

THE RELATIONSHIP BETWEEN SECONDARY TEACHERS' GRIT AND SELF-
EFFICACY BELIEFS ON CLASSROOM MANAGEMENT AND STUDENT ENGAGEMENT

by

Laurie White Lee

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

Liberty University

2020

THE RELATIONSHIP BETWEEN SECONDARY TEACHERS' GRIT AND SELF-EFFICACY BELIEFS ON CLASSROOM MANAGEMENT AND STUDENT ENGAGEMENT

by Laurie White Lee

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

Liberty University, Lynchburg, VA

2020

APPROVED BY:

David Gorman, Ed.D., Committee Chair

Scott B. Watson, Ph.D., Committee Member

ABSTRACT

Teaching as a profession is becoming more and more difficult. School districts are facing a teacher shortage, creating greater focus on recruitment and retention efforts. The majority of these efforts focus on novice teachers (within the first five years) providing support and assistance to help keep them in the classroom. Less effort is placed upon assisting the veteran teacher in maintaining effort in the classroom and avoiding burnout. Those who experience burnout or become disheartened show a reduction in effort negatively impacting student achievement. The purpose of this correlational study was to explore the relationship between teacher passion and perseverance (grit) and teacher sense of self-efficacy in classroom management and student engagement among high school teachers. This study was grounded in Bandura's self-efficacy theory, Deci and Ryan's self-determination theory, and Duckworth's grit theory. The participants included 92 teachers drawn from a convenience sample across the four high schools in a large district in central South Carolina. Data collected from the Grit-S Scale and Teacher Self-Efficacy Scale was analyzed utilizing a product-moment correlation coefficient (Pearson's r) to answer the questions of the relationship between grit and self-efficacy in classroom management and student engagement. This study increased the body of knowledge in the research of these constructs among veteran teachers.

Keywords: Grit, teacher self-efficacy, classroom management, student achievement, student engagement, teacher retention, teacher recruitment, burnout

Dedication

This dissertation is dedicated to –

My amazing husband, Tim, who exemplifies 1 John 4:18. Thank you for your perfect love!

My children, Mason and Faith – may you always remember you can accomplish great things when you never give up. I pray I have been a Godly example.

My son and his family, Bryant, Angela, and Lincoln who covered me with prayer often.

My Lord and Savior, Jesus Christ, for saving my soul and walking with me daily.

Without His hand on my life, all is for naught.

Acknowledgements

I would be remiss if I did not begin this project in the same way I began my program at Liberty University. That is by thanking Jesus Christ for his love, guidance, wisdom, peace, and blessings on my life. Jeremiah 29:11 states, “For I know the plans I have for you,” declares the Lord, “plans to prosper you and not to harm you, plans to give you hope and a future” (NIV). I am so very grateful that His plans for me included pursuing my doctoral degree at Liberty University. I am forever grateful for the lessons I have learned through this process and those I will continue to learn as I go out to make champions for Christ through my practice.

I am grateful for the guidance and support I received from all of my professors in my program. I am especially grateful for Dr. Watson’s instruction, guidance, and leading through the EDUC 919 intensive to ensure I had a solid framework for my study. I am also grateful for his willingness to sit on my committee and continue to help me through the process.

I am grateful for Dr. Gorman and his willingness to take on the position of my chair. It has been amazing to know my chair has prayed for me as I walked through difficult points and celebrated the successes. The time he has taken to ensure I have developed a dissertation I can be proud of is immeasurable.

I thank my family for their love and support. Without my husband, Tim, pressing me, I would not have begun this process. I am so grateful he pressed! Our children have given support and understanding throughout this entire journey. My family has sacrificed so much in allowing me the time I have needed to run this marathon and finish.

Finally, I must thank my fellow teachers, colleagues, and administrators for being my cheerleaders when needed, listening when I needed to vent, and keeping me in check with my

progress. It is the relationships with my fellow teachers that sparked my research topic.

Teaching is a tough profession, and we can all use an extra dose of grit.

Table of Contents

ABSTRACT.....	3
Dedication.....	4
Acknowledgements.....	5
List of Tables	11
List of Figures	12
List of Abbreviations	13
CHAPTER ONE: INTRODUCTION.....	14
Overview.....	14
Background.....	14
Historical.....	15
Social.....	17
Problem Statement.....	18
Purpose Statement.....	19
Significance of the Study	20
Research Questions.....	21
Definitions.....	21
CHAPTER TWO: LITERATURE REVIEW	23
Overview.....	23
Theoretical Framework.....	23
Self-determination Theory	24
Self-efficacy Theory	26

Grit Theory.....	28
Related Literature.....	32
Student Self-Efficacy	32
Teacher Self-Efficacy	34
Emotional Intelligence	37
Collective Teacher Efficacy.....	38
Classroom Management.....	40
Teacher Burnout.....	43
Grit	44
Mindset	48
Teacher Retention	49
Professional Development	51
Summary	53
CHAPTER THREE: METHODS.....	56
Overview.....	56
Design	56
Research Questions.....	56
Hypotheses.....	57
Participants and Setting.....	57
Instrumentation	59
Demographic Survey	60
The Grit Scale	60
Teacher Self-Efficacy Scale.....	61

Procedures.....	62
Data Analysis	64
Summary.....	64
CHAPTER FOUR: FINDINGS.....	65
Overview.....	65
Research Questions.....	65
Null Hypotheses.....	65
Descriptive Statistics.....	66
Results.....	67
Data Screening.....	69
Normality	72
Linearity	74
Null Hypotheses One	76
Null Hypothesis Two	76
Summary	78
CHAPTER FIVE: CONCLUSIONS	79
Overview.....	79
Discussion.....	79
Null Hypothesis One.....	80
Null Hypothesis Two	81
Implications.....	82
Limitations	84
Recommendations for Future Research.....	86

References.....	87
APPENDIX A: Short Grit Scale.....	103
APPENDIX B: Permission to Use the TSES.....	104
APPENDIX C: Permission Letter for TSES.....	105
APPENDIX D: Permission to Publish TSES.....	106
APPENDIX E: Teacher Sense of Self-Efficacy Scale.....	1097
APPENDIX F: Scoring Directions for the TSES	110
APPENDIX G: IRB Approval.....	111
APPENDIX H: Permission to Survey District.....	112
APPENDIX I: Recruitment Email.....	113
APPENDIX J: Participant Consent.....	113

List of Tables

Table 1. Descriptive Statistics for the Variables of Grit and Self-Efficacy	67
Table 2. Participant Demographics.....	68
Table 3. Kolmogorov-Smirnov Test of Normality	74
Table 4. Pearson’s Correlations between Grit and Self-efficacy in Student Engagement and Self- efficacy in Classroom Management	77
Table 5. Spearman’s rho Correlations between Grit and Self-efficacy in Classroom Management and Self-efficacy in Student Engagement	78

List of Figures

Figure 1. Boxplot Graph for Grit Score	69
Figure 2. Boxplot Graph for Self-efficacy in Classroom Management	70
Figure 3. Boxplot Graph for Self-efficacy in Student Engagement.....	70
Figure 4. Assumption of Bivariate Outliers for the Relationship between Grit Score (x) and Efficacy in Student Engagement (y)	71
Figure 5. Assumption of Bivariate Outliers for the Relationship between Grit Score (x) and Efficacy in Classroom Management (y)	71
Figure 6. Histogram of Grit Scores.....	72
Figure 7. Histogram of Efficacy on Classroom Management	73
Figure 8. Histogram of Efficacy in Student Engagement	73
Figure 9. Scatterplot with the Line of Fit for Grit Score (x) and Efficacy in Classroom Management (y)	75
Figure 10. Scatterplot with the Line of Fit for Grit Score (x) and Efficacy in Student Engagement (y)	75

List of Abbreviations

Collective Teacher Efficacy (CTE)
Emotional Intelligence (EI)
Perceived Locus of Control (PLOC)
Project Based Learning (PBL)
Self-determination Theory (SDT)
Short Grit Scale (Git-S)
Social-emotional Learning (SEL)
Teacher Self-efficacy (TSE)
Teacher Self-efficacy Scale (TSES)

CHAPTER ONE: INTRODUCTION

Overview

In the fall of 2018, 3.2 million teachers entered their classrooms ready to accept the tremendous responsibility of preparing the nation's children for their futures (National Commission of Education Statistics, 2018). It is estimated that 20% (one in five) of those will leave the profession before retirement age (Wang, Hall, & Rahimi, 2015). In the state of South Carolina, 7,339.32 teachers left their positions and are no longer employed in the public-school system as of the end of the 2018-2019 school year (Garrett, 2019). When aggregating out the number of retirees, 48% of those leaving were new teachers with five or fewer years' experience. This means 52% of teachers who left the profession were veteran, non-retirement age teachers (Garrett, 2019). Thirteen percent reported leaving due to job dissatisfaction, lack of support, or other non-reported reasons (Garrett, 2019). The teachers' intentions for leaving may be related to both cognitive and non-cognitive factors. Teachers with a stronger sense of self-efficacy and those with more grit are more likely to have a higher sense of job satisfaction, decreased stress levels, increased impact on student achievement, and are more likely to stay in the classroom long term (Herman, Hickmon-Rosa, & Reinke, 2018; Robertson-Kraft & Duckworth, 2014). This study investigated the relationship of grit to teacher sense of self-efficacy in classroom management and student achievement among high school teachers in central South Carolina. This chapter provides the background for this study through a historical, theoretical, and social overview. Also presented is the problem statement, purpose and significance of the study, and the guiding research questions.

Background

Teacher recruitment and retention are growing concerns for the education system nationally with a reported three out five teachers leaving the profession within the first five years (Wang et al., 2015). Policymakers at all levels have responded to the perceived teacher shortage through the development of programs and initiatives aimed at attracting quality educators. These initiatives include, but are not limited to, loan repayment programs, alternative certification programs, and teacher sign-on bonuses (Podolsky, Kini, Bishop, & Darling-Hammond, 2016). Researchers found that the teacher turnover rate is higher than that of any other profession with more teachers choosing to leave voluntarily for other careers or to retire early (Glazer, 2018; Young, 2018). Research shows that teacher attrition rates are related to an increase in stress, a decrease in self-efficacy, and an increase in burnout, which ultimately has a negative effect on student achievement (Herman et al., 2018; Troesch & Bauer, 2017). Teachers who maintain a higher level of passion and an ability to persevere through the stress and emotional exhaustion hallmark to this career will be more likely to remain in the classroom providing quality instruction for the long term. Their passion and ability to persevere are the integral components of grit (Duckworth, 2016).

Historical

Individuals make many decisions, whether large or small, throughout the course of a day. Many of these decisions and subsequent reactions are rooted in one's perception of belonging, support, and acceptance. One's perceptions of belonging, support, and acceptance are often rooted in one's personal needs. These personal needs make up the base of Maslow's hierarchy of needs. Maslow (1943) researched a person's potential and believed in the ability an individual has to reach that potential. Over time, Maslow provided clarification of his hierarchy, separating it into deficiency needs (psychological, safety, love/belonging, and esteem) and growth needs

(self-actualization level). Maslow believed that growth comes out of one's personal desire for growth and that the motivation to grow increases as one's self-actualization needs are met (McLeod, 2018). Related to this self-actualization is Bandura's (1977, 1993) self-efficacy theory. Bandura theorized one's sense of self-efficacy is the most predictive factor in determining behavior (Zee & Koomen, 2016). Self-efficacy is defined as the "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 159). Self-efficacy has its root in the concept of agency: the extent to which one has control over the actions affecting one's life (Zee & Koomen, 2016). Historically, teachers have had little control over the major decisions that determine the set of expectations under which they are to operate.

The No Child Left Behind Act of 2001 (2002) imposed new testing and teaching standards and created a more stringent teacher evaluation process. While having little input in the development of this policy, teachers felt the full effects of it. A new administration implemented the new policy, Every Student Succeeds Act (2015), again changing the expectations for teachers and raising the bar to ensure student success. State and local initiatives such as the Read to Succeed Act (2014) added additional coursework requirements to the growing daily expectations placed upon teachers including following pacing guides, teaching grade level standards, implementing classroom management, and attending school and district mandated meetings. These expectations increase the stress levels of teachers as they work to meet the higher demands. This, in turn, has a negative effect on a teacher's sense of self-efficacy in maintaining a productive instructional environment that meets the needs of all students (Herman et al., 2018; Zee & Koomen, 2016).

The related construct of grit emerged from research conducted by Duckworth (2016). Grit is the passion and perseverance one has to work hard and continue on through difficult tasks in pursuit of a goal (Duckworth, 2016; Duckworth & Gross, 2014; Duckworth, Peterson, Matthews, & Kelly, 2007; Ivcevic & Brackett, 2014; Robertson-Kraft & Duckworth, 2014). Grit is related to conscientiousness and self-control (Ivcevic & Brackett, 2014), with those who exhibit high levels of grit demonstrating the persistence to accomplish seemingly impossible tasks. Individuals with higher levels of grit often are more successful in other areas of their lives as well (Dale, Sampers, Loo, & Green, 2018). Dweck (2006) developed the construct of grit while investigating growth mindset. Dweck (2006) introduced the concept of a fixed mindset versus a growth mindset. Those with a growth mindset believe they can and do learn new things (Heggert, 2015). According to Hochanadel and Finamore (2015), grit can be developed or increased through a growth mindset.

Social

Within a classroom setting, grit and self-efficacy affect the instructional level and subsequently student achievement. Teachers who believe they have the ability to manage the daily behaviors, address the diverse needs, and develop relationships with their students have a positive effect on student success (Aloe, Amo, & Shanahan, 2014; Troesch & Bauer, 2017; Zee & Koomen, 2016). Recent studies have focused on the pre-service teachers and their abilities to meet these needs within the first few years in the classroom (Laughter, 2017; Riddle, 2018). These studies have pointed to the need for improvements to be made in teacher preparation programs to allow for effective instructional strategies in classroom management and relationship building (Martins, Costa, & Onofre, 2015; Riddle, 2018). Other studies have pointed to the importance of effective classroom management as an indicator of student

achievement (Aloe et al., 2014; Furrer, Skinner, & Pitzer, 2014). Research is limited on the relationship of teacher grit as it relates to a teacher's self-efficacy and student achievement (Dobbins, 2016; Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016; Martins et al., 2015; Riddle, 2018).

Teacher burnout among veteran teachers is a concept that is affected by high levels of daily stress, increased negative student behaviors, a decrease in administrative support, and an increase in required job functions (Aloe et al., 2014; Glazer, 2018; Troesch & Bauer, 2017). Teachers with a higher grit score are better able to manage these stresses and remain in the classroom. Teachers with a lower grit score are more likely to leave the profession prior to retirement, thereby increasing the teacher attrition rate (Dale et al., 2018; Robertson-Kraft & Duckworth, 2014).

Problem Statement

Teachers are faced with increasing expectations such as adjusting to the changing student population, dealing with an increase in negative student behaviors and increasing parental concerns. Teachers must have belief in their ability to navigate the growing expectations while positively affecting their students. Teacher preparation programs are unable to fully prepare new teachers for the challenges they will face in their classroom (Goldhaber & Cowan, 2014; Martins et al., 2015; Riddle, 2018). Novice teachers find themselves disheartened and dissatisfied with their career choice (Daniels, Radil, & Goegan, 2017; Robertson-Kraft & Duckworth, 2014). Conversely, veteran teachers find themselves facing burnout and increased stress, which affects their abilities to effectively teach their students (Skaalvik & Skaalvik, 2010). These factors lead to an increased attrition rate with novice teachers leaving the profession within the first five

years of employment and veteran teachers leaving before retirement, creating a u-shaped curve (Riddle, 2018; Wang et al., 2015).

Current research addressed teacher recruitment and retention regarding the novice or pre-service teacher (Dobbins, 2016; Glazer, 2018; Riddle, 2018). Many studies addressed the need for providing mentoring or support initiatives for teachers in the first three to five years of their teaching careers (Able et al., 2018; Berry & Shields, 2019; Dag & Sari, 2017; Whalen, Majocha, & van Nuland, 2019). Therefore, there is limited research addressing the needs or challenges veteran teachers face and the passion and perseverance needed to continue on in the profession despite these challenges (Cruz & Herzog, 2018). Veteran teachers face new, challenging classroom management concerns, and many lack the training to address these concerns or guidance for effective strategies to address them.

Purpose Statement

The purpose of this correlational study was to explore the relationship between teacher grit (as measured by their levels of grit and perseverance) and teacher self-efficacy in the areas of classroom management and student engagement. This study's participants were teachers from four high schools within a large school district in the central part of a southeastern state. The participants completed the Teacher Sense of Self-Efficacy Scale measuring the dependent variables of self-efficacy of classroom management as well as self-efficacy of student achievement. The same teachers completed the Grit-S scale measuring the independent variable of grit. Grit is defined as "perseverance and passion for long term goals" (Duckworth et al., 2007, p. 1087). It is the stamina one has to continue to focus, work, and move forward toward life goals in the midst of difficulty. Self-efficacy is the belief individuals have in their ability to continue forward and make a difference in a particular area (Bandura, 1993; Pfitzner-Eden,

2016). A teacher who demonstrates self-efficacy in classroom management believes he or she has knowledge, support, and ability to address student behavior while maintaining a positive and productive classroom. Teachers demonstrate self-efficacy in student achievement when they believe they are capable of providing the instruction, environment, and opportunities for students to grow and exhibit measurable gains (Schipper, Goei, de Vries, & van Keen, 2018; Zee & Koomen, 2016).

Significance of the Study

Teacher attrition adds an increased financial burden on schools and school districts and decreases student success (Clandinin, et al., 2015; Goldhaber & Cowan, 2014). With more teachers leaving the profession than any other profession (Glazer, 2018; Ingersoll & Smith, 2003; Young, 2018), it is imperative for school-level administration to begin addressing teacher attrition. One way to do this is to gain an understanding of which teachers are leaving and why. With this understanding, school-level administration can effectively begin to address teacher concerns and provide the needed support to increase the likelihood teachers will remain in the classroom (Donohoo, Hattie, & Eells, 2018; Hoerr, 2017; Young, 2018). This support includes assisting new and veteran teachers in developing and maintaining effective classroom management strategies, assisting in understanding differentiation, and assisting in promoting student engagement (Herman et al., 2018; Schipper et al., 2018; Zhu et al., 2018).

A growing body of research exists that addressed the need for improving teacher preparation programs and addressing grit among novice teachers (Goldhaber & Cowen, 2014; Riddle, 2018; Robertson-Kraft & Duckworth, 2014). Self-efficacy among teachers and classroom management in relation to student achievement is also well researched and addressed. Research that examined grit among veteran teachers is scant. Grit may be as effective at

predicting longevity among veteran teachers as it is at predicting longevity among novice teachers (Duckworth, 2016). This study increased the body of knowledge regarding the relationship between grit and self-efficacy among veteran high school teachers.

Research Questions

This study sought to answer the following research questions:

RQ1: Is there a relationship between high school teachers' level of grit and their self-efficacy in classroom management?

RQ2: Is there a relationship between high school teachers' level of grit and self-efficacy in student engagement?

Definitions

1. *Attrition* - Attrition is the loss of teachers due to leaving the profession or early retirement (Glazer, 2018).
2. *Burnout* - Burnout is the accumulated, chronic, negative feelings and outlooks about teaching, school, or the education system marked by a decrease in job satisfaction, self-concept, and student achievement (Aloe et al., 2014; Herman et al., 2018).
3. *Classroom management* - Classroom management is the ability to provide a positive and safe learning environment through a decrease in student discipline and an increase in student learning and achievement (Aloe et al., 2014; Pas, Cash, O'Brennan, Debnam, & Bradshaw, 2015).
4. *Collective efficacy* - Collective efficacy is the shared belief of a group or a team that they can effect change and increase student achievement (Donohoo et al., 2018).
5. *Emotional intelligence* - Emotional intelligence is the ability one has to understand and regulate one's emotions (Wu et al., 2019)

6. *Grit* - Grit is the stamina one has for sticking with long-term, life goals despite difficulties, failures, or adversities and the passion and perseverance for staying the course (Duckworth, 2016; Duckworth et al., 2007; Duckworth & Gross, 2014; Robertson-Kraft & Duckworth, 2014).
7. *Mindset* - Mindset is a personal belief in one's ability to learn and grow and determine if he or she will stay in the status quo or move forward (Cruz & Herzog, 2018; Dweck, 2006).
8. *Passion* - Passion is the sustained devotion toward something which drives one's goals and direction (Duckworth, 2016).
9. *Perseverance* - Perseverance is the ability to stick to a goal or task despite difficulty (Duckworth, 2016).
10. *Professional development* - Professional development is learning opportunities teachers take part in to increase their knowledge and methodology and remain current on effective teaching strategies and techniques (Alibakshi & Dehvari, 2015).
11. *Retention* - Retention is the rate of teachers staying in their classroom affected by self-efficacy, burnout, stress, and feelings of support (Clandinin et al., 2015; Wang et al., 2015).
12. *Self-determination theory* - Self-determination theory is the motivation one has to make decisions and take action (Deci & Ryan, 1985; Koole, Schlinkert, Maldei, & Baumann, 2019)
13. *Self-efficacy* - Self-efficacy is the belief one has in his or her ability and skill to take on a task and master it. Self-efficacy influences thoughts, feelings, motivation and behaviors (Bandura, 1993; Pfitzner-Eden, 2016).

CHAPTER TWO: LITERATURE REVIEW

Overview

This chapter presents the theoretical framework and related research guiding this study. This study seeks to determine if there is a relationship between teachers' traits of passion and perseverance (grit) and their sense of self-efficacy regarding classroom management and student engagement. Related research of student behavior, academic success, and student-teacher relationships as constructs of classroom management will be presented to support the importance of such a study. The ability to address these constructs lies within the teacher and his or her personal feelings of efficacy. Gaps in the current research will be identified in the chapter summary.

Theoretical Framework

Classroom teachers have been charged with the task of educating children and preparing them to become productive members of society. With each generation, this task becomes increasingly more difficult. The many expectations laid upon the classroom teacher including changing student populations and an increase in student behaviors impact teacher beliefs in their ability to positively affect their students. Recent research has shown approximately 20% of teachers who enter the profession leave within the first three years (Clandinin et al., 2015; Wang et al., 2015). Teachers who stay face the challenge of maintaining effort and avoiding burnout. Those who experience burnout or become disheartened show a reduction in effort, therefore impacting student achievement (Duckworth et al., 2009; Robertson-Kraft & Duckworth, 2014). The development and sustainability of a teacher's perceived ability to maintain a positive and productive environment is grounded in Deci and Ryan's (1985) self-determination theory (SDT), Bandura's self-efficacy theory (Bandura, 1977), and Duckworth et al.'s (2009) grit theory.

Self-determination Theory

Self-determination theory (SDT), developed by Deci and Ryan (1985), addressed motivation and how individuals can make themselves or others take action. The SDT is concerned with a person's motivation and where that motivation is developed: from within one's own self or from an external source. In addition, SDT researchers attempt to discern if a person's motivation is the result of one's own choice or if it is derived from one being pushed against their will (Koole et al., 2017; Wehmeyer, Shogren, Toste, & Mahal, 2016). Koole et al. (2019) noted SDT is based upon an individual's freedom to choose which way he or she will go in life and who he or she will become in their future. A person's decision to think or act a certain way without outside influence is another way to define self-determination. The construct of motivation within SDT addresses why one initiates, continues, or stops a certain behavior and why certain decisions are made (Diseth & Samdal, 2014; Koole et al., 2019; Wehmeyer et al., 2016).

There are two types of motivation discussed in the research: intrinsic and extrinsic. Intrinsic motivation refers to those things one finds interesting and chooses to do for the sake of enjoyment or satisfaction (Deci & Ryan, 1985; Diseth & Samdal, 2014). Extrinsic motivation refers to an individual finding motivation from an outside influence or contingency. Intrinsic goals are synonymous with mastery goals (the desire to gain ability through learning) and extrinsic goals with performance goals (the desire to do or score well) (Diseth, 2014). Achievement is the ability to complete something successfully. Koole et al. (2019) noted that intrinsic motivation increases when one makes a choice that satisfies a need that subsequently increases one's well-being. Conversely, when one consistently makes choices based on extrinsic motivational factors, motivation and well-being decrease. Wehmeyer et al. (2012) stated,

“Research has linked student self-determination status to the attainment of more positive academic and transition outcomes, including more positive employment, recreation, and independent living outcomes and more positive quality of life and life satisfaction” (pp. 135-136). Students tend to lose motivation as they progress through their academic career. This decrease has been especially tied to the transition years when they move from elementary to middle school and from middle school to high school (Diseth & Samdal, 2014). The SDT’s concept of locus of causality is an integral part of achievement (Deci & Ryan, 1985; Koole et al., 2019).

Turban, Tan, Brown, and Sheldon (2007) presented research addressing perceived locus of causality (PLOC) as an extension of self-determination theory. In this research, “perceived locus of causality (PLOC) refers to the extent to which individuals perceive their own actions as a result of either external or internal reasons” (Turban et al., 2007, p. 2377). The PLOC states that individuals with an external motivation will act to gain an external award such as position, status, or some other reward. Individuals who act out of internal motivation seek personal pleasure or satisfaction. Researchers of PLOC assert that individuals who perform from an internal motivation find their tasks more pleasurable and will continue to engage in that task (Turban et al., 2007).

The basis of both SDT and PLOC is found in Rotter’s (1966) theory of locus of control. Rotter (1966) introduced the notion of internal versus external control of reinforcement. This refers to a person’s belief in their ability to control the events or circumstances of their lives. Individuals with an internal belief feel they can control events and outcomes while those operating externally believe they have little to no control over events and outcomes (Ahn, 2015; Akkaya & Akyol, 2016; Dumitriu, Timofti, Nechita, & Dumitriu, 2014).

Self-efficacy Theory

The concept of self-efficacy emerged from Bandura's original work in social learning theory (Miller, 2011). Within that theory, Bandura described learning as gaining knowledge cognitively through the processing of information taken in through observing others (Bandura, 1993). Social learning theory identifies three interdependent learning factors: psychological characteristics, behavior, and environment (Miller, 2011). Through his work with the social learning theory, Bandura began to see that one's sense of accomplishment and ability to continue in the face of difficult tasks played a significant role in learning, and thus Bandura developed self-efficacy theory.

Bandura (1997) defined self-efficacy as the "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 159). In essence, it is a person's beliefs in his or her ability and skill to take on and master a task. Efficacy influences a person's thoughts, feelings, motivation, and behaviors (Bandura, 1989, 1993; Pfitzner-Eden, 2016). Researchers of self-efficacy use this concept to provide an explanation as to why people avoid tasks or situations in which they do not feel they are capable of being successful. Individuals have a strong desire to feel success and are willing to put themselves in situations or take on tasks that yield the feeling of success (Bandura, 2018). Conversely, individuals' who have feelings of fear and failure create avoidance behaviors (Pfitzner-Eden, 2016; Snyder & Fisk, 2016).

Self-efficacy beliefs are developed through an individual's expectations of success or failure with a task and whether the individual met those expectations. Efficacy is developed through self-persuasion and built upon information gathered from various sources of information (Bandura, 1989). Bandura (1977, 1989, 1993) defined four sources of efficacy expectations that

affect an individual's choice of task and effort in completing that task. These four sources of information included performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal (physiological states) (Bandura, 1977, 1993; Pfitzner-Eden, 2016; Snyder & Fisk, 2016).

Performance accomplishments are developed through modeling, desensitization, exposure, and self-instructed performance (Bandura, 1977). Efficacy increases through the knowledge gained through social modeling of values, attitudes, and behavior (Bandura, 2018). Also coined mastery experiences, self-efficacy is directly related to success or failure on a given task (Bandura, 1977, 1993; Pfitzner-Eden, 2016). Participants experiencing mastery on a given task increase their expectations while those experiencing failure decrease their expectations. This decrease in expectations, in turn, decreases self-efficacy (Pfitzner-Eden, 2016). Vicarious expectations are developed through watching others succeed in a given task through live modeling or symbolic modeling (Bandura, 1977, 2018). Personal belief develops out of the thought that if others can successfully complete a difficult or threatening task, then he or she should be able to as well (Bandura, 1977). Vicarious expectations are highly social in nature and encompass many experiences. Although modeling, which takes place through vicarious experiences, is effective, this is not as strong of an indicator of increased efficacy as performance or mastery experiences.

When others provide verbal encouragement that an individual possesses the skills and abilities to succeed in a given task, this is referred to as verbal persuasion. Verbal persuasion also takes the form of self-instruction as a person pushes him or herself through positive self-talk and coaching (Bandura, 1977). Verbal persuasion is the most common form of expectation building as it is the easiest to offer, yet Bandura (1977) found this was the weakest source of self-efficacy.

This source of self-efficacy is found in classrooms, school buildings, and teacher preparation programs across the United States. Verbal persuasion has a greater effect when provided by those deemed significant, important, or credible (Pfitzner-Eden, 2016).

Emotional arousal is directly related to stress and perceived level of task difficulty. A person's ability to navigate stressful or fearful situations is central to the concept of emotional arousal (Bandura, 1993). Students who experience high levels of stress and anxiety regarding a task will be less likely to expect success and therefore less likely to attempt that task (Dale et al., 2018). Bandura (1977) found that the impending avoidance of difficult tasks decreases the opportunity to develop needed coping skills, which in turn allows for real fear of task failure to manifest. Teachers experience high levels of stress and anxiety in managing the increased daily expectations, administrative tasks, student behaviors, student achievement levels, and decreasing parental involvement and responsibility (Herman et al., 2018; Lentfer & Franks, 2015; Skaalvik & Skaalvik, 2017). The stress and anxiety have a negative impact on teacher efficacy levels, ultimately leading to teacher burnout and increasing the chances teachers will leave the profession (Aloe et al., 2014). Conversely, teachers who are able to navigate these stressors and develop a more positive self-efficacy actually improve their emotional well-being thereby increasing their levels of job satisfaction and commitment (Zee & Koomen, 2016).

Grit Theory

Grit is a relatively new theory developed by Duckworth (2016). This theory connects the constructs of passion and perseverance to one's ability to successfully reach his or her goals. Duckworth (2016) believed grit explains why some people are successful in the pursuit of their goals and why some people are not. Grit is defined as "perseverance and passion for long term goals" (Duckworth et al., 2007, p. 1087). Grit is the stamina one has to stick with long-term, life

goals despite the difficulties, failures, or adversities experienced (Duckworth, 2016; Duckworth & Gross, 2014; Duckworth et al., 2007; Robertson-Kraft & Duckworth, 2014). Grittier individuals (a term coined by Duckworth denoting individuals with higher levels of grit) view life as a marathon and display a strong work ethic and commitment. The construct of grit does not suggest individuals do not experience failures or setbacks, but that they possess the ability to stay focused and press forward toward their ultimate goal. Duckworth's (2016) original research focused on high achievers in the cadet corps of West Point, the National Spelling Bee, and teachers working in the toughest schools in the country. Since this research, others have begun to connect grit to achievement in ordinary life contexts. Anderson, Turner, Heath and Payne (2016) highlighted recent research connecting higher grit levels to the success of the following groups: soldiers in the Army Special Operations Forces selection course, salespersons, couples with lasting marriages, and students in large, underprivileged public schools.

Duckworth (2016) broke grit into the two components of passion and perseverance. Each component has both an independent and collective effect on a person's ability to grow and sustain grit. Merriam-Webster (2018) defined passion as a strong liking or desire for a particular activity or concept. Perseverance is shown when individuals press on and continue to move forward in the face of difficult situations, failure, or opposition. Duckworth (2016) explained that grit (passion and perseverance) grows over a lifetime of learning to deal with and move past rejection and failure. Grit is developed as an individual learns the difference between low-level goals and higher-level goals and determines where to place their energies. Duckworth maintained that it is not talent that makes an individual gritty, but the willingness to keep learning and growing through one's passion for an activity. Duckworth (2016) stated, "talent is how quickly your skills improve when you invest effort" (p. 42). When these improved skills are

utilized, achievement grows. Duckworth's (2016) theory of "effort builds skill," while simultaneously "effort makes skill productive" (p. 42) provides the basis for grit.

Grit grows through four distinct stages. These stages include interest, practice, purpose, and hope, respectively (Duckworth, 2016). Other people in an individual's life, such as teachers, coaches, mentors, bosses, and friends, are crucial elements in growing and developing grit (Duckworth, 2016). Teachers typically enter the field of education with an interest and desire to teach children with the hope and purpose of making a difference in the life of every child they touch. Through teacher preparation programs, in-service opportunities, and continued teaching experience, teachers participate in purposeful practice of their craft. This purposeful practice develops grittier novice teachers who are more likely to find success and remain in the classroom. The grittier novice teachers who remain are more effective in their positions (Duckworth & Gross, 2014). Robertson-Kraft and Duckworth (2014) noted the high expectations placed upon teachers underscore the relevance of grit as an important personality trait. Research connecting grit to teacher effectiveness and self-efficacy is limited but growing. There is a substantial research base addressing the relationship between teacher impact on student achievement and classroom management. However, there is limited research investigating the impact of grit and sense of teacher self-efficacy on these constructs (Mansfield et al., 2016; Martins et al., 2015; Riddle, 2018). Researchers found that teachers affect student achievement more than any other personnel in the school system (Cavendish, 2013; Robertson-Kraft & Duckworth, 2014; Scherzinger & Wettstein, 2019). The most recent researchers connecting grit to teacher effectiveness found that one in five novice teachers will leave the profession within the first few years (Clandinin et al., 2015; Wang et al., 2015). Gaps in the current literature exist in the understanding of the role grit and self-efficacy play in veteran

teachers' potential decrease in burnout, sense of effectiveness, or departure of the profession all together (Duckworth et al., 2009; Duckworth & Gross, 2014; Robertson-Kraft & Duckworth, 2014).

The concept of grit is connected to resilience, although they are different constructs. Resilience is an important term in the field of psychology and is defined by the American Psychological Association (2014) as “the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of risk” (p. 2). At its core, resilience includes one's quality of perseverance, which provides that connection with grit. There are four main factors that are important in building resilience. These factors include self-efficacy, a sense of meaning, resourcefulness, and adult relationships (Bailey, 2019). Self-efficacy includes the notion that one has the power to effect change in one's life. The stronger the feeling an individual has to effect change, the more persistent and resilient he or she will be toward reaching a goal (Bandura, 1989). Sense of meaning includes the feeling of belonging and that life has a purpose. A person's sense of meaning can be found in family traditions and goals. The third factor, resourcefulness, includes the resources, internal and external, available to assist in solving problems. Finally, adult relationships include having at least one caring and stable adult in one's life to help find peace. Research points to this caring adult as being the most important factor in developing resilience (Bailey, 2019).

When looking specifically at teacher resilience, research points to a resilience that is built over time in response to multiple stressors including student behaviors, school expectations, increased workload, and personal stress (Mansfield et al., 2016; Wilcox & Lawson, 2018). Beltman (2015) defined teacher resilience as “the capacity for teachers to navigate challenges” (p. 21). This definition includes the capacity to change and to process one's environment in

relation to personal characteristics and the outcome on one's personal growth and well-being (Beltman, 2015). Resilience is independent of one's personal or professional goals and may be contingent on current relationships and support systems (Mansfield et al., 2016; Robertson-Kraft & Duckworth, 2014; Wilcox & Lawson, 2018). Teacher resilience is related to stress, burnout, and a lower self-efficacy indicating that a lower resilience will lead to an increase in these areas, thus potentially increasing teacher attrition. Only Mansfield et al. (2016) cautioned against the assumption that all teachers leave their position due to lower levels of professional resilience or that these teachers lack job related resilience.

Related Literature

Student Self-Efficacy

Increasing student achievement through effective instructional strategies and social development is the hallmark of the teaching profession. Engaging students in the classroom becomes increasingly more difficult as children move into their adolescent and secondary school years (Polirstok, 2017). Students must believe in their ability to learn and succeed academically. Developing this sense of self-efficacy is imperative for increasing a student's opportunity for success (Haskell, 2016; Polirstok, 2017). Ciani, Sheldon, Hilpert, and Easter (2011) found that students who understand the importance a class may have on their future are more likely to adopt learning goals and be more willing to work toward achievement of those goals. Students who are allowed to control the setting and achievement of their goals have a higher self-esteem and an increase in academic achievement over those students who are not allowed any control. Zubkovic and Kolic-Vehovec (2014) found that students who see their classroom as mastery-oriented show a more positive affect in school and have a greater sense of well-being than those students who see it as performance based. Students in a mastery-based classroom do not have

anything to prove by being right or wrong and develop a better sense of personal self-worth. Liem, Ginns, Martin, Stone, and Herrett (2011) found that the attainment of a student's personal goals increases the student's achievement. Students gradually increase their personal best through incremental steps until they reach goal attainment. This is a successful way to help students gain confidence as they find success at each goal increment and increase their self-efficacy.

Pfitzner-Eden (2016) found that a sense of self-efficacy influences an individual's behavior through the goals an individual set for oneself and the challenges one is willing to take on. The individual level of self-efficacy then determines how much effort one puts into pursuing and accomplishing those goals. Diseth and Samdal (2014) discussed an individual's desire to have choices and control in goal setting and the action taken to those goals. This is the definition of autonomy and is encouraged within classrooms where teachers utilize non-controlling language, give meaningful rationale for tasks, acknowledge student feelings, and take students' perspectives into account. Students need to feel some sense of autonomy in their education to gain their buy-in. People tend to put forth more effort and are willing to accept a challenge if it is something they feel will benefit them in some way. Students who feel connected to the teacher and feel the task given has value are more likely to be motivated to set and reach mastery level goals (Blazar & Kraft, 2019; Kaufman & Dodge, 2009; Scherzinger & Wettstein, 2019).

Project-based learning and personalized learning initiatives have been developed based upon the assumption that student motivation increases when given meaningful tasks. Project-based learning develops critical thinking skills, expands a student's sense of purpose, and increases student motivation through the authentic learning process of developing and presenting a community-based project (PBLWorks, n.d.). Personalized learning allows for customization of

a student's classroom learning around their individual strengths and needs (Morin, n.d.). Both initiatives allow for student mastery in incremental steps, which meet the students where they are while providing challenging steps designed for the students to feel success. This ultimately results in an increase in student self-efficacy.

Teacher Self-Efficacy

Aloe et al. (2014) defined teacher self-efficacy (TSE) as “the extent to which a teacher believes (s)he is able to teach even the most difficult and unmotivated students” (p. 105). This belief bridges the relationship between teacher knowledge and instructing students in the classroom (Aloe et al., 2014). Teachers with a higher sense of self-efficacy are open to changing their methods, trying new strategies, engaging in professional development, and having a good understanding of classroom behavior and organization (Tschannen-Moran & Woolfolk Hoy, 2001; Zee & Koomen, 2016). The TSE has a direct effect on teachers' enthusiasm and commitment to teaching (Wu et al., 2015), which relates to the construct of grit. The most important piece of effective education and student achievement is the classroom teacher (Anand, 2020; Beatty-O'Ferrall, Green, & Hanna, 2010; Scherzinger & Wettstein, 2019). The teacher has the most contact with his or her students and has a greater opportunity to affect change, whether that be positive or negative. It is important for teachers to know and understand their role and the extent of the impact they have on their students. It is the teacher's thoughts, actions, and views (behavioral management style) that determine how he or she will work with their individual students (Gasser, Gautter, Buholzer, & Wettstein, 2018; Scherzinger & Wettstein, 2019). Teachers with a high self-efficacy also experience higher life satisfaction, which translates into the classroom through their excitement and enthusiasm in teaching their students (Duckworth et al., 2009). The TSE will differ depending upon the classroom task and student

make-up, and it can be measured through the three tenets of instructional practice, classroom management, and student achievement (Zee & Koomen, 2016). The TSE has a direct effect on student achievement and learning (Chang, 2015) and is correlated to classroom management (Aloe et al., 2014; Yuksel, 2014).

Recent research has connected teachers' sense of self-efficacy with their feelings of responsibility for their student's success, classroom management, and overall well-being (Daniels et al., 2017). Teachers enter the profession to make a difference in the lives of the children they teach. This sense of responsibility relates to an individual's belief in his or her ability to make that difference through affecting internal motivation, self-regulation, empathy, and care for others. This sense of responsibility may also play a role in teacher burnout. Daniels et al. (2017) reported that high school teachers had a higher sense of teaching self-efficacy but a lower sense of self-efficacy in classroom management when compared to elementary teachers. Daniels et al. also found that pre-service teachers reported a high sense of responsibility. This high sense of responsibility leads to a higher self-efficacy than veteran teachers who have been working with all aspects of the school environment, students, and parents for much longer than their novice peers. Teachers who feel they are knowledgeable, capable, and equipped will be more likely to persist in meeting the demands of their classrooms and teaching expectations (Dale et al., 2018; Kunsting, Neuber, & Lipowsky, 2016).

An added expectation to be included in classroom instruction is an increased focus on student well-being and the concept of social-emotional learning (SEL). This concept, brought forth by Elias (2018), is rooted in the dated concept of character education but with a 21st century learner focus. Social-emotional learning involves assisting students in improving their self-awareness, cultivating their ability to make good decisions, developing their capacity for

positive relationships, and elevating their ability to behave responsibly (Collie, Shapka, Perry, & Martin, 2015). Collie et al. (2015) conducted a study of teachers in Canada from elementary through high school in which they determined the relationship between SEL and teacher stress, burnout, and self-efficacy. In this study, Collie et al. grouped teachers according to their comfort level in teaching SEL, the level of school support in teaching SEL, and the overall school culture of SEL. Collie et al. found that teachers who were confident in their ability to teach SEL, were committed to SEL, and felt they had administrative/district support reported less stress and overall higher job satisfaction. The SEL was also found to be related to higher student outcomes and teacher effectiveness. According to Collie et al., this increased satisfaction and decreased stress had a positive impact on teacher sense of self-efficacy. Collie et al. found the higher the grade level, the lower the comfort level teachers had working with SEL, subsequently reducing the positive impact on student outcomes. This decrease was found to be due to the change in course schedule, time constraints, and pacing expectations among elementary, middle, and high school teachers. Providing instruction and support to teachers to become knowledgeable in SEL and how to effectively incorporate SEL into the classroom could increase teachers' comfort level increasing their self-efficacy.

In another study, Kunsting et al. (2016) conducted a longitudinal study of 2,043 former students of education colleges in Germany. These researchers investigated the relationship between mastery goal orientation, optimism, and self-efficacy. Kunsting et al. found teachers with higher self-efficacy were more likely than teachers with lower self-efficacy to set mastery goals and work toward attaining them through continued learning and personal growth. These teachers believed their actions and continued improvements had a positive effect on their students and subsequent achievement. They found that the meaning of self-efficacy, on a

personal level, can change significantly through the years of a teaching career. This is especially true when looking at optimism as a factor of self-efficacy. Teachers who have a positive attitude show more resilience and confidence (Kunsting et al., 2016). Kunsting et al. also suggested that having a positive attitude is the basis for developing and increasing self-efficacy and grit.

Emotional Intelligence

Directly related to TSE is the notion of emotional intelligence (EI). Wu et al. (2019) suggested EI is directly related to teachers' ability to deal with student behavior, classroom management, and other work-related concerns. Wu et al. defined EI as an "individuals' ability to understand and regulate their emotions, and to empathize and respond appropriately to other's emotions" (p. 1). Regulating EI is an important piece of how a teacher responds to student demands and work tasks and creates a positive classroom environment. In the study conducted among 497 middle school teachers in China, Wu et al. found that teachers with a higher EI also had a higher sense of self-efficacy. These teachers also tended to have stronger teaching performance and classroom management ratings. They concluded that there was a significant mediating effect of teaching performance in the relationship between EI and TSE.

An important component of EI is that of emotional regulation. In a study of 213 high school students in a private school in New England, Ivcevic and Brackett (2014) found a significant correlation between emotional regulation and school success. Measures were taken in the areas of school outcomes, satisfaction with school, Big Five personality traits, grit, and emotional regulation ability. Ivcevic and Brackett described emotional regulation as an "individual's maximal capacity to evaluate emotion regulation strategies and to influence one's affective experience and actions in ways that promote goal attainment in emotionally charged situations" (p. 29). Emotional regulation is defined as the ability to manage and respond to

difficult or emotionally charged situations. Emotional regulation can be improved upon over time. Ivcevic and Brackett described that emotional regulation allows individuals to deal with emotionally-charged situations and utilize effective strategies to maintain focus. These situations can be distressing or simply overwhelming. A higher ability to control emotions is related to increased positive attitudes and decreased anxiety and depression.

Lower emotional regulation can lead to an increase in emotional exhaustion. Skaalvik and Skaalvik (2017) connected emotional exhaustion to an increase in teacher motivation to leave the education profession before retirement. Teachers experiencing emotional exhaustion will likely experience a lack of energy, chronic fatigue, feelings of being worn out, and potentially an increase in physical pains or illness. Emotional exhaustion is “a core element of burnout” (Skaalvik & Skaalvik, 2017, p. 154) and is brought about by an increase in workload, job-related stressors, tighter deadlines, and increased unrealistic expectations placed on teachers daily. Skaalvik and Skaalvik (2017) found a negative relationship between burnout and self-efficacy but a positive relationship between burnout and teacher retention. Emotional exhaustion ultimately affects teacher grit levels by decreasing emotional regulation abilities. Teachers are professionals, and the inability to care as they always have, provide high levels of instruction, and increase student achievement adds to the negative feelings, which speeds the negative spiral begun by feelings of exhaustion (Lentfer & Franks, 2015; Skaalvik & Skaalvik, 2017; Troesch & Bauer, 2017; Wu et al., 20019). It is imperative that teachers find ways to support each other as they work to support their students (Donohoo et al., 2018).

Collective Teacher Efficacy

Collective teacher efficacy (CTE) was first introduced by Bandura (1993, 1997) along with his self-efficacy theory. Bandura (1993, 1997) defined collective efficacy as a group’s

shared belief in the ability to work together to produce an increase in achievement. Hattie (2015) further defined CTE as the number one influencer on student achievement. Hattie explained that student achievement occurred when teachers collaborated together and discussed student data and the most effective way to help students move forward. The important piece of this collaboration is a focus on data and understanding how that can be used to impact student growth. Teachers tap into the expertise of their colleagues and learn social sensitivity through the group process (Donohoo et al., 2018).

The CTE affects teacher well-being and ultimately TSE (Guidetti, Viotti, Bruno, & Converso, 2018). Teacher isolation, in feeling or reality, has an impact on the level of stress and burnout. The CTE is one method to prevent teacher isolation as it allows for planning, interaction, and learning in teams (Wilcox & Lawson, 2018). This team approach also allows for teachers to support each other (Guidetti et al., 2018; Wilcox & Lawson, 2018). Out of their teacher preparation programs, novice teachers reported a lack of readiness and preparation for their classrooms and students. This drives many teachers to further their education into more specialized directions (Goldhaber & Cowen, 2014; Martins et al., 2015). Developing a culture of collaboration through collective efficacy can help fill that gap of knowledge for both novice and veteran teachers as they work together to solve problems and develop instruction for all students (Bandura, 2002; Donohoo et al., 2018; Guidetti et al., 2018).

Guidetti et al. (2018) suggested that collective efficacy could be a resource for increasing self-efficacy. Guidetti et al. included 415 primary and middle school teachers who taught in Italy and found a significant positive correlation between work ability (ability to complete job related tasks, manage work stress, and maintain healthy work habits) and teachers' collective self-efficacy and individual self-efficacy. This points to the importance for teachers to work

within teams of shared beliefs and goals. Donohoo et al. (2018) determined that teachers affect the performance of their team through the individual assurance placed on the process which, in turn, positively affects student achievement. Collective efficacy subsequently influences student achievement through an increase in teachers' productive classroom instruction and management (Donohoo et al., 2018). A teacher who feels they have a positive impact on the classroom has a higher sense of self-efficacy and tends to experience less burnout and stay in the classroom. Collective efficacy is a culture to be developed by the school-based administration through creating an atmosphere of awareness of the collective impact within the school culture (Donohoo et al., 2018). Creating this positive culture helps to combat teacher feelings that they cannot affect positive outcomes for their students, which breeds low self-efficacy. Donohoo et al. stated, "success lies in the critical nature of collaboration and the strength of believing that together, administrators, faculty, and students can accomplish great things" (p. 43). Collective efficacy positively impacts self-efficacy and the willingness to persevere through teamwork and support.

Classroom Management

Effective teachers are those who can manage the classroom while providing quality instruction to each student. Effective teachers develop and maintain relationships with their students and provide a safe learning environment. Classroom management is providing a safe learning environment and increasing the opportunity for students to learn in the classroom setting through decreasing student discipline and increasing time-on task (Kunsting et al., 2016). Secondary students who are involved in their education learn self-determination skills. This increases self-discipline and leads to an increase in graduation rates (Cavendish, 2012). Demirdag (2015) studied middle school students and found teachers with poor classroom

management skills spent more time on student discipline and less time on instruction, and they had little control over the class, which decreased the safe learning environment and resulted in a decrease of student self-esteem. Schools must provide a safe place for students to grow emotionally and academically (Shoulders & Krei, 2015). Effective classroom management is an important aspect of creating this environment (Demirdag, 2015).

Effective classroom management can and does provide a safe learning environment for all students to learn and grow socially, emotionally, and academically (Eisenman, Edwards & Cushman, 2015; Postholm, 2013; Shoulders & Krei, 2015). Effectively using classroom management strategies allows schools to create a safe place where students can grow socially, emotionally, and academically through the assistance of dedicated educators (Alderman & Green, 2011; Boyd, 2012; Furrer et al., 2014; Shoulder & Krei, 2015). Students need to feel cared for, supported, and safe in the classroom to be able to focus on learning (Eisenman et al., 2015; Furrer et al., 2014; Wang & Kuo, 2018).

Developing appropriate student-teacher relationships plays a big part in providing a supportive and safe learning environment (Gasser et al., 2018; MacSuga-Gage, Simonsen, & Briere, 2012; Pas et al., 2015; Scherzinger & Wettstein, 2019). Gasser et al. (2018) suggested this relationship must be built on trust, respect, warmth, and responsiveness. Teachers who are caring and empathetic toward their students will have a better handle on the discipline in their classroom. Students can develop self-efficacy, self-esteem, and self-discipline when they feel cared for and understood (Banse & Palacios, 2018; Cavendish, 2013; Gasser et al., 2018; Zee & Koomen, 2016). Teachers who respect themselves and others, understand and tolerate other's differences, and have passion in their position will provide caring leadership in the classroom (Wilson, 2013). Teachers who exhibit those behaviors have a high sense of self-efficacy. Aloe

et al. (2014) noted that teachers who felt unprepared in classroom management tended to show a decrease in self-efficacy.

A well-managed classroom increases the level of student engagement, which leads to a higher level of achievement. Corso, Bundick, Quaglia, and Haywood (2013) proposed a model for increasing student engagement through improved student-teacher relationships. Three modes of student engagement were introduced: “engaged in thought, engaged in feeling, and engaged in action” (Corso et al., 2013, p. 52). A student engaged in thought is mentally invested through planning, thinking, and monitoring his or her self-control. Engaged in feeling involves students’ peer and teacher relationships and their overall sense of belonging within the classroom and school as a whole. A student engaged in action exhibits physical participation in the school environment through following directions, completing tasks, and participating appropriately in the classroom. Corso et al. concluded that the relationship between student and teacher and its effect on student engagement is dependent upon the extent to which the student believes the teacher to be available, impartial, respectful, and caring. The level of teacher knowledge and expertise in the classroom content adds to students’ respect for their teacher (Furrer et al., 2014; Pas et al., 2015). This suggests a need for teachers to continue to grow in their knowledge and ability to appropriately display this knowledge in the classroom. Pitzer and Skinner (2017) conducted a study of 1,020 students in Grades 3 through 6 in a rural-suburban school district in upstate New York. Students responded to questionnaires assessing their experiences of interpersonal resources, personal resources, emotional reactivity, motivational resilience, and catastrophizing appraisals. They concluded that teacher support can reshape students’ personal motivation system. Students receiving high levels of teacher support are more likely to develop motivational resilience and end the school year with greater success.

Teacher Burnout

Diseth and Samdal (2014) found that student motivation decreased as students advanced through their educational career. Corso et al. (2013) also found student engagement decreased as students progressed through each grade in school. This lack of motivation creates frustration, off-task behaviors, and potentially aggressive behaviors. The bulk of the responsibility for addressing this lack of motivation and student discipline falls on the classroom teacher as he or she has the most daily contact with students (Herman et al., 2018; Wilson, 2013). Student engagement is dependent upon the availability of the teacher to provide an impartial and respectful classroom atmosphere (Eisenman et al., 2015; Furrer et al., 2014). These expectations, among the myriad of other expectations placed upon teachers, increase stress levels and subsequently decrease job satisfaction. Today's teachers experience an increase in diversity among students in the classroom and a decrease in parental support and responsibility. This causes an increase in teacher stress levels (Aloe et al., 2014). Zee and Koomen (2016) found a relationship between self-efficacy and job-related stress; as self-efficacy increased, job-related stress and student stressors decreased. Teachers with a lower sense of self-efficacy are more likely to experience burnout.

Burnout is the accumulated, chronic response to negative stressors felt working in schools. Burnout is marked by a lower sense of personal accomplishment, disassociation from one's career, and emotional exhaustion (Aloe et al., 2014). Teachers experiencing burnout are more likely to show a decrease in student engagement, instructional effectiveness, and student achievement (Herman et al., 2018). The challenges faced by teachers in their everyday classroom can have a negative effect on teachers' sense of self-efficacy. This is not surprising as teaching has been noted to be the most stressful of the human service occupations (Aloe et al.,

2014). Another challenge facing teachers and adding to discouragement and potential burnout is the inability to see the impact they have made on their students (Robertson-Kraft & Duckworth, 2014). Most teachers must wait days, months, or even years (if at all) to see the impact of their instruction on students. This can be very disheartening for teachers at all levels. Following the logic of grit and self-efficacy presented earlier, it could be expected that teachers with higher grit levels will feel more confident to stay in their classrooms and work intentionally to increase academic gains in their students (Robertson-Kraft & Duckworth, 2014).

Zhu et al. (2018) offered another definition of burnout in their study of 1,892 1st- through 12th-grade teachers across China. Zhu et al. defined burnout as “a dysfunctional response to chronic emotional interpersonal stressors at work” (p. 789). They found burnout to be “an efficacy crisis or an efficacy breakdown” (p. 790) relating burnout to teacher sense of self-efficacy. Zhu et al. introduced the notion of reduced personal accomplishment related to teacher self-confidence. As teachers begin to sense burnout and stress, their feeling of incompetence increases and self-concept decreases. Zhu et al. found a direct relationship between self-concept, teacher self-efficacy, and personal accomplishment. Veteran teachers’ self-concept was found to have a greater effect on their level of efficacy than that of the novice teacher. Herman et al. (2018) supported Zhu et al.’s (2018) findings and also concluded that increased stress decreases well-being and can have an adverse effect on teaching performance. This decrease in performance directly affects student achievement and teacher job satisfaction and increases potential for teachers leaving the profession.

Grit

Grit is defined as a person’s passion and perseverance to maintain toward achievement of his or her goal (Duckworth, 2016). Although grit has become an increasing topic of research, it

is just beginning to grow in the area of how it relates to teachers and their sense of efficacy. As education standards have begun to focus on developing students with 21st-century skills, the need arose to address more than academic or cognitive processes alone. Shechtman, DeBarger, Dornsife, Rosier, and Yarnell (2013) began furthering the discussion by focusing on non-cognitive factors such as attitudes, social skills, and intrapersonal resources in a study commissioned by the U.S. Department of Education's Office of Educational Technology. In this study, Shechtman et al. (2013) furthered Duckworth's (2016) research of grit in relation to student achievement and preparation to meet the needs of a 21st-century workforce. Shechtman, et al. (2013) concluded that grit, tenacity, and perseverance are essential, non-cognitive skills students need to develop. These skills impact one's ability to set long-term goals and work to achieve them. These non-cognitive skills determine a student's ability to persist when met with the challenges and obstacles faced throughout their academic career.

Grit can be taught and developed through a growth mindset and by helping students understand how the brain changes when it faces challenges (Bashant, 2014; Hochanadel & Finamore, 2015; Shechtman et al., 2013). This growth mindset is developed through teaching students to persist through challenges and difficulties, which ultimately increases grit (Hochanadel & Finamore, 2015). Individuals with this gritty growth mindset will seek out solutions to challenges rather than turn away from those challenges. Research mainly discusses this growth in students through the best teaching practices of caring teachers. Shechtman et al. (2013) stated these best practices include the following: (a) providing the atmosphere for students to be willing to take on higher order, long term goals; (b) providing an atmosphere where rigor, support, and high expectations are prevalent while providing constructive feedback, a sense of challenge, and a sense of belonging; and, (c) the appropriate educational use of

technology. While the research mainly focuses on growing grit among students, it stands to reason that teachers can and should develop this grit trait as well.

Research connecting grit to student achievement, growing student grit, and describing the benefits of student grit at all educational levels (elementary to college) is becoming more prevalent. Missing from the research until recently are studies addressing teacher grit, particularly grit in veteran teachers (Dobbins, 2016; Hoerr, 2017; Riddle 2018). Education is a challenging career that is not getting easier. To address these challenges, educators need grit (Hoerr, 2017). Teacher burnout and sustainability are becoming a more prevalent topic. Robertson-Kraft and Duckworth (2014) expressed this same sentiment as follows: “The exceptional demands of teaching suggest the relevance of one personality trait in particular: grit” (p. 6).

In a longitudinal study of novice teachers affiliated with a national teacher organization, Robertson-Kraft and Duckworth (2016) found that those with a higher grit level stayed in the profession and saw greater student growth. Despite the positive outcomes of this study, Robertson-Kraft and Duckworth recognized a limitation lies with the generalizability of the results to veteran teachers who have experienced more long-term effects of the teaching profession. Duckworth and Gross further noted that novice teachers with more grit remain in teaching and are more effective. This effectiveness is related to the notion of deliberate practice as a necessary way to improve the skill of teaching. Duckworth and Gross concluded it is possible to predict which teachers will have a greater propensity for continuous hard work over long periods of time, resulting in higher achievement by their individual grit levels. Deliberate practice is simply the notion of purposefully practicing the skill one wants to improve upon until it becomes an innate action (Duckworth, 2016).

In a study conducted in Turkey among 3,227 teachers in elementary, middle, and high schools, Argon and Kaya (2018) looked deeper into the effects of personal variables on grit levels of teachers. These variables included age, gender, years of teaching, school type, and graduation status. They found a connection to the teacher's psychological state. Their results indicated that grit and characteristics such as trust, self-efficacy, optimism, extraversion, hope and psychological endurance were fluid and connected. They noted that high levels of grit "will ensure that the performance, health and mood of teachers remain positive in schools where stressful environments exist, and human relationships are intensely experienced" (p. 50). The psychological traits discussed in Argon and Kaya's (2014) study on teacher grit and personal variables relate to the big five model of traits predicting success. This model outlined the needed characteristics for success to include conscientiousness, agreeableness, extraversion, emotional stability, and openness to new experiences (Bashant, 2014). Grit has been related to conscientiousness, and the terms have been used interchangeably by Dale et al. (2018). Through their study of undergraduate students at the University of Wisconsin, Dale et al. found individuals with higher levels of conscientiousness (grit) were more likely to maintain effort on impossible tasks. Duckworth et al. (2009) connected the traits of creativity and extraversion to life satisfaction and effective teaching. Teachers are life-long learners and need to understand that learning comes from failure and frustration and through the reflection that follows (Hoerr, 2017). Understanding the connection between grit and the psychological processes begins to equip teachers for success thus increasing the likelihood of persisting through difficult tasks (Dale et al., 2018).

Mindset

Dweck (2006), a psychology professor at Stanford University, provided the research basis for Duckworth's (2016) grit research through research on mindset. Dweck (2014) defined mindset as "people's beliefs about human attributes, including abilities" (p. 10). How individuals view themselves determines the trajectory of their lives. Maintaining a positive mindset (or attitude) has been shown to increase vitality among veteran teachers even when dealing with difficult situations (Cruz & Herzog, 2018). Dweck (2006) went further than merely looking at positive or negative mindsets and connects mindset to teachers' beliefs in their intellectual ability to grow and learn.

Dweck (2006) identified two mindsets: fixed and growth. An individual with a fixed mindset believes he or she is born with a fixed intelligence and skill level. This individual does not believe they can learn past their innate abilities. A fixed mindset creates the need for individuals to prove themselves over and over (Dweck 2006). Bashant (2014) supported this notion and further stated that an individual with a fixed mindset believes intelligence level is attached to success or failure, believing that someone is smart if he or she is successful yet dumb if he or she fails. Conversely, an individual with a growth mindset believes knowledge and skills can be learned and improved upon. This learning is developed through one's effort, actions, and assistance received from others (Dweck, 2006). Related to these mindsets is one's beliefs of his or her own potential for success. A person with a fixed mindset will believe potential for success is limited by ability or lack of ability to succeed. An individual with a fixed mindset will not need to apply further effort. A person with a growth mindset sees a failure as an opportunity for growth and learning. An individual with a growth mindset will understand the need for effort and perseverance (related to grit) in the face of a challenge (Dweck, 2006; Heggert, 2015).

Most of Dweck's (2006) research focused on students' mindsets and the effects on achievement. Students with a growth mindset show greater achievement levels in test scores, classroom motivation, and higher grades (Dweck, 2014). Many schools are adopting growth mindset as a part of their daily instructional strategies within the classroom for this reason. Mindset has also been addressed for teachers and their perceived abilities as a classroom teacher in effectively growing their students. Teachers with a growth mindset are more likely to take instructional risks in their classroom, believe they can learn from others, and do not fear making mistakes in front of their students and co-workers (Dweck, 2014). These teachers provide a daily model of the value of perseverance and focus even in challenging activities for their students. Teachers and students with a fixed mindset can change this and grow into a growth mindset (Bashant, 2014; Dweck, 2016; Hochanandel & Finamore, 2015).

Teacher Retention

Teacher retention has reached the forefront of the educational system's concerns. Teacher retention is defined as the ability for schools to retain teachers on staff. Conversely, attrition is defined as the rate at which teachers are leaving the profession. Some research noted that the number of teachers leaving voluntarily and before reaching retirement is drastically growing (Glazer, 2018; Young, 2018). Geographic area impacts the rate of attrition as teachers tend to leave inner city urban schools and rural schools more quickly. Maranto and Shuls (2012) noted that principals seek "to hire whoever walks through the door" (p. 1) to address the increased number of empty positions. In 2019, one school district found itself placing practicum-level students in their own classroom while still in college to meet the shortage in that area (Watson, 2019). Other districts are beginning to adjust the school calendar to attract and

retain teachers. These adjustments include moving to four-day school weeks or quasi-year-round school schedules, allotting for days off at the end of each nine weeks (Benson, 2019).

Not only is the high attrition rate costly to schools and districts monetarily, but it also affects student achievement and success (Clandinin et al., 2015; Glazer, 2018; Ingersoll & Smith, 2003). Teacher turnover causes lower student achievement through affecting the continuity of instruction and the school climate and increasing adjustment periods for new teachers to learn the ropes (Glazer, 2018; Young, 2018). Increased stress levels caused by managing difficult parents, student discipline, increased expectations outside of the classroom, assessment pressures, and the personal feelings of responsibility for the students can lead to a decrease in job satisfaction or burnout, which are precursors to attrition (Herman et al., 2018; Wang et al., 2015). It is important to understand these areas to keep qualified and effective teachers in the classrooms (Young, 2018).

Schools focus on recruitment efforts to bring in new qualified teachers to fill the voids created by those leaving each year. Young (2018) and Glazer (2018) noted in their respective studies that as teachers leave their positions, this creates a higher turnover rate than other professional occupations. The frequent loss of qualified teachers has a negative effect on student achievement (Clandinin et al., 2015). Recruitment efforts alone are not adequate strategies to address the issue of teacher attrition. Addressing classroom teachers' feelings of stress, exhaustion, and burnout is imperative. Researchers have noted that teachers who are experiencing higher levels of stress and emotional exhaustion also express lower levels of self-efficacy and job satisfaction (Wang et al., 2015). These concerns affect the relationships developed with students and the quality of classroom instruction (Herman et al., 2018; Troesch & Bauer, 2017; Wang et al., 2015). Schools must begin to provide support and assistance for

teachers as they progress through their careers in the form of classroom assistance, interventions, and strategies that work to address classroom management, instructional strategies, and handling daily stressors. Support can be provided through professional development opportunities, health and well-being activities, mentors, or instructional coaches. Veteran teachers need this support as much, if not more, than novice teachers (Herman et al., 2018).

Professional Development

No change or program developed or implemented in the school system can work without effective professional development (Calderon, 2020). As teachers move through their careers and populations and demands change, the old way of doing things may not suffice in the classroom. Student behaviors change, academic rigor increases, and parents become more knowledgeable and demanding (Alibakshi & Deharvi, 2015). These factors require teachers to constantly alter and improve their practices and skills within the classroom. Schwab (2019) examined the self-efficacy of teachers in inclusive classrooms. Schwab determined the difficulties of general education trained teachers in managing students with challenging behaviors and different needs. Schwab found that pre-service as well as in-service teachers should be provided training on dealing “with challenging students’ behavior needs” (p. 14), “how to teach in classes where students with specific needs are included” (p. 15), and “in becoming more sensitive to diversity” (p. 15). Opportunities for practicing classroom management strategies and instructional preparation are limited before teachers enter their professional, lifetime classrooms, adding to the importance of continued professional development (Pankowski & Walker, 2016).

Lentfer and Franks (2015) conducted a study of 31 undergraduate pre-service teachers majoring in secondary education. They examined the effects of teaching a behavior model for

handling classroom disruptions on teacher self-efficacy. Lentfer and Franks found a lack of classroom management training led to lower self-efficacy in teachers, which led to increased stress and ultimately, teachers leaving the classroom early. The increased concerns in the classroom contribute to further increasing teacher stress levels which negatively affect student achievement and teacher retention (Marquez et al., 2016). Despite the increasing stress levels, practicing teachers continue to have a strong desire to grow and develop skills in behavior management. This desire conveys personal concerns and feelings about their classroom management skills (Lentfer & Franks, 2015). These concerns can and should be addressed through professional development.

Kunsting et al. (2016) conducted a longitudinal study on teacher self-efficacy and instructional quality among former students of a German training program. They noted that teachers have a desire to learn and develop professional competencies through setting mastery goals and effective teaching strategies. Learning new strategies increases efficacy through providing needed skill sets to teach and manage a classroom as opposed to covering up inadequacies. Teacher deficits in classroom management skills, instructional strategies, and competencies negatively affect the classroom instructional environment, thus negatively affecting student achievement (Krusting et al., 2019). Providing targeted and effective professional development opportunities will improve these deficits.

Alibakshi and Dehvari (2015) defined professional development as continued learning opportunities and career building activities teachers take part in to increase knowledge and methodology. These activities take place both during teacher preparation and after. Teachers participate in professional development to stay current on teaching techniques and strategies, increase skills, and add to their knowledge base (Alibakshi & Dehvari, 2015). Professional

development must include skills that can be transferred from training to practice (Marquez et al., 2016). Teachers are life-long learners navigating between providing instruction and receiving instruction (Alibakshi & Dehviri, 2015), and they seek professional development opportunities to increase their areas of weakness (Alibakshi & Dehviri, 2015).

Effective professional development increases teachers' feeling of confidence in their practice and in turn their self-efficacy (Yuksel, 2014). Without this confidence and self-efficacy, teachers may have difficulty maintaining the profession, causing them to leave the classroom thus adding to the already growing number of teacher vacancies (Lentfer & Franks, 2015). Troesch and Bauer (2017) found similar results in their study of 297 teachers, including 104 second-career teachers, in Switzerland with 104 of these teachers being second career teachers. Second career teachers are teachers who have a different career prior to receiving certification to teach. Troesch & Bauer (2017) discussed that professional training is exceptionally important within the classroom setting to provide for practical experience for all level of teacher – novice, veteran, and second career. Practical teaching increases the opportunity for positive experiences, which has been shown to increase self-efficacy (Troesch & Bauer, 2017). Increasing quality interactions and training can affect change and develop a growth mindset, which in turn develops grit (Bashant, 2014).

Summary

It is important for schools and districts to work toward finding a resolution to the increasing concerns of teacher recruitment and retention. Continuing to lose qualified teachers has an overarching, negative effect on student achievement (Clandinin et al., 2015). Research supports the notion that teachers who have a higher sense of self-efficacy and a higher grit rating are less likely to report feeling burnout, and therefore, they continue in the teaching profession

(Dale et al., 2018; Robertson-Kraft & Duckworth, 2014; Zee & Koomen, 2016). Self-determination theory (Deci & Ryan, 1985), self-efficacy theory (Bandura, 1977), and grit theory (Duckworth, 2016) provide a strong background to begin addressing the concerns of today's classroom teachers.

Teachers continue to face increasing adversity and daily challenges both in and out of the classroom. Teaching is noted to be the most stressful of the human service occupations (Aloe et al., 2014). The stress and adversity teachers face lead to an increase in burnout and a decrease in self-efficacy (Aloe et al., 2014; Zhu et al., 2018). Teachers' sense of self-efficacy can affect student achievement and learning (Chang, 2015). Teacher self-efficacy is also related to classroom management (Lentfer & Franks, 2015). Teachers must be able to provide a positive learning environment that promotes student achievement (Eisenman et al., 2015).

Teachers' level of grit is the passion and perseverance they have to continue on and press through adversities faced in the classroom (Duckworth, 2016). Gritty individuals have a growth mindset (Dweck, 2006) and seek out solutions to challenges they face (Bashant, 2014). Teachers who are gritty teach students how to persist through challenges and increase student grit level (Hochanandel & Finamore, 2015). This can positively affect student achievement.

Current research on teacher grit and self-efficacy has focused mainly on the novice or preservice teacher populations (Dobbins, 2016; Goldhaber & Cowen, 2014; Riddle, 2018). This group of teachers is easy to access through the teacher preparation programs and the university through which they are enrolled. As one out of five teachers leave the teaching profession within three to five years of entering the classroom (Duckworth et al., 2009; Wang et al., 2015), researchers sought to determine how to support novice teachers and provide the right supports to help retain them within the profession (Dobbins, 2016; Riddle, 2018). What has not been

adequately addressed in the literature is how to retain the veteran teachers who have a low sense of self-efficacy and grit, therefore facing burnout (Muenks, Wigfield, Yang, & O'Neal, 2017).

This study sought to determine the relationship between passion and perseverance and sense of self-efficacy and teacher belief of being able to provide successful classroom management, resulting in student achievement. With expectations on veteran teachers increasing, teachers must believe in their ability to positively affect their students. The difficulties teachers face daily are being more readily discussed and highlighted through blogs, news articles, and news reports. Teachers are finding their passion for teaching students waning as they feel their perseverance to maintain decreasing (Herman et al., 2018; Zhu et al., 2018). Teachers need to develop their grit to be the best they can be for their students, thus increasing their self-efficacy (Dale et al., 2018; Robertson-Kraft & Duckworth, 2014; Yuksel, 2014). This study increased the body of knowledge addressing grit and self-efficacy on veteran teachers' perceived ability to increase student achievement and provide effective classroom management.

CHAPTER THREE: METHODS

Overview

Chapter Three outlines the methodology for this research study, which was developed to test the relationship between grit and teacher sense of self-efficacy in the areas of classroom management and student engagement. The chapter also presents the questions and null hypothesis posed. The study design, participants, setting, instrumentation, and data analysis are outlined.

Design

The researcher utilized a quantitative, correlational design to test the relationship between the variables of teacher grit and self-efficacy for classroom management and student achievement. A correlational design is appropriate for this research as this form of research is utilized to determine the relationship of continuous scores (Gall, Gall, & Borg, 2007). Correlational studies allow for determining the strength of the relationship between two defined variables of quantitative data. Continuous data scores are commonly found within the educational setting; therefore, correlation studies are most common among education research (Gall et al., 2007). For this study, The Teacher Self-Efficacy Scale (TSES) ratings of classroom management and student engagement were the dependent variables and the Short Grit Scale (Grit-S) was the independent variable.

Research Questions

This study sought to answer the following research questions:

RQ1: Is there a relationship between high school teachers' level of grit and their self-efficacy in classroom management?

RQ2: Is there a relationship between high school teachers' level of grit and self-efficacy in student engagement?

Hypotheses

The null hypotheses for this study are:

H₀₁: There is no statistically significant correlation between grit level measures by the Short Grit Scale (Grit-S) and self-efficacy beliefs in classroom management measured by the Teacher Self-Efficacy Scale (TSES) of high school teachers.

H₀₂: There is no statistically significant correlation between grit level measures by the Short Grit Scale (Grit-S) and self-efficacy beliefs in student engagement measured by the Teacher Self-Efficacy Scale (TSES) of high school teachers.

Participants and Setting

The participants for this study were drawn from a convenience sample of the target population of all high school teachers employed in a large school district in central South Carolina. This school district consists of 3 traditional high schools, 1 magnet high school, 1 career and technical studies center (high school), and 1 alternative school along with 12 elementary schools (with a new one, 13, being built), 2 intermediate schools, and 3 middle schools. The district employs 1,285 teachers who support and educate 17,054 students (South Carolina Department of Education, 2018). Of the teachers employed by the district, 71% hold advanced degrees and 86% are continuing contract teachers. According to state report card data (South Carolina Department of Education, 2018), the return rate from the 2015-2016 school year to the 2016-2017 school year was 90%. The racial demographics for teachers in the district is 83% White, 9% Black/African American, 2% Hispanic, and 6% other or not specified. The gender breakdown is 18% male and 82% female. Of the 17,054 students served in this district,

49% are female and 51% are male, and 59% are White, 28% are Black/African American, 5% are Hispanic, and 9% are other. Overall, 39% live in poverty and 14% have a qualifying disability. The overall graduation rate for this district is 90% (South Carolina Department of Education, 2018).

The target population for this study included the 382 teachers employed in the four high schools within the chosen school district. Three of the high schools are traditional, public high schools and one is a career pathways magnet. School One employs 80 teachers and serves 1,349 students. Of these teachers, 81% hold advanced degrees, 91% are on a continuing contract, with 90% of the teachers returning from the previous school year. This school has an overall 92% graduation rate. The student gender and race demographics for this school are as follows: 50% male and 50% female, and 86% White, 6% Black/African American, 4% Hispanic, and 4% other or not specified. School Two employs 109 teachers and serves 1,725 students. Of these teachers, 77% hold advanced degrees, 91% are on a continuing contract, and 89% returned to the classroom. The graduation rate at this school is 88%. The gender and race demographics for this school are as follows: 51% female and 49% male, and 54% White, 33% Black/African American, 5% Hispanic, and 9% other or not specified. School Three employs 108 teachers serving 1,334 students. Of these teachers, 75% hold advanced degrees, 79% are on a continuing contract, and 85% returned to the classroom. The graduation rate for School Three is 87%. The student gender and race breakdown is as follows: 49% female and 51% male, and 32% White, 53% Black/African American, 6% Hispanic, and 9% other or not specified. School Four employs 85 teachers and serves 1,031 students. Of these teachers, 82% hold advanced degrees, 85% are on a continuing contract, and 85% returned to the classroom. The graduation rate for this school is 95%. The student gender and race breakdown for this school is as follows: 50%

female and 50% male, and 75% White, 16% Black/African American, 3% Hispanic, and 6% other or not specified (South Carolina Department of Education, 2018).

The total number of participants for this study was 92 from a convenience population of 382 high school teachers across the four high schools in the district. This number exceeds the minimum sample size of $N = 66$ required for a medium effect size with an alpha level of .05 and statistical power of .7 for a correlation coefficient (Pearson's r) test (Gall et al., 2007). The demographics of the study participants mirror the school district's demographics, with 74% females and 24% males, and 80% White, 13% Black/African American, 3% Hispanic, and 3% other or not specified. The sample included 16 new teachers (1-5 years' experience) and 76 veteran teachers. Years of experience for the veteran teacher participants included: 15 teachers with 6-10 years' experience, 30 teachers with 11-20 years' experience, 20 teachers at 21-30 years' experience, and 10 with 31 or more years' experience. One teacher did not respond to the demographic survey. Information was obtained including subject area taught but was not utilized in the analysis of this study.

Instrumentation

Participants completed three questionnaires: a demographic survey, the Short Grit Scale (Grit-S), and the Teacher Self-Efficacy Scale (TSES). The demographic survey was utilized to gather participants' demographic information. The Grit-S was utilized to measure the level of grit (passion and perseverance) of each teacher and the TSES measured the level of self-efficacy for classroom management, instructional strategies, and student engagement. Responses from the instructional strategies section were not used in this study. The data from these surveys were utilized to determine the level of relationship between grit and self-efficacy in classroom management and student engagement.

Demographic Survey

The researcher developed the demographic survey to obtain information regarding years of teaching experience, subject area taught, highest education level obtained, gender, race, and age. This information was used to compare the relationship data among novice versus veteran teachers. Future analyses utilizing this data could include comparing the relationship of grit and self-efficacy across subject area, educational level, and age ranges. For this study, years of experience was the target information.

The Grit Scale

The Grit-S scale was developed by Duckworth et al. (2009) at the University of Pennsylvania's Department of Psychology. The Grit-S scale was developed out of the longer, original Grit-O scale to provide a more efficient measure of grit. Grit is defined as the "perseverance and passion for long term goals" (Duckworth et al., 2007, p. 1087). The Grit-S is a self-report scale consisting of eight questions, such as: "Setbacks don't discourage me," "I am a hard worker," "I finish whatever I begin," and "I am diligent" (Duckworth & Quinn, 2009). Scoring is based on a five-point Likert scale ranging from five = very much like me to one = not like me at all for each question. The overall grit score is derived from adding the scores for each question and dividing by eight (number of questions) with an overall five = extremely gritty and one = not gritty at all (Duckworth & Quinn, 2009).

Reliability and validity of the Grit-S scale were tested utilizing confirmatory factor analyses within the four original samples utilized for the development of the Grit-O scale within six separate studies (Duckworth et al., 2007; Duckworth & Quinn, 2009). The six studies tested each step of development of the Grit-S scale for validity to ensure the development of a more efficient tool. Reliability measures for the overall scale were reported using Cronbach's alpha

with a range of .73 to .83. The two-factor subscales were reported using Cronbach's alpha with a range of .73 to .79 for the passion subscale and .60 to .78 for the perseverance subscale (Duckworth, Quinn, & Seligman, 2009). For this study, the overall scale score of five (extremely gritty) to one (not gritty at all) was utilized. Predictive validity was confirmed utilizing a test-retest analysis over a one-year time period within three of the six samples at $r = 0.08, p < 0.001$ (Duckworth et al., 2009). This instrument has been utilized effectively in previous research (Mandelbaum, 2018; Strayhorn, 2014; Wolters & Hussain, 2015). Permission for the use of this scale is provided for teachers and researchers. A copy of the Grit-S scale can be found in Appendix A.

Teacher Self-Efficacy Scale

The TSES was developed by Tschannen-Moran and Woolfolk Hoy (2001) in response to the need for a valid and reliable instrument to measure issues related to TSE impacting commitment, persistence, and retention. Tschannen-Moran and Woolfolk Hoy (2001) expanded previous self-efficacy scales to include assessing teachers' feelings of personal competence in connection with analyzing typical tasks in relation to the available resources and constraints. The TSES Long Form is a 24-question, self-report survey assessing a range of capabilities believed to be important for good teachers (Tschannen-Moran & Hoy, 2001). Scoring of each question is based on a nine-point Likert scale responding to "how much can you do?" with scores ranging from one = nothing to nine = a great deal. The middle marker measures five = some influence. An overall scale score is obtained by adding the responses where 24 = a low sense of self-efficacy and 216 = a high sense of self-efficacy. The developers of this tool recommended factor analysis to gain a sense of teacher efficacy in the areas of student engagement,

instructional strategies, and classroom management. Item breakdowns for each factor subscale are provided at the end of the scale for easy scoring and reference.

Reliability for the overall long form, 24-item TSES and the three subscales were reported using Cronbach's alpha. The 24-item scale had a reliability of .94. The reliability for each subscale is as follows: efficacy in student engagement = .87, efficacy in instructional strategies = .97, and efficacy in classroom management = .90 (Tschannen-Moran & Hoy, 2001). Construct validity was tested through correlation assessments of the TSES and three previously existing scales. A positive correlation was found with research and development (Rand) researchers items at $r = 0.18$ and 0.53 , $p < 0.01$, and the Gibson and Dembo TES measure of personal teaching efficacy at $r = 0.64$, $p < 0.01$, and the general teacher efficacy measure at $r = 0.16$, $p < 0.01$ (Tschannen-Moran & Hoy, 2001). The TSES has been utilized in many research studies (Ryan, Kuusinen, & Bedoya-Skoog, 2015; Van Daal, Donche, & De Maeyer, 2014; Wang et al., 2015). Permission for the use of this instrument was provided by Dr. Anita Woolfolk Hoy via email (see Appendix B) at which time a permission letter was provided via a direct website link (see Appendix C). A copy of the TSES can be found in Appendix D and the scoring guidance in Appendix E.

Procedures

The researcher obtained approval from the Liberty University's Institutional Review Board (see Appendix F) as well as permission to conduct the study in the chosen district (see Appendix G). After receiving approval, the researcher contacted the principal at each of the four high schools in the district to schedule a meeting to discuss the proposed study. The purpose of this meeting was two-fold: to present the details and purpose of the study and to obtain permission to present the study to the school faculty and invite participation. Three out of the

four principals accepted the invitation for this meeting. Each principal agreed to alert their faculty they would be receiving the surveys and expressed their agreement for the study to be conducted within the school. The week after the final meeting, an email was sent out to each faculty member at all four high schools containing the study surveys.

The three study surveys (Grit-S, TSES, and the demographic survey) were converted to Google Forms as this district is a Google district and all teachers have been trained on and regularly utilize Google Suite products. All identifiers were turned off to allow for the responses to remain confidential. No email addresses or names were recorded with responses. The three surveys were sent in the same email along with directions, a brief explanation, and a statement of thanks for their participation. Participants were reminded this is a voluntary study, and their responses were very important. Completion time of all three surveys was approximately 20-30 minutes. A time limit of one week was placed on responses. At the end of one week, an email was sent out reminding participants who were willing to participate but had not completed the forms. An extension of a third week was provided to ensure the minimum sample size ($n = 66$) was obtained. At the conclusion of the third week, a final email was sent out thanking participants for their time and input and marked the end of data collection. See Appendix H for the recruitment email and Appendix I for the participant consent.

Data collected through Google Forms were stored on a spreadsheet to allow for easy manipulation and use. All data was run through the chosen analyses, and interpretations were made looking at the level of teacher grit related to their sense of self-efficacy in classroom management and student engagement. Results will be reported and provided to the principals of each school for assistance in guiding professional development or personal development opportunities for the staff.

Data Analysis

The obtained data were entered into the SPSS and the product-moment correlation coefficient (Pearson's r) analysis was run to determine the strength of the relationship between teacher grit and sense of self-efficacy in classroom management and student engagement. The resulting data were used to determine whether the null hypotheses was rejected.

To ensure validity of the Pearson correlation in testing the null hypotheses, several assumptions were tested. The variables of grit and teacher sense of self-efficacy are continuous variables, which can be paired to each other for analysis. The assumption of linearity was tested through the use of scatterplots to ensure a linear relationship existed between the variables. Scatterplots were visually inspected to determine the strength and direction of linearity. Box and whisker plots were utilized to examine for extreme outliers in the data. These outliers were evaluated to determine if they should be excluded from the data. Bivariate normality assumptions were run to ensure both variables, grit and self-efficacy, were normally distributed and were reported at the 0.05 confidence level. Significance levels were reported at the alpha level $p < 0.05$ with statistical power of .07 at the medium effect size.

Summary

This chapter presented the methodology for testing the two null hypotheses related to the overall research questions posed. The study design including participants, setting, instrumentation, procedures, and analysis was outlined. In the next chapter, findings from the data analysis will be presented.

CHAPTER FOUR: FINDINGS

Overview

Chapter Four discusses the findings from the data analysis performed to address the research questions and null hypotheses. This study investigated the relationship between grit and teacher sense of self-efficacy in classroom management and student engagement. Data was collected through the Short Grit Scale (Grit-S) and the Teacher's Sense of Self-Efficacy Scale (TSES). The research questions, null hypotheses, descriptive statistics, and results of the analysis will be presented.

Research Questions

This study sought to answer the following research questions:

RQ1: Is there a relationship between high school teachers' level of grit and their self-efficacy in classroom management?

RQ2: Is there a relationship between high school teachers' level of grit and self-efficacy in student engagement?

Null Hypotheses

The null hypotheses for this study are:

Ho1: There is no statistically significant correlation between grit level measures by the Short Grit Scale (Grit-S) and self-efficacy beliefs in classroom management measured by the Teacher Self-Efficacy Scale (TSES) of high school teachers.

Ho2: There is no statistically significant correlation between grit level measures by the Short Grit Scale (Grit-S) and self-efficacy beliefs in student engagement measured by the Teacher Self-Efficacy Scale (TSES) of high school teachers.

Descriptive Statistics

The descriptive statistics for the quantitative variables of grit ($M = 3.86$ and $SD = .51$) and self-efficacy in classroom management ($M = 7.67$ and $SD = .86$) and self-efficacy in student engagement ($M = 7.63$ and $SD = .88$) were analyzed using data from 92 high school teachers from four high schools across one district in central South Carolina. Surveys were sent out via email to 379 high school teachers with 92 (24%) returning responses. Total grit scores ranged from 2.38 to 5.00 out of a maximum score of 5.00. The self-efficacy scale renders a total efficacy score as well as three indicators aggregated by individual question groupings. Of the three indicators, two were of importance to this study: self-efficacy in classroom management and self-efficacy in student engagement. The total score for self-efficacy in classroom management ranged from 5.05 to 9.00 and the total score for self-efficacy on student engagement ranged from 4.86 to 9.00 out of a maximum score of 9.00. In this study, grit was the predictor variable and self-efficacy in classroom management and self-efficacy in student engagement are the criterion variables. See Table 1 for descriptive statistics for grit, self-efficacy in student engagement, and self-efficacy in classroom management.

The descriptive statistics for the participants of this study resemble those of the overall district chosen. Of the 92 respondents, 74.4% were female, 24.4% were male, and 1.1% preferred not to specify. Ethnicity among participants was reported as 80% Caucasian, 13.3% Black/African American, 3.3% Hispanic/Latino, and 3.3% Asian. Regarding years of teaching experience, 17.5% were considered novice teachers with 0-5 years of experience, 71.1% reported 6-30 years of experience, and 11.1% reported 30 plus years of experience and considered eligible for retirement. In regard to education level, 16.7% have obtained a bachelor's degree, 71.1% a

master's degree, and 12.2% obtained other advanced-level degrees (specialist or higher).

Complete descriptive statistics for the participants of this study can be found in Table 2.

Table 1

Descriptive Statistics for the Variables of Grit and Self-efficacy

Variables	N	Mean	SD	Min	Max
Grit Score	92	3.86	.51	2.38	5.00
Self-efficacy in Classroom Management	92	7.67	.86	5.05	9.00
Self-efficacy in Student Engagement	92	7.63	.88	4.86	9.00

Results

The data obtained in this study were put into the IBM Statistical Package for the Social Sciences (SPSS) system and analyzed utilizing the product-moment correlation (Pearson r). Each null hypothesis was assessed through assumptions of linearity utilizing scatterplots to determine the strength and direction of potential relationships, box and whisker plots were examined for extreme outliers, and bivariate normality assumptions were run with results reported at the 0.05 confidence level at the alpha level $p < 0.05$ with the statistical power of 0.07 at the medium effect size. Each null hypothesis will be addressed individually.

Table 2

Participant Demographics

Characteristics	n	%
Gender		
Female	67	74.4
Male	22	24.4
Prefer not to say	1	1.1
Ethnicity		
White/Caucasian	72	80
Black/African American	12	13.3
Hispanic/Latino	3	3.3
Asian	3	3.3
Age		
20 – 29 years old	8	8.9
30 – 39 years old	25	27.8
40 – 49 years old	24	26.7
50 – 59 years old	22	24.4
60 years or older	11	12.2
Teaching Experience		
0 – 5 years	16	17.8
6 – 10 years	15	16.7
11 – 20 years	29	32.2
21 – 30 years	20	22.2
31 years or more	10	11.1
Subject Taught		
English	7	7.8
Science	14	15.6
Social Studies	13	14.4
Math	15	16.7
Special Education	12	13.3
Foreign Language	6	6.7
Physical Education	6	6.7
Fine Arts	6	6.7
CATE	11	12.2
Highest Level of Education		
Bachelor's Degree	15	16.7
Master's Degree	37	41.1
Master's Degree plus 30	27	30.0
Specialist Degree	2	2.2
Doctoral Degree	9	10.0

Data Screening

An assumption of bivariate outliers was run to determine if a score fell outside the region in the X,Y scatterplot. Extreme outliers must be identified and removed as they can have a disproportionate impact on the Pearson Correlation (Warner, 21013). Box plots and scatterplots were run on each variable to identify potential extreme outliers in the scores (Warner, 2013). Upon review of the graphs, the outliers were removed from the data set prior to running the remaining analyses. Figures 1-3 display the box plots for each variable. Figures 3 and 4 display the scatterplots for the predictor variable (x) and the criterion variables (y).

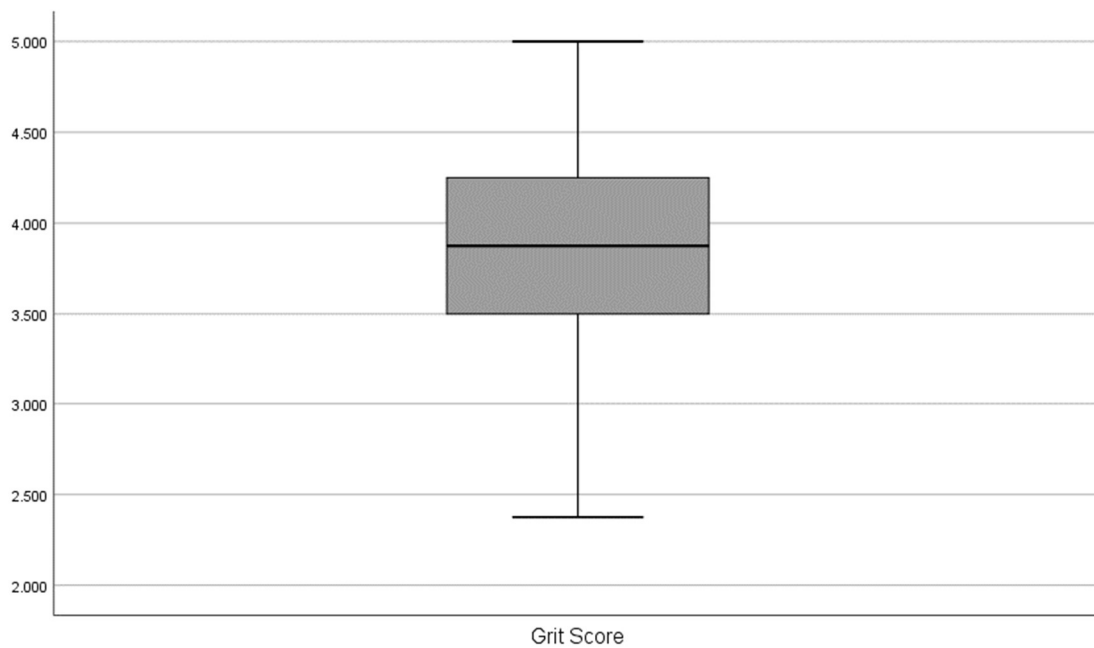


Figure 1. Boxplot graph for grit score.

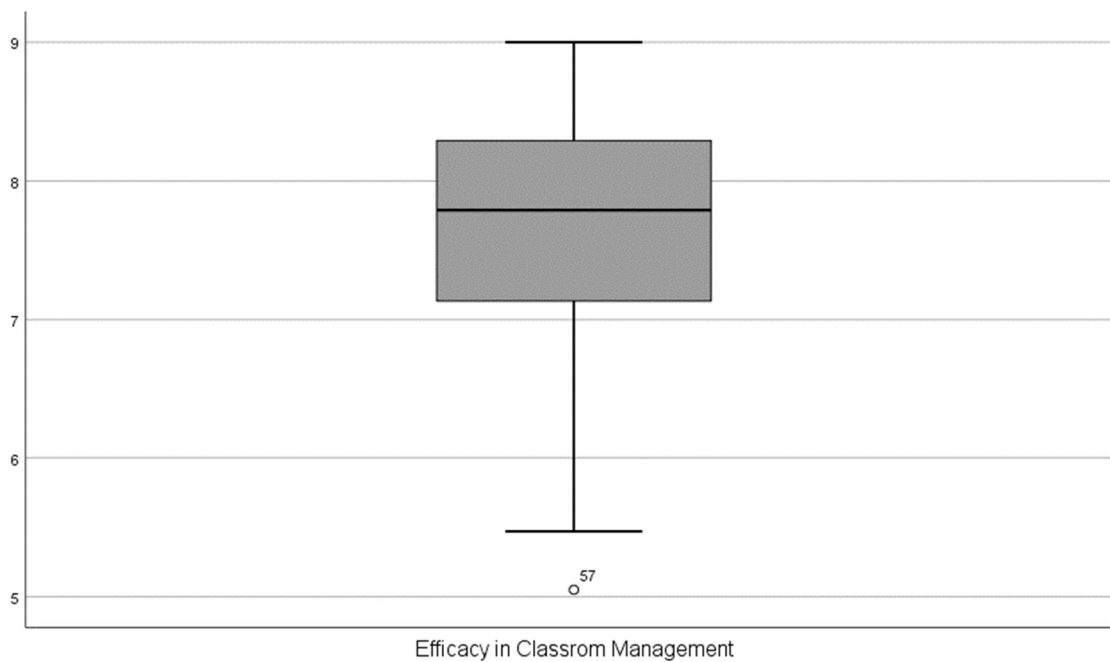


Figure 2. Boxplot graph for self-efficacy in classroom management.

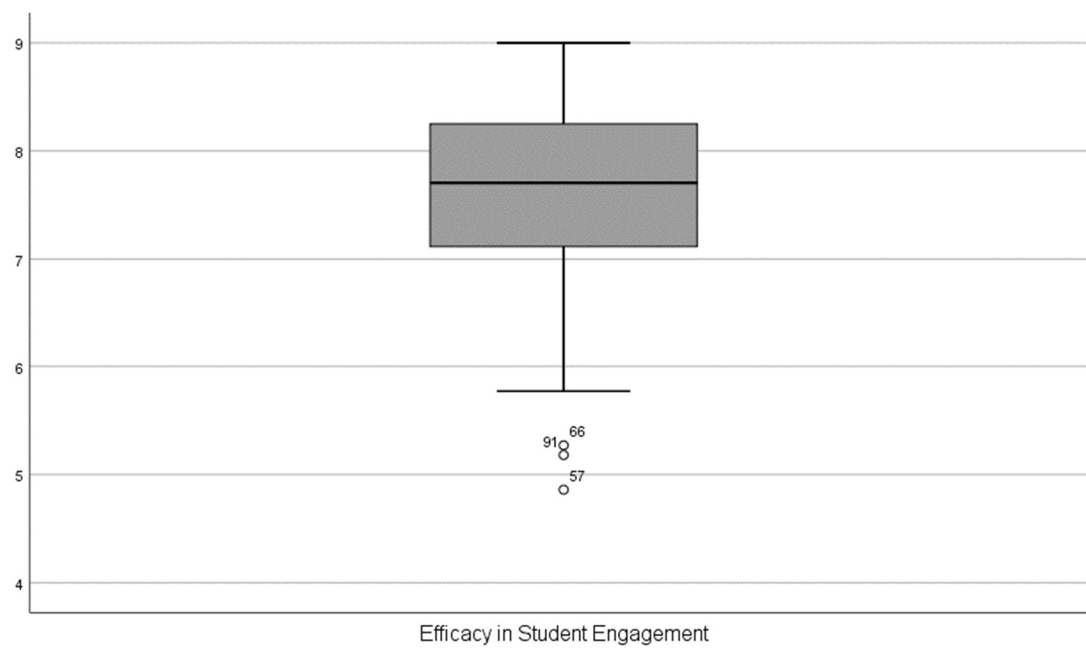


Figure 3. Boxplot graph for self-efficacy on student engagement.

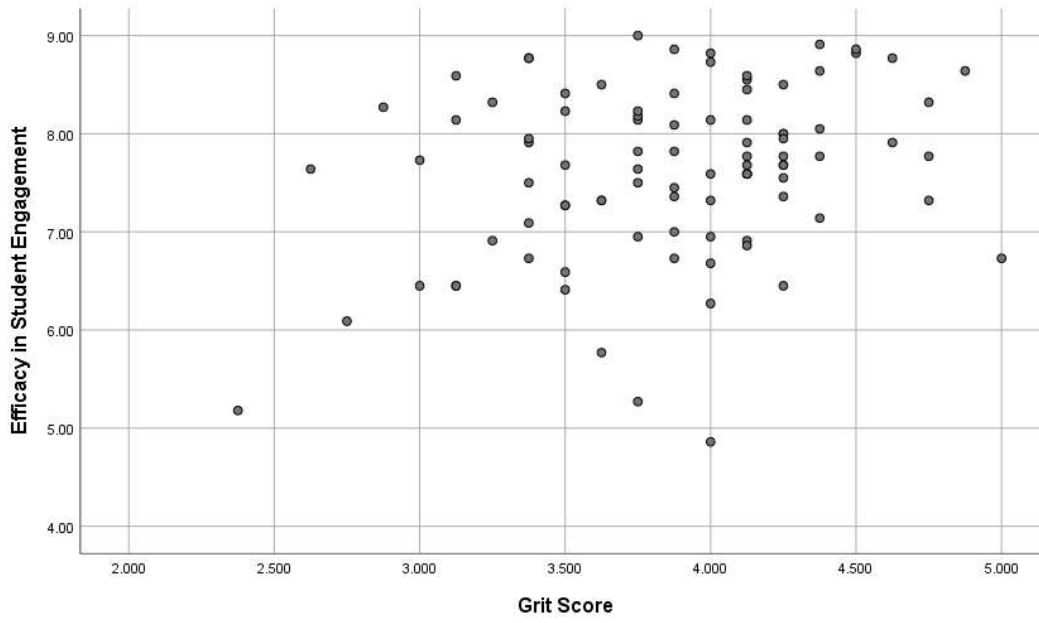


Figure 4. Assumption of Bivariate Outliers for the relationship between grit score (x) and efficacy in student engagement (y)

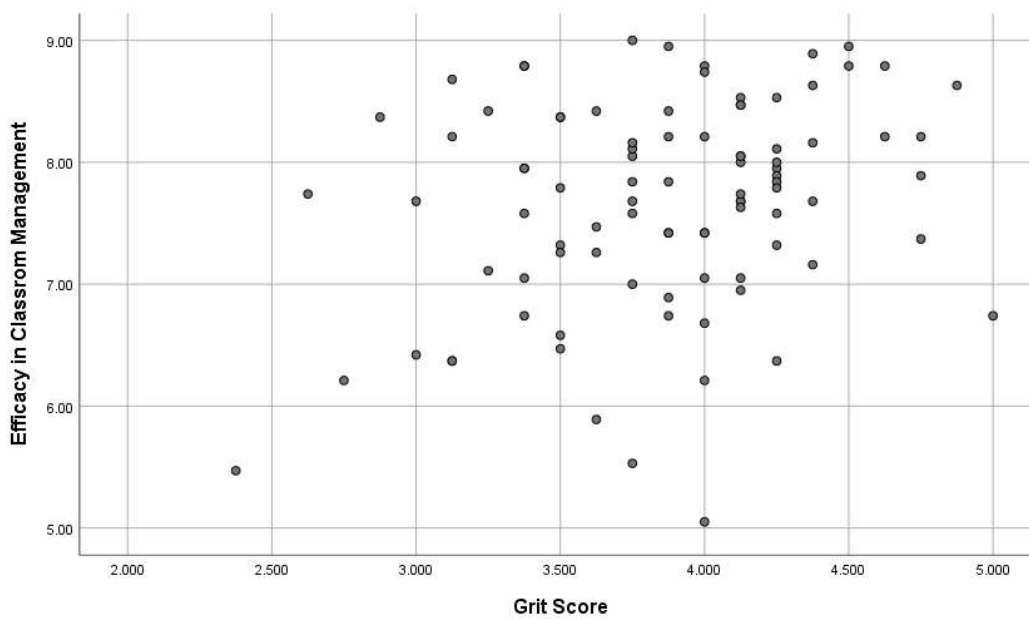


Figure 5. Assumption of Bivariate Outliers for the relationship between grit score (x) and efficacy in classroom management (y)

Normality

Results of the box plots revealed several outliers which were removed from the data set. Once these data points were removed, histogram charts were created for the criterion and predictor variable to determine an assumption of normality was met for all three variables. Figures 6-8 depict the results of the histograms for each variable.

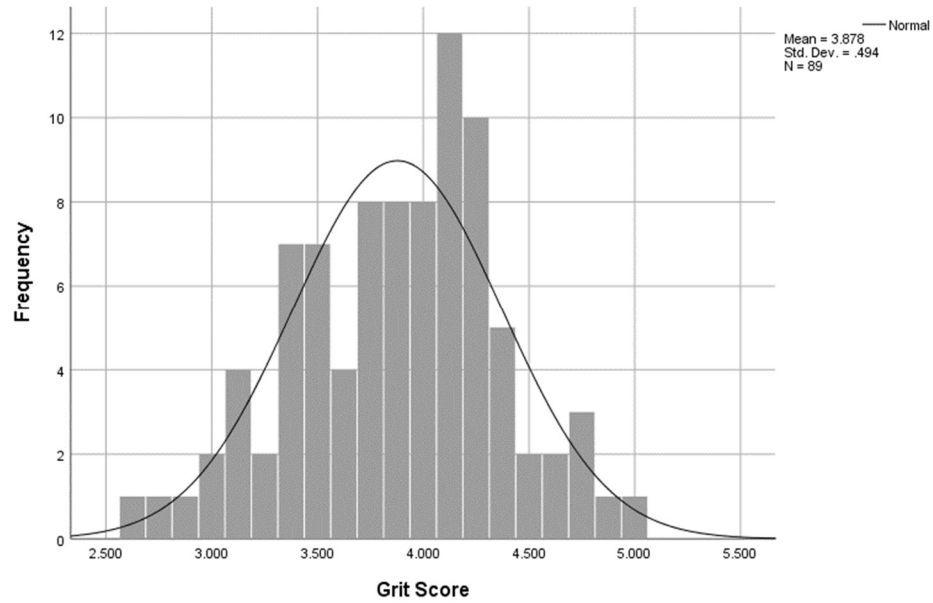


Figure 6. Histogram of grit scores.

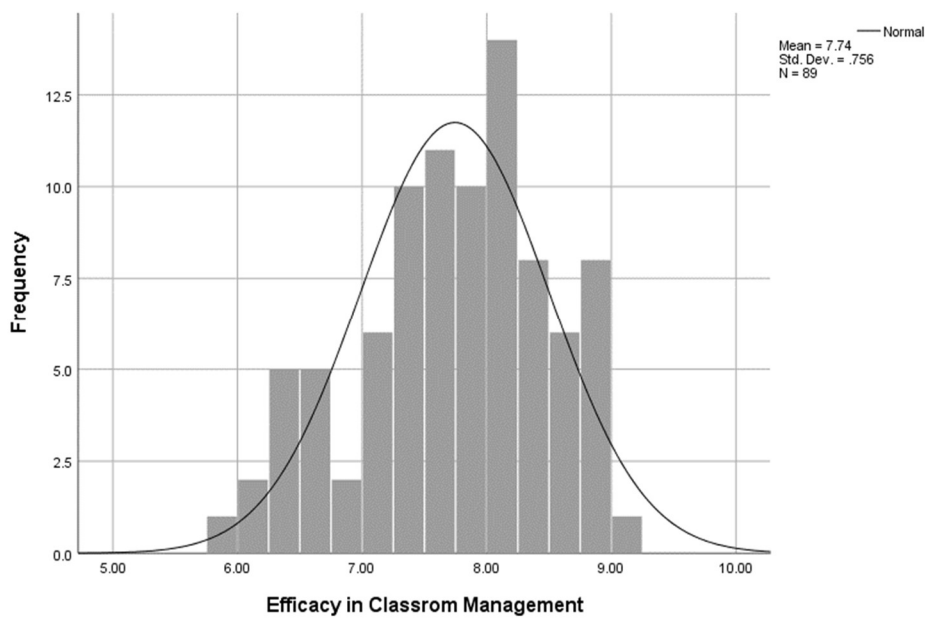


Figure 7. Histogram of efficacy on classroom management.

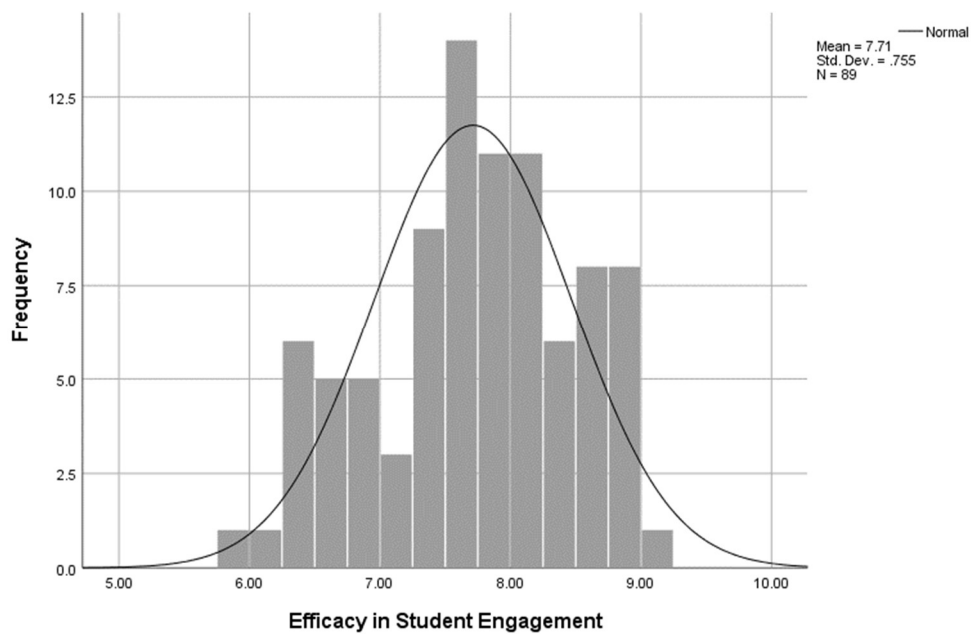


Figure 8: Histogram of efficacy in student engagement.

To further test for normality, the Kolmogorov-Smirnov test was run as the sample size ($N = 89$) is greater than 50 (Green & Salkind, 2017). Review of the results reveal no violations of normality for self-efficacy in classroom management ($p = .200$) and self-efficacy in student

engagement ($p = .200$). Grit, however, did not meet the assumption of normality ($p = .042$) by a slight margin. Table 3 displays the data for the Kolmogorov-Smirnov test.

Table 3

Kolmogorov-Smirnov Test of Normality

Variable	Statistic	df	Sig.
Efficacy in Student Engagement	.065	89	.200
Efficacy in Classroom Management	.073	89	.200
Grit Score	.096	89	.042

Linearity

An assumption of linearity was run by adding a line of fit to the above scatterplots. To continue with the Pearson correlation data analysis, data must be linear (Warner, 2013). This means that the predictor variable (x) is linearly related to the criterion variables (y). Analysis of the scatterplot with the line of fit also depicts the direction of the relation between the data (Warner, 2013). Review of the line of fit graphs reveals the assumption of linearity was met for both self-efficacy in classroom management and self-efficacy in student engagement in relation to grit. Both graphs also show a positive relation within the data. Figures 9 and 10 display the scatterplot with the line of fit.

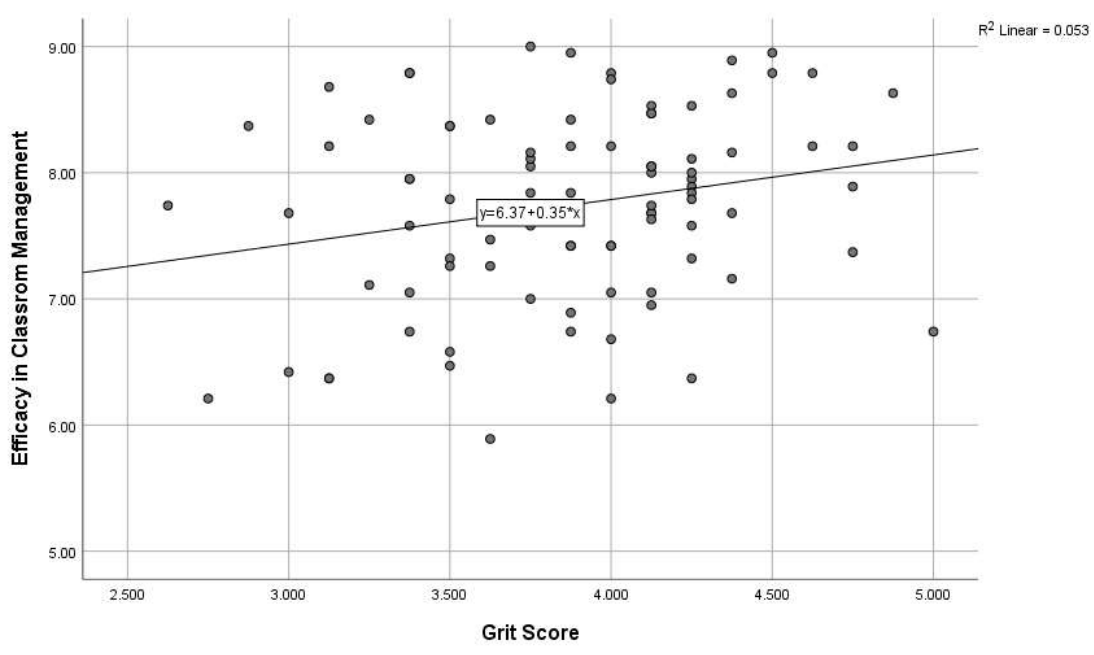


Figure 9. Scatter plot with the line of fit for grit score (x) and efficacy in classroom management (y).

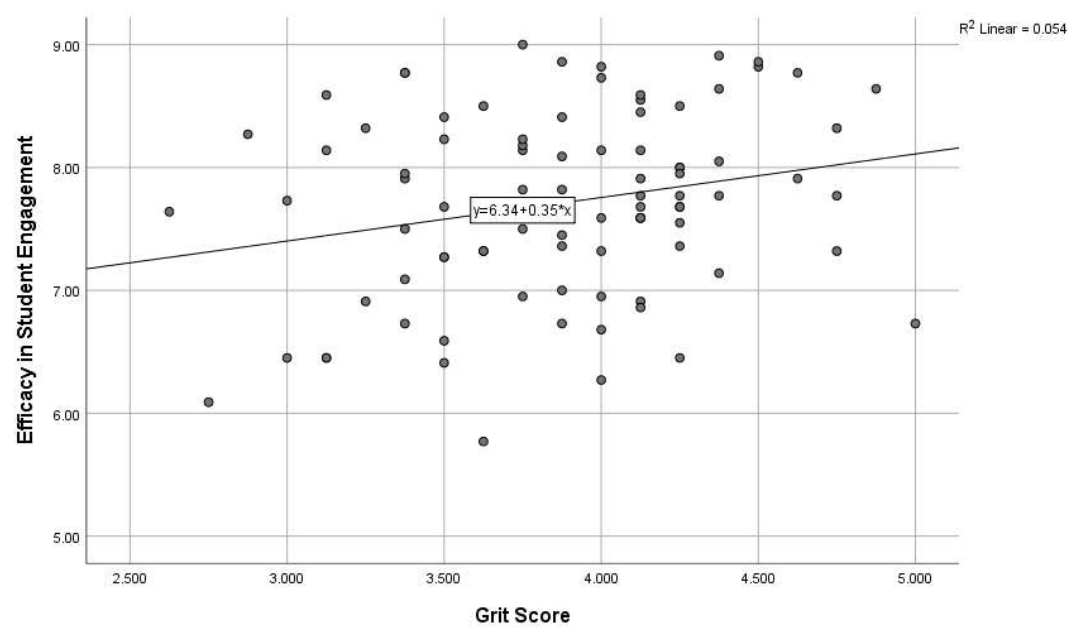


Figure 10. Scatterplot with the line of fit for grit score (x) and efficacy in student engagement (y).

Null Hypotheses One

The Pearson correlation was run to test the first null hypothesis that there is no statistically significant correlation between grit level measured by the Short Grit Scale (Git-S) and self-efficacy beliefs in classroom management measured by the Teacher Self-Efficacy Scale (TSES) of high school teachers. Data were obtained through the grit survey and the TSES for the quantitative variables of grit ($M = 3.86$ and $SD = .51$) and self-efficacy in classroom management ($M = 7.67$ and $SD = .86$). Assumption of bivariate outliers was run to identify extreme outliers resulting in 3 scores being removed from the data set. The Kolmogorov-Smirnov test was run for normality of the data ($N = 89$). Teacher self-efficacy in classroom management ($p = .200$) was found to be normally distributed while grit score normality was rejected at $p = .042$. To address the problem of normality for grit, the Spearman's *rho* (Warner, 2013) was run with a significance level reported at $r_s = .238$ between grit and self-efficacy in classroom management. There was a minimal difference between the Spearman's *rho* ($r_s = .238$) and the Pearson's correlation ($r = .231$); therefore, data analysis with the Pearson's correlation was continued.

At the 0.05 confidence level, alpha level $p < 0.05$, and statistical power of 0.07 at the medium effect size where $r(89) = .231$, $p = .029$, the null hypothesis must be rejected. This analysis shows a significant, positive relationship between grit and self-efficacy in classroom management. See Table 4 for the Pearson's correlation results, and Table 5 for the Spearman's *rho* results.

Null Hypothesis Two

The Pearson Correlation was run to test the second null hypothesis that there is no statistically significant correlation between grit level measures by the Short Grit Scale (Grit-S)

and self-efficacy beliefs in student engagement as measured by the Teacher Self-Efficacy Scale (TSES) of high school teachers. Data were obtained through the Grit-S and the TSES for the quantitative variables of grit ($M = 3.86$ and $SD = .51$) and self-efficacy in student engagement ($M = 7.63$ and $SD = .88$). Assumption of bivariate outliers was run to identify extreme outliers resulting in three scores being removed from the data set. The Kolmogorov-Smirnov test was run for normality of the data ($N = 89$). Teacher self-efficacy in student engagement ($p = .200$) was found to be normally distributed while grit score normality was rejected at $p = .042$. To address the problem of normality for grit, the Spearman's rho (Warner, 2013) was run with a significance level reported at $r_s = .237$ between grit and self-efficacy in student engagement. There was minimal difference between the Spearman's rho ($r_s = .237$) and the Pearson's correlation ($r = .232$); therefore, data analysis with the Pearson's correlation was continued.

At the 0.05 confidence level, alpha level $p < 0.05$, and statistical power of 0.07 at the medium effect size where $r(89) = .232$, $p = .029$, the null hypothesis was rejected. This analysis shows a significant, positive relationship between grit and self-efficacy in student engagement. See Table 4 for the Pearson's correlation results, and Table 5 for the Spearman's rho results.

Table 4

Pearson's Correlations between Grit and Self-efficacy in Student Engagement and Self-efficacy in Classroom Management

		Efficacy in Student Engagement	Efficacy in Classroom Management
Grit Score	Pearson Correlation	.232*	.231*
	Sig (2-tailed)	.029	.029
	N	89	89

*Correlation is significant at the 0.05 level (2-tailed)

Table 5

Spearman's rho Correlations between Grit and Self-efficacy in Classroom Management and Self-efficacy in Student Engagement

		Efficacy in Student Engagement	Efficacy in Classroom Management
Grit Score	Pearson Correlation	.237	.238
	Sig (2-tailed)	.023	.022
	N	92	92

Summary

The results of the Pearson's correlation test run between grit scores from the Grit-S and the self-efficacy in classroom management and self-efficacy in student engagement scores obtained from the TSES, displayed a significant, positive relationship between the variables among high school teachers. Therefore, both null hypotheses were rejected at the 0.05 confidence level at an alpha level $p < 0.05$ and a statistical power of 0.07 with a medium effect size.

CHAPTER FIVE: CONCLUSIONS

Overview

Chapter Five will discuss the findings of this research study which explored the potential relationship between grit and self-efficacy in classroom management and self-efficacy in student engagement among high school teachers. Each research question will be discussed separately. This chapter will also address implications of the findings, limitations of the study, and recommendations for future research.

Discussion

A correlational design study was conducted to determine the potential relationship between grit and teacher sense of self-efficacy in classroom management and self-efficacy in student engagement among high school teachers. Grit is defined by Duckworth (2016) as the passion and perseverance to continue with a difficult task. Self-efficacy is an individual's belief in his or her ability to master a skill (Bandura, 1993). For this study, grit was the predictor variable and self-efficacy in classroom management and self-efficacy in student engagement were the criterion variables. This study utilized a convenient volunteer sampling method of the high school level teachers in a large district. Data was collected through the Grit-S scale as well as the Teacher Self-Efficacy Scale to address the following research questions:

RQ1: Is there a relationship between high school teachers' level of grit and their self-efficacy in classroom management?

RQ2: Is there a relationship between high school teachers' level of grit and self-efficacy in student engagement?

The Pearson's correlation results revealed a significant, positive relationship between grit level and self-efficacy in classroom management ($r(89) = .231, p = .029$) as well as between grit

and self-efficacy in student engagement ($r(89) = .232, p = .029$). This current study addresses a gap in the literature relating the concepts of grit and self-efficacy and their potential relationships among veteran teachers. Limited research exists that investigates the impact of grit and teacher sense of self-efficacy (Mansfield et al., 2016; Martins et al., 2018).

This study's theoretical base was Deci and Ryan's (1985) self-determination theory (SDT), Bandura's (1977) self-efficacy theory, and Duckworth et al.'s (2009) grit theory. All three of these theories address an individual's reasoning behind their decisions and actions and one's abilities to follow through with those actions. Research addressing self-determination or self-efficacy among teachers is easily found; however, studies involving grit among teachers is scant. Duckworth (2016) states that grit can be a predictive factor in a veteran teacher's longevity within the profession. Understanding how grit and self-efficacy relate to each other in the areas of classroom management and student engagement may provide insight to district and school leaders for decreasing burnout and frustration with the teaching profession and subsequently improving retention rates among their teachers.

Null Hypothesis One

The first question this study sought to address was whether there is a significant relationship between grit and self-efficacy in classroom management among high school teachers. The results showed a significant positive relationship does exist at the 0.05 confidence level, alpha level $p < 0.05$, and statistical power of 0.07 at the medium effect size where $r(89) = .231, p = .029$. Teacher grit is the passion and perseverance a teacher has to continue on in difficult situations. These situations may include dealing with student behaviors, challenging parents, or a lack of administrative support. Researchers noted that the classroom teacher has the greatest impact on students as they have the most daily contact with their students within the

classroom (Anand, 2020; Beatty-O’Ferrall et al., 2010; Scherzinger & Wettstein, 2019). The teachers’ thoughts and views influence how they interact with their students (Gasser et al, 2018; Scherzinger & Wettstein, 2019). These interactions include classroom management styles.

The significant, positive relationship reported between grit and self-efficacy in classroom management supports other research studies noting that teachers who have passion for teaching are caring leaders in their classrooms (Wilson, 2013) leading to improved student-teacher relationships thus improving classroom management (Aloe et al., 2014). Bandura (1977, 1993) states in his self-efficacy theory that individuals tend to avoid difficult tasks thus not improving in their abilities. Teachers develop more positive self-efficacy when they learn to persevere through the difficult tasks ultimately increasing their commitment to their job (Zee & Koomen, 2016). The significant, positive relationship found also supports the correlation between self-efficacy and classroom management (Aloe et al., 2014; Yuksel, 2014). In this study, as grit scores increased, so did self-efficacy scores. As there is limited research relating grit and self-efficacy in classroom management, the current results increase the body of knowledge in this area.

Null Hypothesis Two

The second question the current study sought to answer was whether there is a significant relationship between grit and teacher self-efficacy in student engagement. The results show a significant positive relationship does exist at the 0.05 confidence level, alpha level $p < 0.05$, and statistical power of 0.07 at the medium effect size where $r(89) = .232, p = .029$. The hallmark of Bandura’s (1977, 1993) self-efficacy theory lies in one’s feelings of success or failure. As individuals experience mastery in a task, their self-efficacy increases. Teachers model these mastery experiences to their students in turn increasing student’s efficacy and overall

achievement (Pfitzner-Eden, 2016). An increase in teacher grit (passion for teaching and perseverance through difficulties) affects student engagement through the teacher's willingness to remain in the classroom and focus on providing quality instruction (Robertson-Kraft & Duckworth., 2014).

Grit is related to student achievement through Dweck's (2006) growth mindset research. Teachers who possess a growth mindset can teach their students to persist through challenging or difficult coursework without giving up. This increases student grit levels, which increases their engagement and ultimately achievement levels (Hochanadel & Finamore, 2015). The significant, positive relationship found between grit and self-efficacy in student achievement supports the connection made between a higher teacher self-efficacy and teacher willingness to try new strategies or changing their teaching methods to increase student engagement (Tschannen-Moran & Hoy, 2001; Zee & Koomen, 2016). A teacher with a higher grit level is more likely to persist through feelings of burnout or stress without developing the feelings of incompetence in their classroom as noted by Herman et al. (2018) and Zhu et al. (2018), which would have a negative impact on teaching performance thus potentially decreasing student engagement. The results of this study suggest that higher grit levels among veteran teachers do yield a higher sense of self-efficacy in student engagement suggesting teachers can combat that feeling of incompetence.

Implications

Classroom teachers at all levels encounter increased negative student behaviors, a decrease in administrative or community support, and growing increases in required job functions, which may lead to an increase in burnout and an increase in teachers leaving the classroom. As veteran teachers face increased burnout and increased stress, their abilities to

effectively teach and grow their students decreases (Skaalvik & Skaalvik, 2010). There are several implications that can be drawn from this current study that could proffer guidance for increasing support of teachers and the quality of their professional life. This study adds to the limited body of research connecting grit and self-efficacy of veteran teachers, specifically in the areas classroom management and student engagement. Grit is a fairly new concept and research focusing on veteran teachers is limited (Cruz & Herzog, 2018).

Retaining highly qualified K-12 teachers is a concern. The results of this study provide insight into recruiting and retaining teachers by underscoring personality traits (grit and self-efficacy) to look for in the recruitment process and providing insight into stressors that may cause teachers to leave. Teachers who exhibit higher levels of grit tend to stay in their positions and those with lower levels of grit will tend to leave (Dale et al., 2018; Robertson-Kraft & Duckworth, 2014). Teachers with higher grit levels staying in the classroom increases academic gains within students and provides stability for the school and future students. Bandura (1977, 1993) stated people avoid tasks they feel they are not capable of being successful which points to self-efficacy. Teachers can improve their level of self-efficacy and grit through maintaining a growth mindset (Dweck, 2006). Understanding how these concepts connect is important for school and district level administration as they support and grow their veteran teachers. Challenges created by politics, social unrest, or health related crises are felt in the classroom. Teachers' jobs become more difficult with increasing stress, responsibility, and work, which only adds to the retention concerns. District and school officials must be more mindful of how to provide effective support for the teachers in their buildings.

One way to support classroom teachers is to provide targeted and appropriate professional development opportunities to meet teacher's self-efficacy needs. Yuksel (2014)

found that effective professional development increases teachers' feelings of success and consequently their self-efficacy. The district utilized to conduct this study has a strong teacher-led professional development program which is grounded in teacher choice. Teachers have the opportunity to take part in a year-long cohort of professional development sessions focused on a topic of benefit to them. This program likely plays a large part in the higher self-efficacy ratings obtained in the surveys. Many districts have developed programs to support novice teachers or new to their district teachers for the first three years of employment. It is important for school and district officials to provide similar support to veteran teachers. Classroom management concerns and instructional strategies change frequently. Providing necessary and effective training to teachers will increase their level of self-efficacy, develop a growth mindset and in turn, increase grit.

Limitations

Several important limitations to this study need to be considered. Researchers need to address both internal and external validity concerns within their study that may threaten validity (Creswell, 2015). The first limitation was the convenience sampling procedure used for this study as it threatens the generalizability of the results. Potential participants were 346 high school teachers across the four high schools of one district in central South Carolina. The threat of generalizability affects the ability to draw inferences across other settings or populations (Gall et al., 2007). The district utilized is a more affluent district that is sought after by teacher applicants. The inferences made from data collected may or not be generalized across other districts in the area or across the state.

Another limitation related to generalizability was the use of only high school level teachers. The results found in this study and inferences may likely not be generalized to other

educational levels (elementary or middle school). The study was conducted within a public-school district. This also limits the potential for making inferences across private school or charter school settings. The challenges faced within these other settings may or may not match those found in the public sector.

Another limitation of this study is the threat of internal validity. Correlational studies inherently have low internal validity due to the absence of the researcher manipulating variables. Surveys were sent to participants via email and participants chose whether to participate or not. The researcher had no control over how many participants fell in each category of years of experience, for example. The data were taken as a whole as opposed to aggregating potential impacts among subgroups of participants. Due to this internal validity concern, correlational designs are most effective at determining relationship between variables.

Another internal validity concern was the nature of the Grit-S and the TSES Scales completed by participants. These surveys are self-reported surveys. Self-reported surveys could be influenced by personal bias. Participants' responses could be over reported or under reported depending upon personal feelings at the time of participation. It is important to note this potential bias as data is reported and manipulated.

A final limitation was the timing of the dissemination of the actual surveys. Teachers received the surveys and were asked to participate in the summer months. This may have limited participation as not all teachers check their email during the summer. More importantly, the surveys were disseminated during the time the district being surveyed was working to release their plan to re-open schools because of the COVID-19 pandemic. Emotions were high among teachers across the state as they waited to hear what would be expected of them during the upcoming school year while working through their personal feelings of safety and security with

returning to the classroom. This added stress may or may not have affected the direction of the responses from the participants.

Recommendations for Future Research

Upon review of the findings, results, and limitations of this study, there are a number of recommendations for future research to consider. The following recommendations should be considered to increase the strength of the conversation for supporting novice and veteran teachers across all settings and subsequently providing quality and effective educational opportunities for all students.

- (a) Replicate this study and include teachers at the elementary and middle school levels.
- (b) Replicate this study within private and charter schools. Consider comparing and contrasting the results from these educational settings with the public schools.
- (c) Supplement the quantitative data gathered with qualitative interviews to gather further information and drill deeper into the reasoning for teacher responses.
- (d) Replicate this study utilizing between district comparisons to determine the difference in grit and self-efficacy among teachers in less affluent districts and teachers in more affluent districts. Future researchers could take this a step further and look at what factors among the differences in the districts affect the teachers the most.
- (e) Develop additional survey questions to account for attitudinal changes among teachers pre-pandemic and post-pandemic to determine the potential effect of the COVID-19 pandemic on teacher grit and self-efficacy.

References

- Able, H., Glazier, J., Mallous, R., Boyd, A., Bell-Hughes, K., & Eaker-Rich, D. (2018). Reconnect and recharge: Plugging new teachers into support outlets. *Action in Teacher Education, 40*(2), 203-219. doi:10.1080/01626620.2018.1424048
- Ahn, T. (2015). Locus of control and job turnover. *Economic Inquiry, 53*(2), 1350-1383. doi:10.1111/ecin.12173
- Akkaya, R., & Akyol, B. (2016). The relationship between teacher's locus of control and job satisfaction: A mixed method study. *International Online Journal of Educational Sciences, 8*(3), 71-82. doi:10.15345/iojes.2016.03.008
- Alderman, G. L., & Green, S. K. (2011). Social powers and effective classroom management: Enhancing teacher-student relationships. *Intervention in School and Clinic, 47*(1), 39-44. doi:10.1177/1053451211406543.
- Alibakshi, G., & Dehvari, N. (2015). EFL teachers' perceptions of continuing professional development: A case of Iranian high school teachers. *Profile: Issues in Teachers Professional Development, 17*(2), 29-42. doi:10.15446/profile.v17n2.44374
- Aloe, A. M., Amo, L. C., & Shanahan, M. E. (2014). Classroom management, self-efficacy and burnout: A multivariate meta-analysis. *Educational Psychology Review, 26*, 101-126. doi:10.1007/s10648-013-9244-0
- American Psychological Association. (2014). The road to resilience. Washington, DC: American Psychological Association. Retrieved from <http://www.apa.org/helpcenter/road-resilience.aspx>
- Anand, S. (2020, February). *A national profile of English learners*. Presentation at the meeting of National Association of English Learner Program Administrators, Las Vegas, Nevada.

- Anderson, C., Turner, A. C., Heath, R. D., & Payne, C. M. (2016). On the meaning of grit...and hope...and alienation...and locus of control...and...self-efficacy...and...effort optimism...and... *Urban Review*, *48*, 198-219. doi:10.1007/s11256-016-0351-3
- Argon, T., & Kaya, A. (2018). Examination of grit levels of teachers according to personal variables. *Journal of Education and Training Studies*, *6*(3a), 45-53.
doi:10.11114/jets.v6i3a.3157
- Bailey, L. (2019). Adverse childhood experiences and trauma [PowerPoint slides]. Retrieved from <https://docs.google.com/presentation/d/1culmPq7vHT2VkvOHdtQPvVxalEczBkVCiMndNbwraWg/edit?ts=5db86538#slide=id.p6>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191-215.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, *44*(9), 1175-1184.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, *28*(2), 117-148.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W.H. Freeman and Company.
- Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review*, *51*(2), 269-290. doi:10.1111/1464-0597.00092
- Bandura, A. (2018). Toward a psychology of human agency: Pathways and reflections. *Perspectives on Psychological Science*, *13*(2), 130-136. doi:10.1177/1745691617699280

- Banse, H., & Palacios, N. (2018). Supportive classrooms for Latino English language learners: Grit, ELL status and the classroom context. *Journal of Educational Research, 111*(6), 645-656. doi:10.1080/00220671.2017.1389682
- Bashant, J. (2014). Developing grit in our students: Why grit is such a desirable trait, and practical strategies for teachers and schools. *Journal for Leadership and Instruction, 13*(2), 14-17.
- Beaty-O'Ferrall, M. E., Green, A., & Hanna, F. (2010). Classroom management strategies for difficult students: Promoting change through relationships. *Middle School Journal, 41*(4), 4-11. doi:10.1080/00940771.2010.11461726
- Beltman, S. (2015). Teacher professional resilience: Thriving not just surviving. In N. Weathersby-Fell (Eds), *Learning to teach in the secondary school* (pp. 20-33). Port Melbourne, Australia: Cambridge University Press.
- Benson, A. (2019, October 11). D50 superintendent says modified calendar could be option in 2020. *Index-Journal*. Retrieved from https://www.indexjournal.com/news/d-superintendent-says-modified-calendar-could-be-option-in/article_a1e8bb82-8027-5465-9c88-8d6b939b1ae5.html
- Berry, B., & Shields, P. (2019). Solving the teacher shortage: revisiting the lessons we've learned. *Phi Delta Kappan, 98*(8), 8. <https://doi.org/10.1177/0031721717708289>
- Blazar, D., & Kraft, M. A. (2017). Teacher and teaching effects on students' attitudes and behaviors. *Educational Evaluation and Policy Analysis, 39*(1), 146-170. doi:10.3102/0162373716670260
- Boyd, L. (2012). 5 Myths about student discipline. *Educational Leadership, 70*(2), 62-66.

- Calderon, M. (2020, February). *Collaboration, cohesion, and leadership among administrators and teacher leaders of ELs*. Keynote address presented at the meeting of National Association of English Learner Program Administrators, Las Vegas, Nevada.
- Cavendish, W. (2013). Student perceptions of school efforts to facilitate student involvement, school commitment, self-determination, and high school graduation. *Social Psychology of Education: An International Journal*, 16(2), 257-275. doi:10.1007/s11218-013-9212-z
- Chang, Y. (2015). Examining relationships among elementary math teachers' efficacy and their students' math self-efficacy and achievement. *EURASIA Journal of Math, Science and Technology Education*, 116(6), 1307-1320. doi:10.12973/Eurasia.2015.1387a
- Ciani, K. D., Sheldon, K. M., Hilpert, J. C., & Easter, M. A. (2011). Antecedents and trajectories of achievement goals: a self-determination theory perspective. *The British Journal of Educational Psychology*, 81(2), 223-243. doi:10.1348/000709910X517399
- Clandinin, D. J., Long, J., Schaeffer, L., Downey, C. A., Steeves, P., Pinnegar, E., Robblee, S. M., & Wnuk, S. (2015). Early career teacher attrition: Intentions of teachers beginning. *Teaching Education*, 26(1), 1-16. doi:10.1080/10476210.2014.996746
- Collie, R., Shapka, J. D., Perry, N. E., & Martin, A. J. (2015). Teachers' beliefs about social-emotional learning: Identifying teacher profiles and their relations with job stress and satisfaction. *Learning and Instruction*, 39, 148-157.
doi:10.1016/j.learninstruc.2015.06.002
- Corso, M. J., Bundick, M. J., Quaglia, R. J., & Haywood, D. E. (2013). Where student, teacher, and content meet: Student engagement in the secondary school classroom. *American Secondary Education*, 41(3), 50-60.

- Cresswell, J. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (5th ed.). Boston, MA: Pearson Education, Inc.
- Cruz, L., & Herzog, M. J. (2018). Setting the faculty on fire: Fostering vitality in career faculty. *The Journal of Faculty Development*, 32(3), 25-34.
- Dag, N., & Sari, M. (2017). Areas of mentoring needs of novice and preservice teachers. *International Electronic Journal of Elementary Education*, 10(1), 115-129.
doi:10.26822/iejee.2017131892
- Dale, G., Sampers, D., Loo, S., & Green, C. S. (2018). Individual differences in exploration and persistence: Grit and beliefs about ability and reward. *PLoS ONE*, 13(9), 1-17.
doi:10.1371/journal.pone.0203131
- Daniels, L. M., Radil, A. I., & Goehan, L. D. (2017). Combinations of personal responsibility; Differences on pre-service and practicing teachers' efficacy, engagement, classroom goal structures and wellbeing. *Frontiers in Psychology*, 8, 1-12.
doi:10.3389/fpsyg.2017.00906
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.
- Demirdag, S. (2015). Classroom management and students' self-esteem: Creating positive classrooms. *Educational Research and Reviews*, 10(2), 191-197.
doi:10.5897/ERR2014.2000
- Diseth, Å., & Samdal, O. (2014). Autonomy support and achievement goals as predictors of perceived school performance and life satisfaction in the transition between lower and upper secondary school. *Social Psychology of Education: An International Journal*, 17(2), 269-291. doi:10.1007/s11218-013-9244-4

- Dobbins, D. (2016). *Teacher effectiveness: Examining the relationship between teacher grit and teacher self-efficacy* (Doctoral dissertation). Retrieved from Semantic Scholar.
- Donohoo, J., Hattie, J., & Eells, R. (2018). The power of collective efficacy. *Educational Leadership, 75*(6), 40-44.
- Duckworth, A. L. (2016). *Grit: The power of passion and perseverance*. New York, NY: Simon & Schuster, Inc.
- Duckworth, A., & Gross, J. J. (2014). Self-control and grit: Related but separable determinants of success. *Current Directions in Psychological Science, 1-7*.
doi:10.1177/0963721414541462
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 92*(6), 20187-1101. doi:10.1037/0022-3514.92.6.1087
- Duckworth, A. L., Quinn, P. D., & Seligman, M. E. P. (2009). Positive predictors of teacher effectiveness. *The Journal of Positive Psychology, 4*(6), 540-547.
doi:10.1080/17439760903157232
- Dumitriu, C., Timofti, I. C., Nechita, E., & Dumitriu, G. (2014). The influence of locus of control and decision-making capacity upon the leadership style. *Social and Behavioral Sciences, 141*, 494-499. doi:10.1016/j.sbspro.2014.05.086
- Dweck, C. S. (2006). *Mindset; The new psychology of success: Howe we can learn to fulfill our potential*. New York, NY: Ballentine Books.
- Dweck, C. (2014). Teacher's mindsets: "Every student has something to teach me." *Educational Horizons, 93*(2), 10-14.

- Eisenman, G., Edwards, S., & Cushman, C. A. (2015). Bringing reality to classroom management in teacher education. *Professional Educator, 39*(1), 1-12.
- Elias, M. (2018) Social-Emotional & Character Lab. Retrieved from <https://secdlab.org>
- Every Student Succeeds Act of 2015, Pub. L. No. 114-95, 20 U.S.C. § 6301 (2015).
- Furrer, C. J., Skinner, E. A., & Pitzer, J. R. (2014). The influence of teacher and peer relationships on student's classroom engagement and everyday motivational resilience. *National Society for the Study of Education, 113*(1), 101-123.
- Garrett, J. (2019). *South Carolina annual educator supply & demand report (2018-19 school year)*. The Center for Educator Recruitment, Retention, and Advancement. Retrieved from https://www.cerra.org/uploads/1/7/6/8/17684955/2018-19_supply_demand_report_update_jan_16.pdf
- Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction* (8th ed.). Boston, MA: Pearson Education, Inc.
- Gasser, L., Grutter, J., Buholzer, A., & Wettstein, A. (2018). Emotionally supportive classroom interactions and students' perceptions of their teachers as caring and just. *Learning and Instruction, 54*, 82-92. doi:10.1016/j.learninstruc.2017.08.003
- Glazer, J. (2018). Learning from those who no longer teach: Viewing teacher attrition through a resistance lens. *Teaching and Teacher Education, 74*, 62-71.
doi:10.1016/j.tate.2018.04011
- Goldhaber, D., & Cowan, J. (2014). Excavating the teacher pipeline: Teacher preparation programs and teacher attrition. *Journal of Teacher Education, 65*(5), 449-462.
doi:10.1177/0022487114542516

- Green, S. B., & Salkind, N. J. (2017). *Using SPSS for Windows and Macintosh: Analyzing and understanding the data* (8th ed.). New York, NY: Pearson.
- Guidetti, G., Viotti, S., Bruno, A., & Converso, D. (2018). Teachers' work ability: A study of relationships between collective efficacy and self-efficacy beliefs. *Dovepress, 11*, 197-206. doi:10.2147/PRBM.S157850
- Haskell, N. (2016, July 28). Classroom strategies to improve student self-efficacy and learning outcomes. *Higher Education*. Retrieved from pearsoned.com/improve-self-efficacy-learning-outcomes
- Hattie, J. (2015). The applicability of visible learning to higher education. *Scholarship of Teaching and Learning in Psychology, 1*(1), 79-91.
- Heggert, K. (2015). Developing a growth mindset in teachers and staff. *Edutopia*. Retrieved from <https://www.edutopia.org/discussion/developing-growth-mindset-teachers-and-staff>
- Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2018). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions, 20*(2), 90-100. doi:10.1177/1098300717732066
- Hochanadel, A., & Finamore, D. (2015). Fixed and growth mindset in education and how grit helps students persist in the face of adversity. *Journal of International Education Research, 11*(1), 47-50.
- Hoerr, T. R. (2017). Educators need grit too! *Educational Leadership, 74*(9), 60-64.
- Ingersoll, R. M., & Smith, T. M. (2003). The wrong solution to the teacher shortage. *Education Leadership, 60*(8), 30-33.

- Ivcevic, Z., & Brackett, M. (2014). Predicting school success: Comparing conscientiousness, grit, and emotional regulation ability. *Journal of Research in Personality, 52*, 29-36. doi:10.1016/j.jrp.2014.06.005
- Kaufman, A., & Dodge, T. (2009). Student perceptions and motivation in the classroom: Exploring relatedness and value. *Social Psychology Education, 12*, 101-112. doi:10.1007/s11218-008-9070-2
- Koole, S. L., Schlinkert, C., Maldei, T., & Baumann, N. (2019). Becoming who you are: An integrative review of self-determination theory and personality systems interactions theory. *Journal of Personality, 87*, 15-36. doi:10.1111/jopy.12380
- Kunsting, J., Neuber, V., & Lipowsky, F. (2016). Teacher self-efficacy as a long-term predictor of instructional quality in the classroom. *European Journal of Psychology Education, 31*, 299-322. doi:10.1007/s10212-015-0272-7
- Laughter, E. B. (2017). *The relationship between teacher self-efficacy and student discipline referrals written by secondary teachers from a rural school district in a southern state* (Doctoral dissertation). Retrieved from Digital Commons.
- Lentfer, V. S., & Franks, B. (2015). The redirect behavior model and the effects on pre-service teachers' self-efficacy. *Journal of Education and Practice, 6*(35), 79-87.
- Liem, G. A. D, Ginns, P., Martin, A. J., Stone, B., & Herrett, M. (2011). Personal best goals and academic and social functioning: A longitudinal perspective. *Learning and Instruction, 22*, 222-230. doi:10.1016/j.learninstruc.2011.11.003
- MacSuga-Gage, A., Simonsen, B., & Briere, D. E. (2012). Effective teaching practices that promote a positive classroom environment. *Beyond Behavior, 22*(1), 14-22. doi:10.1177/107429561202200104

- Mandelbaum, T. (2018). The relationship between attachment and grit in lower income adolescents. *Journal of Character Education, 14*(1), 59-74.
- Mansfield, C. F., Beltman, S., Broadley, T., & Weatherby-Fell, N. (2016). Building a resilience in teacher education: An evidenced informed framework. *Teaching and Teacher Education, 54*, 77-87. doi:10.1016/j.tate.2015.11.016
- Maranto, R., & Shuls, J. V. (2012). How do we get them on the farm? Efforts to improve rural teacher recruitment and retention in Arkansas. *Rural Educator, 34*(1), 32-40.
- Marquez, B., Vincent, C., Marquez, J., Pennefather, J., Smolkowski, K., & Sprague, J. (2016). Opportunities and challenges in training elementary school teachers in classroom management: Initial results from classroom management in action, an online professional development program. *Journal of Technology and Teacher Education, 24*(1), 87-109.
- Martins, M., Costa, J., & Onofre, M. (2015). Practicum experiences as sources of pre-service teachers' self-efficacy. *European Journal of Teacher Education, 38*(2), 263-279. doi:10.1080/02619768.2014.968705
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*(4), 370-96.
- McLeod, S.A. (2018, May 21). *Maslow's hierarchy of needs*. Retrieved from <https://www.simplypsychology.org/maslow.html>
- Miller, P.H. (2011). *Theories of developmental psychology* (5th ed.). New York, NY: Worth Publishers.
- Morin, A. (n.d.). *Personalized learning: What you need to know*. Retrieved from <https://www.understood.org/en/school-learning/partnering-with-childs-school/instructional-strategies/personalized-learning-what-you-need-to-know>

- Muenks, K., Wigfield, A., Yang, J. S., & O'Neal, C. A. (2017). How true is grit? Assessing its relations to high school and college students' personality characteristics, self-regulation, engagement, and achievement. *Journal of Educational Psychology, 109*(5), 599-620.
doi:10.1037/edu0000153
- National Commission of Education Statistics. (2018). *The condition of education*. Retrieved from <https://nces.ed.gov/pubs2018/2018144.pdf>
- No Child Left Behind Act of 2001, Pub. L. No. 107-110, 20 U.S.C. § 6319 (2002).
- Pankowski, J., & Walker, J. T. (2016). Using simulation to support novice teachers' classroom management skills: Comparing traditional and alternative certification groups. *Journal of the National Association for Alternative Certification, 11*(1), 3-20.
- Pas, E. T., Cash, A. H., O'Brennan, L., Debnam, K. J., & Bradshaw, C. P. (2015). Profiles of classroom behavior in high schools: Associations with teacher behavior management strategies and classroom composition. *Journal of School Psychology, 53*, 137-148.
doi:10.1016/j.jsp.2014.12.005
- Passion. (2018). In Merriam-Webster.com. Retrieved from <https://www.merriam-webster.com/dictionary/passion>
- PBLWorks. (n.d.). Retrieved from <https://www.pblworks.org/>
- Pfitzner-Eden, F. (2016). Why do I feel more confident? Bandura's sources predict preservice teachers' latent changes in teacher self-efficacy. *Frontiers in Psychology, 7*(1486), 1-16.
doi: 10.3389/fpsyg.2016.01486
- Pitzer, J., & Skinner, E. (2017). Predictors of changes in students' motivational resilience over the school year: The roles of teacher support, self-appraisals, and emotional reactivity. *International Journal of Behavioral Development, 41*(1), 15-29.

- Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the teacher shortage: How to attract and retain excellent educators* (research brief). Palo Alto, CA: Learning Policy Institute.
- Polirstok, S. (2017). Strategies to improve academic achievement in secondary school students: Perspectives on grit and mindset. *SAGE Open*, 1-9. doi:10.1177/2158244017745111
- Postholm, M. B. (2013). Classroom Management: What does research tell us? *European Educational Research Journal*, 12(3), 389. doi:10.2304/eej.2013.12.3.389
- Read to Succeed Act of 2014. Publ. L. No. 284. Retrieved from https://www.scstatehouse.gov/sess120_2013-2014/bills/516.htm.
- Riddle, R. A. L. (2018). *A predictive correlational study of the relationship between grit and self-efficacy beliefs among pre-service teachers* (Doctoral dissertation). Retrieved from Digital Commons.
- Robertson-Kraft, C., & Duckworth, A.L. (2014). True grit: Trait-level perseverance and passion for long-term goals predicts effectiveness and retention among novice teachers. *Teachers College Record*, 116(030302), 1-27.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80, 1-28. doi:10.1037/h0092976
- Ryan, A. M., Kuusinen, C. M., & Bedoya-Skoog, A. (2015). Managing peer relations: A dimension of teacher self-efficacy that varies between elementary and middle school teachers and is associated with observed classroom quality. *Contemporary Educational Psychology*, 41, 147-156. doi:10.1016/j.cedpsych.2015.01.002
- Scherzinger, M., & Wettstein, A. (2019). Classroom disruptions, the teacher-student relationship and classroom management from the perspective of teachers, students and external

- observers: A multimethod approach. *Learning Environ Res*, 22, 101-116.
doi:10.1007/s10984-018-9269-x
- Schipper, T., Goei, S. L., de Vries, S., & van Veen, K. (2018). Developing teachers' self-efficacy and adaptive teaching behavior through lesson study. *International Journal of Educational Research*, 88, 10-120. doi:10.1016/j.ijer.2018.01.011
- Schwab, S. (2019). Teachers' student-specific self-efficacy in relation to teacher and student variables. *Educational Psychology*, 39(1), 4-18. doi:10.1080/01443410.2018.1516861
- Shechtman, N., DeBarger, A. H., Dornsife, C., Rosier, S., & Yarnall, L. (2013). Promoting grit, tenacity, and perseverance: Critical factors for success in the 21st century. U.S. Department of Education Office of Educational Technology. State Department of Education (2014). FY 2015.
- Shoulders, T. L., & Krei, M.S. (2015). Rural high school teacher's self-efficacy in student engagement, instructional strategies, and classroom management. *American Secondary Education*, 44(11), 50-61.
- Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26, 1059-1069.
- Skaalvik, E. M., & Skaalvik, S. (2017). Motivated for teaching? Associations with school goal structure, teacher self-efficacy, job satisfaction and emotional exhaustion. *Teaching and Teacher Education*, 67, 152-160. doi:10.1016/j.tate.2017.06.006
- Snyder, S., & Fisk, T. (2016). Applying Bandura's model to identifying sources of self-efficacy of teaching artists. *Research in the Schools*, 23(2), 38-50.

- South Carolina Department of Education. (2018). Retrieved from The South Carolina Department of Education. <https://ed.sc.gov/data/report-cards/state-report-cards/2017/opportunities/students/?d=3205&s=054&t=M&y=2017>
- Strayhorn, T. L. (2014). What role does grit play in the academic success of Black male collegians at predominantly White institutions? *Journal of African American Studies*, 18(1), 1-10. doi:10.1007/s12111-012-9243-0
- Troesch, L. M., & Bauer, C. E. (2017). Second career teachers: Job satisfaction, job stress, and the role of self-efficacy. *Teaching and Teacher Education*, 67, 389-398. doi:10.1016/j.tate.2017.07.006
- Tschannen-Moran, M., & Woolfolk Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.
- Turban, D. B., Tan, H. H., Brown, K. G., & Sheldon, K. M. (2007). Antecedents and outcomes of perceived locus of causality: An application of self-determination theory. *Journal of Applied Social Psychology*, 37(10), 2376-2404. doi: 0.1111/j.1559-1816.2007.00263.x.
- Van Daal, T., Donche, V., & De Maeyer, S. (2014). The impact of personality, goal orientation and self-efficacy on participation of high school teachers in learning activities in the workplace. *Vocations and Learning*, 7, 21-40. doi:10.1007/s12186-013-9105-5
- Wang, H., Hall, N. C., & Rahimi, S. (2015). Self-efficacy and causal attributions in teachers: Effects on burnout, job satisfaction, illness, and quitting intentions. *Teaching and Teacher Education*, 47, 120-130. doi:10.1016/j.tate.2014.12.005
- Wang, W., & Kuo, C. (2018). Relationships among teachers' positive discipline, students' well-being and teachers' effective teaching: A study of special education teachers and adolescent students with learning disabilities in Taiwan. *International Journal of*

Disability, Development and Education, 66(1), 82-98.

doi:10.1080/1034912x.2018.1441978

Warner, R. M. (2013). *Applied statistics: From bivariate through multivariate techniques*.

Thousand Oaks, CA: Sage Publications, Inc.

Watson, N. (2019, August 13). Florence School District One hires student-teachers to fill teacher vacancies. *WMBF News*. Retrieved from

<https://www.wmbfnews.com/2019/08/13/florence-school-district-one-hires-student-teachers-fill-teacher-vacancies/>

Wehmeyer, M. L., Shogren, K. A., Palmer, S. B., Williams-Diehm, K., Little, T. D., & Boulton, A. (2012). The impact of the self-determined learning model of instruction on student self-determination. *Exceptional Children*, 78(2), 135-153.

Wehmeyer, M. L., Shogren, K. A., Toste, J. R., & Mahal, S. (2016). Self-determined learning to motivate struggling learners in reading and writing. *Intervention in School and Clinic*, 52(5), 295-303. doi:10.1177/1053451216676800

Whalen, C., Majocha, E., & van Nuland, S. (2019). Novice teachers challenges and promoting novice teacher retention in Canada. *European Journal of Teacher Education*, 42(5), 591-607. doi:10.1080/02619768.2019.1652906

Wilcox, K. C., & Lawson, H.A. (2018). Teachers' agency, efficacy, engagement, and emotional resilience during policy innovation implementation. *Journal of Educational Change*, 19, 181-204. doi:10.1007/s10833-017-9313-0

Wilson, S. D. (2013). Caring leadership applied in the classroom to embrace the needs of students. *Journal of College Teaching & Learning*, 10(1), 23-28.

- Wolters, C. A., & Hussain, M. (2015). Investigating grit and its relations with college students' self-regulated learning and academic achievement. *Metacognition Learning, 10*, 293-311. doi:10.1007/s11409-014-9128-9
- Wu, Y., Lian, K., Hong, P., Liu, S., Lin, R., & Lian, R. (2019). Teachers' emotional intelligence and self-efficacy: Mediating role of teacher performance. *Social Behavior and Personality: An international journal, 47*(3), 1-10. doi:10.2224/sbp.7869.
- Young, S. (2018). Teacher retention and student achievement: How to hire and retain effective teachers. *Delta Kappa Gamma Bulletin, 84*(3), 16-21.
- Yuksel, I. (2014). Investigating the impact of classroom management course on self-efficacy levels: An experimental study on pre-service teachers. *Education and Science, 39*(171), 259-269.
- Zee, M., & Koomen, M. Y. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research, 86*(4), 981-1015. doi:10.3102/0034654315626801
- Zhu, M., Liu, Q., Fu, Y., Yang, T., Zhang, X., & Shi, J. (2018). The relationship between teacher self-concept, teacher efficacy and burnout. *Teachers and Teaching, 24*(7), 788-801. doi:10.1080/13540602.2018.1483913
- Zubkovic, B. R., & Kolic-Vehovec, S. (2014). Perceptions of contextual achievement goals: Contribution to high-school students' achievement goal orientation, strategy use and academic achievement. *Studia Psychologica, 56*(2), 137-153.

APPENDIX A: Short Grit Scale

<https://angeladuckworth.com/research/>

Scale removed to comply with copyright.

APPENDIX B: Permission to Use the TSES

12/1/2018

Mail - llee31@liberty.edu

Re: Permission to use your T SES instrument

Anita Woolfolk Hoy <anitahoy@me.com>

Thu 11/29/2018 9:01 AM

To: Lee, Laurie <llee31@liberty.edu>;

You are welcome to use the TSES in your research as you describe below. This website might be helpful to you:

<http://u.osu.edu/hoy.17/research/instruments/>

Best wishes in your work.

Anita

Anita Woolfolk Hoy, PhD
Professor Emerita
The Ohio State University
7655 Pebble Creek Circle,
Unit 301 Naples, FL 34108

anitahoy@mac.com
415-640-2017

<http://u.osu.edu/hoy.17/>

APPENDIX C: Permission Letter for TSES

Anita Woolfolk Hoy, Ph.D.

Professor

Psychological Studies in Education

Dear

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy of the scoring instructions can be found at:

<http://u.osu.edu/hoy.17/research/instruments/>

Best wishes in your work,

Anita Woolfolk Hoy, Ph.D.
Professor Emeritus

APPENDIX D: Permission to Publish TSES

Good afternoon Dr. Hoy! I hope this finds you well and managing our odd world we are in. I reached out to you some time ago to obtain your permission to use the TSES in my dissertation, which I just successfully defended (YAY!). In your return email, it provided permission to use the instrument. I am now asking if that permission covers publishing your survey in my appendices or do I need to not include that?

Thank you for your time and response!

--

Laurie Lee

Congratulations! That permission covers publishing the survey in your appendices—good to include it there.



Anita Woolfolk Hoy, PhD
Professor Emerita
The Ohio State University
7655 Pebble Creek Circle, Unit 301
Naples, FL 34108

APPENDIX E: Teacher Sense of Self-Efficacy Scale

Teachers' Sense of Efficacy Scale¹ (long form)

Teacher Beliefs	How much can you do?									
Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.	Nothing	Very Little	Some Influence	Quite a Bit	A Great Deal					
1. How much can you do to get through to the most difficult students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
2. How much can you do to help your students think critically?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
3. How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
4. How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
5. To what extent can you make your expectations clear about student behavior?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
6. 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)	
7. How well can you respond to difficult questions from your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
8. How well can you establish routines to keep activities running smoothly?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
9. How much can you do to help your students value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
10. How much can you gauge student comprehension of what you have taught?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
11. To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
12. How much can you do to foster student creativity?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
13. How much can you do to get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
14. How much can you do to improve the understanding of a student who is failing?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
15. How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
16. How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
17. How much can you do to adjust your lessons to the proper level for individual students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
18. How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
19. How well can you keep a few problem students from ruining an entire lesson?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
20. To what extent can you provide an alternative explanation or example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	

21. How well can you respond to defiant students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
22. How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
23. How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
24. How well can you provide appropriate challenges for very capable students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

APPENDIX F: Scoring Directions for the TSES

Directions for Scoring the Teachers' Sense of Efficacy Scale¹

Developers: Megan Tschannen-Moran, College of William and Mary

Anita Woolfolk Hoy, the Ohio State University.

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 and elusive construct. *Teaching and Teacher Education*, 17, 783-805.

Factor Analysis

It is important to conduct a factor analysis to determine how your participants respond to the questions. We have consistently found three moderately correlated factors: *Efficacy in Student Engagement*, *Efficacy in Instructional Practices*, and *Efficacy in Classroom Management*, but at times the makeup of the scales varies slightly. With preservice teachers we recommend that the full 24-item scale (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:

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

Short Form

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

APPENDIX G: IRB Approval

Date: 9-26-2020

IRB #: IRB-FY19-20-394

Title: THE RELATIONSHIP BETWEEN SECONDARY TEACHERS' GRIT AND SELF-EFFICACY BELIEFS ON CLASSROOM MANAGEMENT AND STUDENT ENGAGEMENT

Creation Date: 5-22-2020 End

Date:

Status: Approved

Principal Investigator: Laurie Lee
 Review Board: Research Ethics Office
 Sponsor:

Study History

Submission Type	Initial	Review Type	Exempt	Decision	Exempt
-----------------	---------	-------------	--------	----------	--------------------------------------------

Key Study Contacts

Member	David Gorman	Role	Co-Principal Investigator	Contact	<div style="background-color: black; color: white; padding: 2px;">XXXXXXXXXXXXXXXXXXXX</div>
Member	Laurie Lee	Role	Principal Investigator	Contact	<div style="background-color: black; color: white; padding: 2px;">XXXXXXXXXXXXXXXXXXXX</div>
Member	Laurie Lee	Role	Primary Contact	Contact	<div style="background-color: black; color: white; padding: 2px;">XXXXXXXXXXXXXXXXXXXX</div>

APPENDIX H: Permission to Survey District

5/23/2020

Gmail - Fwd: Research question



Laurie Lee

Fwd: Research question

1 message

From: [REDACTED]
Date: May 20, 2019 at 7:47:00 AM EDT
To: Laurie Lee <[REDACTED]>
Subject: Re: Research question

Hi Laurie,

You do not need our permission to survey our staff. **Please be reminded that**

[REDACTED]
[REDACTED] **has not endorsed your survey and research study. Survey links cannot be forwarded by our staff.** Our district staff directory is available online:

[REDACTED]
[org/Domain/433](#). Please be reminded that our staff has the right to decline

participation in your study. If you have any questions, please contact me at your earliest convenience.

Best wishes!

[REDACTED]
Coordinator of Assessment, District Test Coordinator
Office of Planning and Administration, Department of Accountability

APPENDIX I: Recruitment Email

Dear High School Teacher:

As a doctoral candidate in the School of Education at Liberty University, I am conducting research as part of the requirements for a Doctor of Education degree. The purpose of my research is to determine the relationship between grit and teacher self-efficacy in classroom management and student engagement among high school teachers, and I am writing to invite eligible participants to join my study.


Participants must be currently employed as a high school teacher. Participants, if willing, will be asked to complete three study instruments: the Grit-S Scale, the Teacher Self-Efficacy Scale, and a demographic survey. It should take approximately 20-30 minutes to complete the procedures listed. Participation will be completely anonymous, and no personal, identifying information will be collected.

In order to participate, please complete the scales survey found below as attachments to this email. You will click on the individual survey attachment which will open the Google Form for you to complete. Your responses will be automatically stored within the Google Form spreadsheet. No further action will be needed from you.

A consent document is attached to this email. The consent document contains additional information about my research. After you have read the consent form, please click each email attachment below to proceed to the scales and survey. Doing so will indicate that you have read the consent information and would like to take part in the study.

Sincerely,

Laurie W. Lee, MPH, MEd, EdS
Doctoral Candidate



APPENDIX J: Participant Consent

Consent

Title of the Project: The Relationship Between Secondary Teachers' Grit and Self-Efficacy Beliefs on Classroom Management and Student Engagement

Principal Investigator: Laurie W. Lee, MPH, MEd, EdS, EdD candidate, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. In order to participate, you must be a current high school teacher. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research project.

What is the study about and why is it being done?

The purpose of the study is to determine the relationship between grit and self-efficacy in classroom management and student engagement among high school teachers. The data gathered will be utilized to determine potential reasons for veteran teachers leaving the profession before retirement and allow for the development of supports to help maintain veteran teachers in their classrooms.

What will happen if you take part in this study?

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

1. Complete the Grit-S Scale, the Teacher Self-Efficacy Scale and a demographic survey. This should take approximately 30 minutes to complete.

How could you or others benefit from this study?

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

Benefits to society include an increased knowledge on the given topic, potentially improved professional development opportunities for veteran teachers in particular, and potentially improved novice and pre-service teacher training.

What risks might you experience from being in this study?

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

How will personal information be protected?

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 responses will be anonymous.
- 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.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the first study instrument without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the scales or survey and close your internet browser prior to completing the first study instrument. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Laurie Lee. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at 803-206-8889 or XXXXXXXXXXXXXXXXXXXX. You may also contact the researcher's faculty sponsor, David Gorman, at XXXXXXXXXXXXXXXXXXXX.

Whom do you contact if you have questions about your rights as a research participant?

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.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of the document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.