classic “cigar shape.” Therefore, it was concluded that the data for each of the four null hypotheses did not

meet the assumption for bivariate normal distribution, thus, the non-parametric alternative, Spearman's Rank Order, was used to analyze the data.

Null Hypothesis One

H₀1: There is no statistically significant relationship between *overall self-efficacy* of high school teachers as measured by composite scores of the Teacher Sense of Efficacy Scale and the number of discipline referrals.

Due to failure to meet the assumptions of normality, a non-parametric instrument, Spearman's Rank Order, was appropriate (Warner, 2013). Spearman's Rank Order was performed in order to determine the strength of relationship between the predictor variable, overall teacher self-efficacy, and the criterion variable, the number of office discipline referrals (minus referrals for tardies) that each teacher wrote during the first semester of the 2018-2019 school year. Full-time high school teachers ($N = 72$) from a large school district in a southeastern state participated. Overall teacher self-efficacy was measured by results from the Teacher Sense of Efficacy Scale (TSES) Short Form. This 12-question instrument is a self-report, Likert-type scale. Office discipline referral data was collected from archival school district data.

Due to the number of participants ($N = 72$), a medium effect size with a statistical power of .7 and an alpha level of $\alpha = .05$ was chosen (Gall et al., 2007). Because multiple significance tests were run on the same set of data, Bonferroni corrections were used to reduce the risk of Type I errors (Warner, 2013). This changed the alpha level from the more standard .05 to only .0125 (.05 divided by four) for each null hypothesis tested (Warner, 2013). The more conservative alpha level meant that a p -value of less than .0125 is required in order to indicate that there is a statistically significant relationship (Gall et al., 2007).

Spearman's Rank Order is used when tests of normality and linearity have been violated and the researcher finds it useful to remove outliers on account for abnormal distributions (Warner, 2013). The criterion variable data used in this correlation failed to meet the assumption of normality. Table 12 displays the correlation coefficient for the predictor variable of overall teacher self-efficacy and the criterion variable of number of office discipline referrals using Spearman's Rank Order $\rho(72) = -.202, p = .088$ indicating a relationship that is not statistically significant at the Bonferroni-corrected p -value of less than .0125. Therefore, the researcher failed to reject the first null hypothesis.

Table 12

Spearman's Rank Order for Overall Teacher Self-Efficacy and Number of ODR

			TSES Composite Score	Number of Office Discipline Referrals
Spearman's rho	TSES Composite Score	Correlation Coefficient	1.000	-.202
		Sig (2-tailed)	.	.088
		<i>N</i>	72	72
	Number of Office Discipline Referrals	Correlation Coefficient	-.202	1.000
Sig (2-tailed)		.088	.	
<i>N</i>		72	72	

Null Hypothesis Two

H₀₂: There is no statistically significant relationship between high school teacher *classroom management self-efficacy* as measured by the Teacher Sense of Efficacy Scale classroom management subscale and the number of discipline referrals.

Due to failure to meet the assumptions of normality, a non-parametric instrument, Spearman's Rank Order, was appropriate (Warner, 2013). Spearman's Rank Order was performed in order to determine the strength of relationship between the predictor variable, classroom management teacher self-efficacy, and the criterion variable, the number of office discipline referrals (minus referrals for tardies) that each teacher wrote during the first semester of the 2018-2019 school year. Full-time high school teachers ($N = 72$) from a large school district in a southeastern state participated. Classroom management teacher self-efficacy was measured by results from the Teacher Sense of Efficacy Scale (TSES) Short Form. This 12-question instrument is a self-report, Likert-type scale. Office discipline referral data was collected from archival school district data.

Due to the number of participants ($N = 72$), a medium effect size with a statistical power of .7 and an alpha level of $\alpha = .05$ was chosen (Gall et al., 2007). Because multiple significance tests were run on the same set of data, Bonferroni corrections were used to reduce the risk of Type I errors (Warner, 2013). This changed the alpha level from the more standard .05 to only .0125 (.05 divided by four) for each null hypothesis tested (Warner, 2013). The more conservative alpha level meant that a p -value of less than .0125 is required in order to indicate that there is a statistically significant relationship (Gall et al., 2007).

Given the violation of assumptions of normality with the predictor variable, classroom management teacher self-efficacy, and the criterion variable, number of office discipline referrals, a Spearman's Rank Order was conducted. The Spearman's Rank Order is used when tests of normality have been violated and the researcher finds it useful to remove outliers on account for abnormal distributions (Warner, 2013). Table 13 displays the correlation coefficient for the predictor variable of classroom management teacher self-efficacy and the criterion

variable of number of office discipline referrals using Spearman's Rank Order $\rho (72) = -.272$, $p = .021$ indicating a relationship that is not statistically significant at the Bonferroni-corrected p -value of less than .0125. Therefore, the researcher failed to reject the second null hypothesis.

Table 13

Spearman's Rank Order for Classroom Management TSE and Number of ODR

			TSES Composite Score	Number of Office Discipline Referrals
Spearman's rho	Number of Office Discipline Referrals	Correlation	1.000	-.272
		Coefficient Sig (2-tailed)	.	.021
		<i>N</i>	72	72

	TSES Classroom Management Subscale	Correlation	-.272	1.000
		Coefficient Sig (2-tailed)	.021	.
		<i>N</i>	72	72

Null Hypothesis Three

H₀₃: There is no statistically significant relationship between high school teacher *student engagement self-efficacy* as measured by the Teacher Sense of Efficacy Scale student engagement subscale and the number of discipline referrals.

Due to failure to meet the assumptions of normality, a non-parametric instrument, Spearman's Rank Order, was appropriate (Warner, 2013). Due to the number of participants ($N = 72$), a medium effect size with a statistical power of .7 and an alpha level of $\alpha = .05$ was chosen (Gall et al., 2007). Because multiple significance tests were run on the same set of data, Bonferroni corrections were used to reduce the risk of Type I errors (Warner, 2013). This

changed the alpha level from the more standard .05 to only .0125 (.05 divided by four) for each null hypothesis tested (Warner, 2013). The more conservative alpha level meant that a p -value of less than .0125 is required in order to indicate that there is a statistically significant relationship (Gall et al., 2007).

Given the violation of assumptions with the criterion variable, number of office discipline referrals, a Spearman's Rank Order was conducted. The Spearman's Rank Order is used when tests of normality or linearity have been violated and the researcher finds it useful to remove outliers on account for abnormal distributions (Warner, 2013). The criterion variable data used in this correlation failed to meet the assumption of normality. Table 14 displays the correlation coefficient for the predictor variable of student engagement teacher self-efficacy and the criterion variable of number of office discipline referrals using Spearman's Rank Order $\rho (72) = -.180, p = .131$, indicating a relationship that is not statistically significant at the Bonferroni-corrected p -value of less than .0125. Therefore, the researcher failed to reject the third null hypothesis.

Table 14

Spearman's Rank Order for Student Engagement TSE and Number of ODR

			TSES Composite Score	Number of Office Discipline Referrals
Spearman's rho	Number of Office Discipline Referrals	Correlation	1.000	-.180
		Coefficient Sig (2-tailed)	.	.131
		N	72	72
	TSES Student Engagement Subscale	Correlation Coefficient Sig (2-tailed) N	-.180 .131 72	1.000 .131 72

Null Hypothesis Four

H₀4: There is no statistically significant relationship between high school teacher *instructional strategies self-efficacy* as measured by the Teacher Sense of Efficacy Scale instructional strategies subscale and the number of discipline referrals.

Due to failure to meet the assumptions of normality, a non-parametric instrument, Spearman's Rank Order, was appropriate (Warner, 2013). Due to the number of participants ($N = 72$), a medium effect size with a statistical power of .7 and an alpha level of $\alpha = .05$ was chosen (Gall et al., 2007). Because multiple significance tests were run on the same set of data, Bonferroni corrections were used to reduce the risk of Type I errors (Warner, 2013). This changed the alpha level from the more standard .05 to only .0125 (.05 divided by four) for each null hypothesis tested (Warner, 2013). The more conservative alpha level meant that a p -value of less than .0125 is required in order to indicate that there is a statistically significant relationship (Gall et al., 2007).

Given the violation of assumptions with the predictor variable, instructional strategies teacher self-efficacy, and the criterion variable, number of office discipline referrals, a Spearman's Rank Order was conducted. The Spearman's Rank Order is used when tests of normality or linearity have been violated and the researcher finds it useful to remove outliers on account for abnormal distributions (Warner, 2013). Table 15 displays the correlation coefficient for the predictor variable of instructional strategies teacher self-efficacy and the criterion variable of number of office discipline referrals using Spearman's Rank Order $\rho(72) = -.048, p = .689$ indicating a relationship that is not statistically significant at the Bonferroni-corrected p -value of less than .0125. Therefore, the researcher failed to reject the fourth null hypothesis.

Table 15

Spearman's Rank Order for Instructional Strategies TSE and Number of ODR

			TSES Composite Score	Number of Office Discipline Referrals
Spearman's rho	Number of Office Discipline Referrals	Correlation	1.000	-.048
		Coefficient	.	.689
		Sig (2-tailed)	.	.689
		<i>N</i>	72	72
	TSES Instructional Strategies Subscale	Correlation	-.048	1.000
		Coefficient	.689	.
		Sig (2-tailed)	.689	.
		<i>N</i>	72	72

CHAPTER FIVE: CONCLUSIONS

Overview

The purpose of this quantitative correlational study was to determine the strength of the relationship between teacher self-efficacy and office discipline referrals. Participants completed the Teacher Sense of Efficacy (TSES) short form in order to quantify teacher self-efficacy as a whole and in the subareas of student engagement, instructional strategies, and classroom management. The criterion variable, the number of office discipline referrals that each participant wrote during the first semester of the 2018-2019 school year, was compared to the predictor variables of overall teacher self-efficacy and teacher self-efficacy in student engagement, instructional strategies, and classroom management via Spearman's Rank Order analyses. The results of these analyses will be discussed in this chapter including implications and limitations of this study. Finally, recommendations for future research will be provided.

Discussion

The purpose of this non-experimental, quantitative correlational study was to determine the relationship and strength of relationship between teacher self-efficacy and the number of office discipline referrals (minus tardies) that teachers write. Spearman's Rank Order correlation analyses were conducted to analyze the relationship between the criterion variable of number of office discipline referrals and the criterion variables of overall teacher self-efficacy, classroom management teacher self-efficacy, student engagement teacher self-efficacy, and instructional strategies teacher self-efficacy. The criterion variable was measured by utilizing the number of office discipline referrals that each participant wrote during the first semester of the 2018-2019 school year, not including any referrals for tardies. Data for the predictor variables was obtained via participant responses on the Teacher Sense of Efficacy Scale (TSES) Short Form. The TSES

Short Form produced a composite score which measures overall teacher self-efficacy. In addition, this instrument also produced subscales that provided the data for the other three predictor variables. The target population for the study included ($N = 72$) full-time high school teachers in a large school district located in a state in the American Southeast. The participants in this study were selected via convenience sampling.

Results from the histogram test for the criterion variable, number of office discipline referrals, indicated that the assumption of normality was not met. Due to failure to meet the assumption of normality, a non-parametric analytical tool (Spearman's Rank Order) was conducted for each null hypothesis to determine if the violations of assumptions impacted the significance of the variable relationship. Spearman's Rank Order is used when tests of normality have been violated and the researcher removes extreme outliers due to abnormal distributions (Warner, 2013).

Null Hypothesis One

H₀₁: There is no statistically significant relationship between *overall self-efficacy* of high school teachers as measured by composite scores of the Teacher Sense of Efficacy Scale and the number of discipline referrals.

A weak negative linear relationship was discovered indicating that as overall teacher self-efficacy increases, the number of office discipline referrals would decrease slightly. However, a Spearman's Rank Order indicated that the relationship between the two variables was not statistically significant. Therefore, the researcher failed to reject the null hypothesis based on the results of the Spearman's Rank Order.

Despite the failure to find a statistically significant relationship between overall teacher self-efficacy and the number of office discipline referrals teachers write, the negative direction of the linear relationship is consistent with prior research. Teachers with greater self-efficacy are

more likely to have motivated students (Wossenie, 2014). This greater self-efficacy in turn should decrease the number of office discipline referrals a student receives because motivated students have fewer behavioral issues and thereby less office discipline referrals (Eagle et al., 2015; McCurdy et al., 2016). This is consistent with the results of this study. As overall teacher self-efficacy increases, the number of office discipline referrals should decrease.

Null Hypothesis Two

H₀₂: There is no statistically significant relationship between high school teacher *classroom management self-efficacy* as measured by the Teacher Sense of Efficacy Scale classroom management subscale and the number of discipline referrals.

A weak negative linear relationship was discovered indicating that as classroom management teacher self-efficacy increases, the number of office discipline referrals would decrease slightly. However, a Spearman's Rank Order indicated that the relationship between the two variables was not statistically significant. It is worth noting that Spearman's Rank Order for this relationship indicated a statistically significant relationship at $p = .05$ but did not indicate a significant relationship ($p = .021$) at the Bonferroni-corrected p -value of less than .0125. Therefore, the researcher failed to reject the null hypothesis based on the results of the Spearman's Rank Order.

Despite the failure to find a statistically significant relationship between classroom management teacher self-efficacy and the number of office discipline referrals teachers write, the negative direction of the linear relationship is consistent with prior research. It is also worth noting that the strongest relationship out of the four null hypotheses was H₀₂. Teachers with higher levels of self-efficacy enjoy better classroom management when linked to externalizing behavior such as class disruption, disrespect, and verbal or physical aggression. In addition, teachers with higher self-efficacy report a greater sense of ability to

combat internalized behavior in students. The level of teacher self-efficacy potentially influences which classroom management strategies and styles the teacher chooses to implement. Those with greater levels of self-efficacy tend to utilize more positive interventions (Zee et al., 2016). This suggests that teachers with higher levels of classroom management self-efficacy are more likely to use positive interventions inside of their classrooms instead of writing office discipline referrals.

Teachers with higher levels of classroom management self-efficacy better manage externalizing behaviors such as class disruption, disrespect, and verbal or physical aggression and internalized behavior in students (Zee et al., 2016). At the high school level, teacher self-efficacy has been linked to not only positive classroom management strategies, but also positive character traits in teachers such as altruism, courtesy, and conscientiousness thereby reducing the likelihood of students of teachers with higher classroom management self-efficacy to receive office discipline referrals (Ngidi, 2012).

Null Hypothesis Three

H₀₃: There is no statistically significant relationship between high school teacher *student engagement self-efficacy* as measured by the Teacher Sense of Efficacy Scale student engagement subscale and the number of discipline referrals.

A weak negative linear relationship was discovered indicating that as student engagement teacher self-efficacy increases, the number of office discipline referrals would decrease slightly. However, a Spearman's Rank Order indicated that the relationship between the two variables was not statistically significant. Therefore, the researcher failed to reject the null hypothesis based on the results of the Spearman's Rank Order.

Despite the lack of a statistically significant relationship between student engagement teacher self-efficacy and the number of office discipline referrals teachers write, the negative direction of the linear relationship is consistent with prior research. Effective teachers select the strategies that are most appropriate for their students (Thomas & Green, 2015).

Shoulders and Krei (2015) stated teachers with a high level of self-efficacy are more likely to utilize current instructional practices and experiment with innovative methods leading to better student engagement. Better student engagement leads to less student outbursts thereby lessening the number of office discipline referrals (Gregory et al., 2016).

The direction of the relationship of the third null hypothesis is supported by prior research. Teachers with positive self-efficacy feel they are important and their lessons are meaningful. This sense of importance compels teachers to gain confidence and to take a more resolute and active role in engaging their students. When the teachers believe they are important and that their lesson are meaningful (positive self-efficacy), the students are more likely to view the teachers as important and their lessons as meaningful (Zee et al., 2016). Research has shown that positively engaged students are less likely to misbehave and therefore are less likely to obtain office discipline referrals (Gregory, et al., 2016).

Null Hypothesis Four

H₀4: There is no statistically significant relationship between high school teacher *instructional strategies self-efficacy* as measured by the Teacher Sense of Efficacy Scale instructional strategies subscale and the number of discipline referrals.

Research question four was asked to determine if there is a statistically significant relationship between instructional strategies teacher self-efficacy as measured by the Teacher Sense of Efficacy Scale and the number of office discipline referrals teachers write as measured

by school discipline records. A weak positive linear relationship was observed indicating that as instructional strategies teacher self-efficacy increases, the number of office discipline referrals would increase slightly. However, a Spearman's Rank Order indicated that the relationship between the two variables was not statistically significant. Therefore, the researcher failed to reject the null hypothesis based on the results of the Spearman's Rank Order.

A positive linear relationship between the variables was in contrast to what the researcher hypothesized. Teachers with greater self-efficacy in instructional strategies are more likely to use innovative teaching practices (Shoulders & Krei, 2015). Research has shown that students exhibit fewer off task behaviors and fewer disruptive behaviors when lessons are well planned with effective instructional strategies (Martin, Sass, & Schmitt, 2012). At first, this appears to support the researcher's hypothesis. However, there is an additional layer to instructional strategies that may have played a role. Research has also shown that lower performing students struggle to connect previously learned content (schema) to new concepts when complex examples are utilized (Clarke, Doabler, Nelson, & Shanley, 2015). Teacher self-efficacy influences the type of instructional strategies that a teacher chooses to implement, meaning teachers with higher self-efficacy in their instructional strategies are more likely to experiment with new instructional strategies before determining if they are effective strategies or perhaps before they are properly prepared to use those new instructional strategies (Rubie-Davies, Flint, & McDonald, 2012). It is plausible that teachers with higher instructional strategies self-efficacy used more complex instructional strategies that caused greater confusion for struggling students thereby increasing disruptive behavior due to student frustration.

The researcher failed to reject any of the four null hypotheses. This is possible for several reasons. First, it is possible that teacher self-efficacy is not directly related to office

discipline referrals and that there is something else in the belief system of teachers that determines if they write an office discipline referral (Atiles, Gresham, & Washburn, 2017). Second, teacher bias on student behavior could be a factor. Research suggests that different teachers view behavior differently and that some have a higher tolerance for student misbehavior than others (Clonan, McDougal, Clark, & Davison, 2007). Third, teachers may be less likely to write office discipline referrals if they believe that their school administrators will negatively judge them (Kern & Manz, 2004).

Students with disabilities, low income, and minority students are more likely to receive office discipline referrals (Anyon et al., 2017; Martinez et al., 2015; Morris & Perry, 2017). Minority students are much more likely to be suspended than their non-minority classmates (Noltemeyer et al., 2015). In fact, African American girls are three times more likely to receive an office discipline referral than their white counterparts. This disparity has been attributed to race and gender interpretations meaning that school officials perceive the same behaviors, especially disruptive or disobedient behavior, as more severe in African American girls than when commensurate behaviors are performed by their white female peers (Morris & Perry, 2017). The abnormal distribution of office discipline referrals could be due to the demographics of the class, not the self-efficacy of the teacher. A teacher with a higher number of the subgroups mentioned above may have a higher number of office discipline referrals despite his or her positive self-efficacy.

Implications

Previous research has determined that students who receive more office discipline referrals are less likely to graduate high school (Okilwa & Robert, 2017) and are therefore much less likely to earn the same level of income as high school graduates (Abdullah, Doucouliagos, &

Manning, 2015). Therefore, the purpose of this study was to determine if there is a relationship between teacher self-efficacy and office discipline referrals. If such a relationship exists, then the number of office discipline referrals could be lowered by implementing strategies to improve teacher self-efficacy.

The research questions in this study examined if a statistically significant relationship existed between the criterion variable of number of office discipline referrals and the predictor variables of overall teacher self-efficacy, classroom management teacher self-efficacy, student engagement teacher self-efficacy, and instructional strategies teacher self-efficacy. This study sought to determine if a relationship existed between teacher self-efficacy and office discipline referrals in an effort to discover ways to reduce the disproportionate number of office discipline referrals in order to decrease student retention and increase on time graduation rates.

Tschannen-Moran and Hoy (2001) found that measuring teacher self-efficacy has been difficult. This dissertation has built upon the foundation of Bandura's Social Cognitive Theory (1977) and the extensive research in the area of teacher self-efficacy by Woolfolk Hoy and Tschannen-Moran (2001).

The study did suggest there were linear relationships that indicate there is some relationship, albeit weak, between office discipline referrals and the four predictor variables. However, none of the correlations run for any of the hypotheses proved to be statistically significant. Therefore, the researcher failed to reject all the null hypotheses based on the results of Spearman's Rank Order.

The results of this research failed to determine any strong relationships between office discipline referrals and teacher self-efficacy. Moreover, the results of this study failed to support the concept that teacher self-efficacy levels relate to how many office discipline referrals a

teacher writes. The results of this study were not robust enough to provide any method for identifying which teachers may write disproportionate numbers of office discipline referrals. Research has shown that positive teacher self-efficacy is negatively correlated to teacher burnout and teachers leaving the profession (Skaalvik & Skaalvik, 2017; Wang et al., 2015; Yu, Wang, Zhai, Dai, & Yang, 2014). Therefore, if school districts are seeking to increase teacher retention and reduce burnout, concentrating on teacher self-efficacy could prove beneficial. However, the results of this study suggest that administrators and school district personnel that are seeking to reduce the disproportionate number of office discipline referrals would not likely receive a substantial return on investment if solely focusing professional development opportunities on improving teacher self-efficacy.

Classroom management teacher self-efficacy showed the strongest relationship to office discipline referral out of the four predictor variables. Teacher classroom management self-efficacy can be predicted by personality traits such as extroversion and openness to new experiences more accurately than years of teaching experience (Bullock et al., 2015). It could be beneficial for school districts to include personality tests as part of the hiring process for teachers similar to procedures in the corporate world. This could allow employers to predict who will have the highest levels of self-efficacy. The level of self-efficacy could subsequently predict the actual teacher efficacy and therefore who is more likely to write a disproportionate number of office discipline referrals (Jamil et al., 2012; Mojavezi & Tamiz, 2012). As has been discussed previously, the number of office discipline referrals a student receives is negatively correlated to graduation rate (Martinez et al., 2016). Teacher candidate screening via personality tests could not only help predict teachers that are more likely to stay in the profession and not burn out, but also potentially the teachers that

will submit less office discipline referrals thereby increasing the likelihood of their students to graduate on time.

The negative direction of the relationship—office discipline referrals go down when overall teacher self-efficacy, classroom management teacher self-efficacy, and student engagement teacher self-efficacy go up—is telling. It behooves teachers and school administration to find ways to increase teacher self-efficacy in these areas through professional development and other strategies in an effort to reduce office discipline referrals with the goal of lowering student retention and increasing graduation rates (Ethiane, 2014). Teachers that do not believe they can manage disruptive behaviors are more likely to write office discipline referrals (Smolkowski et al., 2016). How teachers view their students and their students' behavior is directly related to how teachers view themselves and their personal sense of efficacy (Miller et al., 2017).

It is vital that teachers continue to use innovation in the classroom only after they have developed a certain level of mastery with that innovation prior to implementation inside the classroom. Instructional strategies teacher self-efficacy had the strongest relationship to office discipline referral. In addition, the linear relationship was positive. This was unanticipated. This implication supports previous research that students may become more disruptive if they are confused by the instructional strategies a teacher selects (Clarke et al., 2015). Using innovative instructional strategies does not always mean effective instructional strategies. Administrators and district office personnel must take care in creating professional development opportunities for teachers that provide them with methodologies and modalities that can be easily and readily applied. In addition, teachers must take care to not use instructional strategies before they have become adequately knowledgeable about and skilled in their usage.

The next implication of this study is that office discipline referrals can be subjective and human nature, motivation, and perception are complex (Pas, Bradshaw, & Mitchell, 2011). Teachers may write more office discipline referrals because of their attitudes towards certain gender, racial, or other subgroups (Anyon, et al., 2017; Martinez et al., 2015; Morris & Perry, 2017). This suggests that training on cultural awareness and examining personal bias may be more effective in decreasing office discipline referrals than a focus on teacher self-efficacy.

The final implication was manifest in the mode of 0 for office discipline referrals. From very low teacher self-efficacy up to very high reported levels of teacher self-efficacy, there was a wide range of teachers that did not write any office discipline referrals during the first semester of the 2018-2019 school year. This suggests that a factor other than teacher self-efficacy might be more significant. Kern and Manz (2004) conducted research that indicated teachers may be reluctant to write office discipline referrals for three reasons: (a) when school administrators perceive the use of discipline referrals as an indicator of poor teaching; (b) if administrators rely on the discipline referral data to determine the success of discipline plans; (c) and if lower discipline referral data are emphasized for reporting purposes. Therefore, teacher attitudes towards office discipline referrals may be more significant than teacher self-efficacy in reducing the number of office discipline referrals.

Limitations

There are several limitations that are inherent to this study. The participants in this study stem from a convenience sample from a restricted population. A convenience sample was necessary in order to provide the researcher with access to both student and teacher data. Convenience samples can be predisposed to bias which could impede an error-free assessment of the participants' true self-efficacy (Gall et al., 2007).

A non-experimental design was selected for this study due to the limitations of the researcher. Simple correlational studies, such as this study, cannot establish a causal relationship between variables (Gall et al., 2007). An experimental design could have provided a more robust analysis of teacher self-efficacy than this study's correlational analysis.

An additional variable that could have skewed the results is teacher experience level. The teachers in this study ranged from only one year of teaching experience to 40 years with a mean of 15.31 years of teaching experience. The standard deviation, 8.53, for the number of years of teaching experience was the data point with the largest standard deviation in the entire study. This could account for the non-normal distribution of the criterion variable, number of office discipline referrals. A more homogenous group may have produced more normally distributed data that could have contributed to a more robust study.

A limitation of this study may have been the source that produced the archival data for the criterion variable, number of office discipline referrals. This archival data was obtained from the online school-wide management system that the site school district uses. When administrators enter data into this system, there is a section in which they can include the reporter of the office discipline referral. This is where the name of the teacher that wrote the referral should go. The name of the reporter has to be manually entered. This means that there could be office discipline referrals that were submitted by participants of this study that were not recorded because the administrator that entered the office discipline referral did not include the reporter's name. The reporter's name is not a required field in order to finalize an office discipline referral in the school-wide management system from which the data for this study originated. It is very possible that data points were thereby excluded. These data points could have altered the results of this study.

Finally, sample size could have been a factor in this study. The study had enough participants ($N > 66$) to achieve a medium effect size (Gall et al., 2007). Eighty-two teachers agreed to participate in the study. Two of those participants did not answer all questions in the TSES Short Form. Next, eight participants' data was removed because they were extreme outliers. This left a sample size of 72 ($N = 72$). The mode for the criterion variable, number of office discipline referrals, was 0. If more participants were included, the researcher may have been able to remove all data for participants that did not write any office discipline referrals and then analyze the remaining data. This may have produced more normally distributed data and therefore better chances of a statistically significant relationship (Warner, 2013).

Recommendations for Future Research

Upon review of the results of this study, there are six recommendations that could be utilized in order to improve this research. First, a larger sample size may have produced more normally distributed data for the criterion variable, number of office discipline referrals. The second recommendation would be dependent upon the first recommendation being implemented. In this study, the mode for the criterion variable was 0. A larger sample size would allow a researcher to remove the data for all participants that did not write any office discipline referrals. As mentioned previously, a mode of 0 skewed the data for the criterion variable.

The third recommendation is to control for demographic factors. Variables such as gender, ethnicity, and years of teaching experience might have influenced the variables assessed. The fourth recommendation is to perform a more rigorous analysis such as a bivariate regression to look for a predictive relationship between the predictor variables and the criterion variables in lieu of the correlational design that this study used. Correlational studies assess the direction and strength of the relationship or association between variables. Predictive studies attempt to

predict the criterion variable through its relationship with the predictor variable or variables (Warner, 2013).

The final two recommendations are offered because no significant relationship was discovered in this study. They are also being provided because it is difficult to quantify human behavior. A mixed methods study that includes both quantitative and qualitative measures might be able to better evaluate the relationship between teacher self-efficacy and office discipline referrals. The final recommendation is to conduct future research into the relationship between the attitudes/opinions that teachers have regarding office discipline referrals and the number of referrals that they write. Human behavior is difficult to quantify. This study has left the researcher pondering if something other than teacher self-efficacy, such as how teachers view office discipline referrals, has a significant relationship with how many referrals teachers write.

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APPENDICES

Appendix A



William & Mary School of Education

MEGAN TSCHANNEN-MORAN, PhD
PROFESSOR OF EDUCATIONAL LEADERSHIP

November 25, 2018

Brian,

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.

All the best,

Megan Tschannen-Moran
William & Mary School of Education



William & Mary School of Education

MEGAN TSCHANNEN-MORAN, PhD
PROFESSOR OF EDUCATIONAL LEADERSHIP

April 11, 2019

Brian,

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 may submit it for publication in the Liberty University open-access institutional repository, the Scholars Crossing, and in the Proquest Thesis and Dissertation subscription research database.

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.

All the best,

Megan Tschannen-Moran
William & Mary School of Education

Appendix B



Frances Furlong <fcfurlong@email.wm.edu>

Sun 11/25/2018 10:15 AM

Conary, Brian; fcfurlong@email.wm.edu



2 attachments (814 KB) Download all Save all to OneDrive - Liberty University

Brian,

I have attached a letter of permission from Dr. Tschannen-Moran, as well as directions for accessing the materials on her password-protected website. Please let me know if you have any further questions.

Regards,

Frances

Frances C. Furlong
PhD Student
William & Mary
School of Education

Appendix C

LIBERTY UNIVERSITY
INSTITUTIONAL REVIEW BOARD

February 5, 2019

Brian Conary

IRB Approval 3602.020519: The Relationship Between Teacher Self-Efficacy and the Quantity of Office Discipline Referrals They Write

Dear Brian Conary,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Your study falls under the expedited review category (45 CFR 46.110), which is applicable to specific, minimal risk studies and minor changes to approved studies for the following reason(s):

5. Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis). (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(b)(4). This listing refers only to research that is not exempt.)

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(b)(2) and (b)(3). This listing refers only to research that is not exempt.)

Thank you for your cooperation with the IRB, and we wish you well with your research project.
Sincerely,

G. Michele Baker, MA, CIP

Administrative Chair of Institutional Research

Research Ethics Office

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Appendix D

CONSENT FORM

Brian P. Conary
Liberty University
School of Education

You are invited to be in a research study on teacher self-efficacy. The study will explore the relationship between teacher self-efficacy and the number of office discipline referrals that a teacher writes. You were selected as a possible participant because you are at least 18 years old, possess a bachelor degree or higher, and are currently employed as a full-time high school teacher with Horry County Schools. Please read this form and ask any questions you may have before agreeing to be in the study.

Brian Conary, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to explore the relationship between teacher self-efficacy, how a teacher views himself or herself, and the number of discipline referrals that he or she writes.

Procedures: If you agree to be in this study, I would ask you to do the following:

1. Complete the 12 question Teacher Sense of Efficacy (TSES) short form. It is estimated that this will take approximately 5-6 minutes to complete.
2. Allow the researcher to access the number of discipline referrals you have submitted during the first semester of the 2018-2019 school year.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include furthering the volume of research in both teacher self-efficacy and office discipline referrals.

Compensation: Not all participants will be compensated for participating in this study. However, all participants that fully complete the TSES will be entered into a drawing for the chance to win one of twenty \$10 gift cards. Your name will be requested for compensation purposes; however, they will be pulled and separated from your responses by an independent third party to maintain anonymity.

Confidentiality: The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records

- Participant names and their schools will be replaced with pseudonyms by a third party. No personally identifiable information will be published or stored. Records will be kept for three years per IRB policy and then destroyed.
- Data will be stored on a password locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or Horry County Schools. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Contacts and Questions: The researcher conducting this study is Brian Conary. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at bconary@liberty.edu. You may also contact the researcher's faculty chair, Dr. Jessica Talada, at javanderpool@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature of Participant

Date

Signature of Investigator

Date

Appendix E

Teacher Beliefs		This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for teachers. Your answers are confidential.								
<i>Directions:</i> Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum.										
Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position.										
		None at all	Very Little			Some Degree	Quite A Bit		A Great Deal	
1.	How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2.	How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3.	How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4.	How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5.	To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6.	How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7.	How much can you do to get students to believe they can do well in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8.	How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9.	To what extent can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10.	To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11.	How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12.	How well can you implement alternative teaching strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Appendix F

Directions for Scoring the Teachers' Sense of Efficacy Scale¹

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Construct Validity

For information the construct validity of the Teachers' Sense of Teacher efficacy Scale, see:

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

Factor Analysis

As we have used factor analysis to test this instrument, we have consistently found three moderately correlated factors: *Efficacy in Student Engagement*, *Efficacy in Instructional Practices*, and *Efficacy in Classroom Management*. At times, however, the make up of the scales may vary slightly. With preservice teachers we recommend that the full scale (either 24-item or 12-item short form) be used, because the factor structure often is less distinct for these respondents.

Subscale Scores

To determine the *Efficacy in Student Engagement*, *Efficacy in Instructional Practices*, and *Efficacy in Classroom Management* subscale scores, we compute unweighted means of the items that load on each factor. Generally these groupings are:

Short Form

<i>Efficacy in Student Engagement:</i>	Items 2, 4, 7, 11
<i>Efficacy in Instructional Strategies:</i>	Items 5, 9, 10, 12
<i>Efficacy in Classroom Management:</i>	Items 1, 3, 6, 8

Long Form

<i>Efficacy in Student Engagement:</i>	Items 1, 2, 4, 6, 9, 12, 14, 22
<i>Efficacy in Instructional Strategies:</i>	Items 7, 10, 11, 17, 18, 20, 23, 24
<i>Efficacy in Classroom Management:</i>	Items 3, 5, 8, 13, 15, 16, 19, 21