Dissertations, Theses, and Masters Projects   Theses, Dissertations, & Master Projects

2017

Emotional Intelligence, Environment, and Teacher Self-Efficacy: A Look into the Effects of Teacher Emotional Intelligence and Socioeconomic Status of School on Teacher Self-Efficacy in K-12 Public Schools

Augustine Kang
College of William and Mary, axkang@gmail.com

Follow this and additional works at: https://scholarworks.wm.edu/etd

Part of the Educational Leadership Commons

EMOTIONAL INTELLIGENCE, ENVIRONMENT, AND TEACHER SELF-EFFICACY: A LOOK INTO THE EFFECTS OF TEACHER EMOTIONAL INTELLIGENCE AND SOCIOECONOMIC STATUS OF SCHOOL ON TEACHER SELF-EFFICACY IN K-12 PUBLIC SCHOOLS

A DISSERTATION PRESENTED TO THE FACULTY OF

THE COLLEGE OF WILLIAM & MARY SCHOOL OF EDUCATION

WILLIAMSBURG, VA

In Partial Fulfillment of the

Requirements for the Degree of

Doctor in Philosophy

---

by

Augustine Kang

July 2017

EMOTIONAL INTELLIGENCE, ENVIRONMENT, AND TEACHER

SELF-EFFICACY: A LOOK INTO THE EFFECTS OF TEACHER EMOTIONAL

INTELLIGENCE AND SOCIOECONOMIC STATUS OF SCHOOL

ON TEACHER SELF-EFFICACY IN K-12 PUBLIC SCHOOLS

by

Augustine Kang

Megan Tschannen-Moran, Ph.D.
Chairperson of Doctoral Committee

Carol Tieso, Ph.D.

Leslie W. Grant, Ph.D.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

encouragement, and constant back pressure to get this dissertation completed. And to my

dear grandparents, especially my grandfather, who reminded me of the importance of

education and who, with every phone call, pushed me to finish.

LIST OF TABLES

LIST OF FIGURES

EMOTIONAL INTELLIGENCE, ENVIRONMENT, AND TEACHER

SELF-EFFICACY: A LOOK INTO THE EFFECTS OF TEACHER EMOTIONAL

INTELLIGENCE AND SOCIOECONOMIC STATUS OF SCHOOL ON TEACHER

SELF-EFFICACY IN K-12 PUBLIC SCHOOLS

ABSTRACT

This study sought to uncover the relationship among emotional intelligence, teacher self-efficacy, and socioeconomic status of schools amongst K-12 public school teachers. Correlations were analyzed between overall emotional intelligence and overall teacher self-efficacy, as well as between the subscales of both constructs. Furthermore, regression analysis was used to determine the predictability of teacher self-efficacy based on emotional intelligence, school socioeconomic status, and the subscales of emotional intelligence. Weak correlations were found between emotional intelligence of teachers and teacher self-efficacy levels. Emotional intelligence and school socioeconomic status were not found to be strong predictors of teacher self-efficacy. Subscales of emotional intelligence did not predict levels of teacher self-efficacy well. The current study calls into question the validity of the Reactions to Teaching Situations measure of emotional intelligence and suggests further research be conducted to determine the reason for the inconsistent findings as compared to prior studies on the relationship between emotional intelligence and teacher self-efficacy in field of education.

AUGUSTINE KANG

EDUCATIONAL POLICY, PLANNING, AND LEADERSHIP

K-12 EDUCATION ADMINISTRATION

THE COLLEGE OF WILLIAM & MARY IN VIRGINIA

EMOTIONAL INTELLIGENCE, ENVIRONMENT, AND TEACHER SELF-EFFICACY: A LOOK INTO THE EFFECTS OF TEACHER EMOTIONAL INTELLIGENCE AND SOCIOECONOMIC STATUS OF SCHOOL ON TEACHER SELF-EFFICACY IN K-12 PUBLIC SCHOOLS

CHAPTER 1

INTRODUCTION

The landscape of K-12 public education in the United States is changing dramatically and quickly. Along with the backdrop of rising demands of performance standards and achievement testing, teacher responsibilities are ever broadening in attempts to accommodate all of the changes in expectations. Skills related to Goleman's (1995) emotional intelligence may be related to the effective management of stressful school situations such as challenging student behaviors, poor student motivation, and lack of administrative support (Brotheridge & Grandey, 2002; Ingersoll & Smith, 2003). In fact, higher levels of emotional intelligence have been found to reduce occupational stress among teachers (Mehta, 2013) and may be the key to improving a teacher's perception of their own success in the classroom, also known as teacher self-efficacy. Emotional intelligence may be critical for today's educators who must be the facilitators of learning for students with varying needs in schools that are only becoming more diverse and demanding (Lanier, 1997).

Teachers with higher levels of teacher self-efficacy have been found to be more effective in the classroom (Cantrell, Almasi, Carter, & Rintamaa, 2013; Chang, 2015). They have been found to more persistent and more willing to develop creative alternative approaches to challenges (Raudenbush, Rowan, & Cheong, 1992; Ross, Hogaboam-Gray, & Hannay, 2001), often resulting in more successful experiences in the classroom. A

teacher's willingness to persist through challenges and try new approaches to challenges may be a product of personality, but may also be a product of emotional intelligence.

The following study uses the theories of emotional intelligence and teacher self-efficacy as a conceptual foundation. In the business world, Goleman (1995) described emotional intelligence as the ability to be aware of and manage the emotions of oneself and others. He further asserted that emotional intelligence is what sets apart effective leaders from less effective leaders. Teachers are leaders of their classrooms. A teacher's skill of being aware of and managing emotions may be a critical factor that influences and determines a teacher's self-efficacy for teaching. A significant relationship between emotional intelligence and teacher self-efficacy could have important implications for teacher preparation programs and policy makers who often emphasize pedagogy and content knowledge.

Conceptual Framework

There has been a notable emphasis in school districts on developing and improving the affective skills of teachers and school leaders such as relationship building (Bradberry & Greaves, 2005), empathy (Goleman, 1995; Iacoboni, 2008), and trust building (Tschannen-Moran, 2014). These skills are related to the theory of emotional intelligence. Improving a teacher's emotional intelligence may be the key to allowing the teacher to experience more success in the classroom (Reissman, 2006), thereby increasing teacher self-efficacy. Factors of emotional intelligence may be significant predictors for factors of teacher self-efficacy. If emotional intelligence can be developed and improved it may possibly allow for improvements in a teacher's self-efficacy as well, which may result in greater teacher motivation. There is also reason to believe that

3

environmental factors can have an impact on a teacher's sense of teacher self-efficacy (Tschannen-Moran, Hoy, & Hoy, 1998). A less supportive administration, larger class sizes, or limited school resources could understandably impact a teacher's ability to feel successful in the classroom. Jensen (2009) explains the stressors associated with poverty that inherently increase the needs of students living in poverty. These increased needs, in turn, increase the stressors for teachers in the classroom as well. The current study will use socioeconomic status of school to define environment in an attempt to determine if the school working environment also has an effect on a teacher's sense of self-efficacy in the classroom.
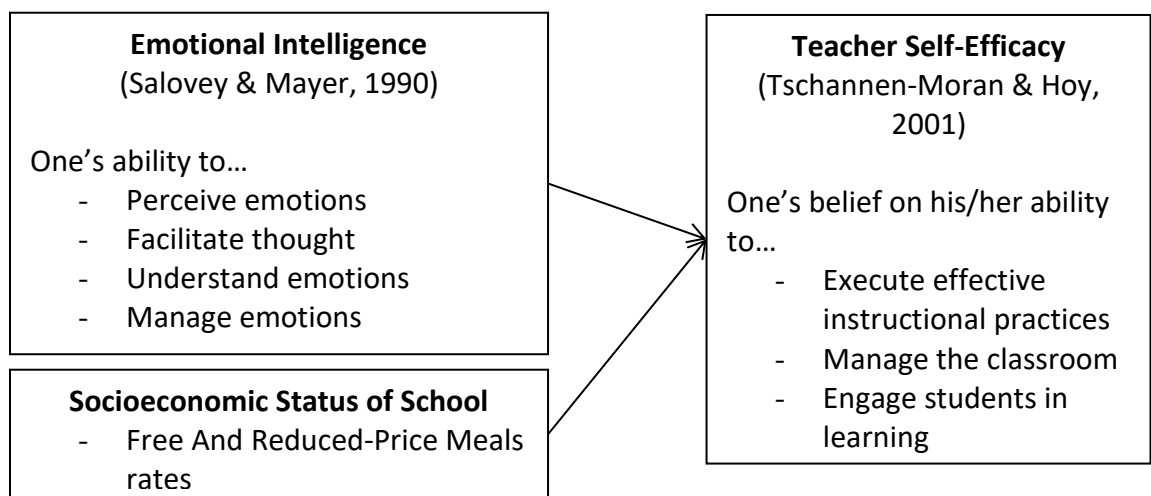
Figure 1. Impact of emotional intelligence and socioeconomic status of school on teacher self-efficacy.

Teacher Emotional Intelligence

Salovey and Mayer (1990) coined the term "emotional intelligence" and described it as,

a set of skills hypothesized to contribute to the accurate appraisal and

expression of emotion in oneself and in others, the effective regulation of

4

emotion in self and others, and the use of feelings to motivate, plan and

achieve in one's life. (p. 185)

Emotional intelligence has been generally described as the skill of being aware of and

managing emotions and the emotions of others (Goleman, 1995; Salovey & Mayer,

1990).

Even with the dramatic transformation of the role of the teacher, teacher

preparation programs and district professional development programs continue to focus

heavily on content knowledge and pedagogy (Nagy & Wang, 2006). However the range

in effectiveness of teachers within teacher preparation programs has been found to vary

even greater than between teacher preparation programs (Koedel, Parsons, Podgursky, &

Ehlert, 2012). The skills encompassed by emotional intelligence may be important for

teachers dealing with more challenging student behaviors or lack of support and

resources, and may be a distinguishing factor between teachers who feel more successful

and less successful, especially in more challenging school environments. Emotional

intelligence may be an especially good predictor of teacher perception of success in

environments with higher levels of poverty, which have been associated with greater

challenges stemming from factors outside the classroom (Leroy & Symes, 2001). This

study examined how emotional intelligence of teachers and school socioeconomic status

determined by free and reduced-price meals rates at each school, impacted the

predictability of teacher self-efficacy.

In schools, teachers are the leaders of their classrooms. Goleman (2000) explained

that top performing business leaders are able to assess their impact on others and adjust

their leadership style to get results. He shared that an analysis of 3,871 executives

uncovered six distinct leadership styles that Goleman associates with emotional intelligence. Businesses led by executives with higher levels of emotional intelligence outperformed those led by executives with lower emotional intelligence.

Along the same premise but in the world of education, teachers who are more aware of student emotions may be more successful at leading students in the classroom by keeping students engaged and managing students in an effective manner. Higher levels of engagement and effective management have been strongly related to student achievement (Gettinger & Ball, 2007; Gettinger & Walter, 2012) so improving emotional intelligence may be beneficial for teachers and students. Most importantly, unlike personality or Wechsler's (1955) IQ, emotional intelligence has been described as a skill that can be learned and improved (Goleman, 1995; Salovey & Mayer 1990). Whereas in the past, teacher development and improvement have been based on pedagogy and content knowledge, this theoretical framework allows for further teacher development and improvement through the development of soft skills such as emotional intelligence.

Emotional intelligence may have strong influences on the ability of teachers to apply their content knowledge and pedagogical skills appropriately and successfully in the ever-diversifying classroom. This may further alleviate stressors that cause teachers to perceive themselves as less effective teachers. If so, teacher preparation programs and school districts may want to include an emphasis on emotional intelligence in their programs to better equip teachers with the softer skills needed to teach, lead, and manage today's classrooms. The following study investigated the relationship between teacher levels of emotional intelligence and teacher beliefs in his/her own teaching ability (teacher self-efficacy), while controlling for the socioeconomic status of the school. It

was hypothesized that lower-income schools might provide a larger range of emotional intelligence and self-efficacy levels which might result in stronger correlations and higher levels of statistical significance.

Teacher Self-Efficacy

In the teaching profession, Tschannen-Moran and Hoy (2001) defined teacher self-efficacy as "a judgment of his or her capabilities to bring about desired outcomes of students engagement and learning, even among those students who may be difficult or unmotivated" (p. 783). Furthermore, a teacher's belief in his/her teaching abilities is based on three factors: self-efficacy for student engagement, self-efficacy for instructional strategies, and self-efficacy for classroom management. Higher levels of success allow teachers to develop higher levels of self-efficacy for teaching. Significant research has found that teachers with stronger beliefs about their teaching ability have been found to be more effective teachers overall (Ashton & Webb, 1986; Emmer & Hickman, 1991; Gibbs, 2002; Gibson & Dembo, 1984; Saklofske, Michaluk, & Randhawa, 1988; Tschannen-Moran, Hoy, & Hoy, 1998).

Teacher self-efficacy has been found to correlate with a willingness to try new instructional strategies as well as student achievement (Raudenbush et al., 1992; Ross et al., 2001). A strong relationship has been repeatedly found between the teacher's successful experiences and the teacher's self-efficacy. However the factors that significantly impact a teacher's success in the classroom remain unclear. The following study attempted to discover the role teacher emotional intelligence plays in a teacher's sense of success in the classroom.

The relationship between teacher self-efficacy and student achievement has been attributed more specifically to the higher levels of teacher persistence when guiding students who are having difficulties (Podell & Soodak, 1993), higher organization skills resulting in more effective lessons (Allinder, 1994), as well as the suggestion that efficacious teachers hold higher standards for not only themselves, but also their students (Ross, 1995).

Teacher Emotional Intelligence and Self-Efficacy

Few studies have investigated the relationship between teacher levels of emotional intelligence and teacher self-efficacy. The few that have, however, have found positive results. Penrose, Perry, and Ball (2007) found that a significant relationship was evident between emotional intelligence and teacher self-efficacy amongst 211 primary and secondary teachers in Victoria, Australia. The length of teaching experience and current status (graduate teacher, accomplished teacher, expert teacher, leading teacher, or principal) did not moderate the relationship between emotional intelligence and teacher self-efficacy. In addition, Koçoğlu (2011) found that a positive relationship was evident between emotional intelligence and self-efficacy amongst 90 Turkish English as Foreign Language (EFL) pre-service teachers. Furthermore, Okech (2004) also found a significant relationship between emotional intelligence and teacher self-efficacy amongst 180 elementary science teachers in Texas. Chan (2004) found that self-efficacy could be predicted by specific factors of emotional intelligence. None of these studies, however, has taken into account the environment in which the participants taught in, which may have an effect on a teacher's beliefs in his/her own teaching.

8

Emotional intelligence may be especially important in improving teacher self-efficacy in challenging teaching environments such as low-income schools. This is not to say that all low-income schools house more challenges for teachers; however, higher concentrations of poverty, especially in urban environments, are often associated with greater racial and linguistic diversity (Kincheloe, 2010), presenting structural and cultural challenges often impeding student achievement (Noguera, 2003). Children from low socioeconomic households have been shown to develop academic skills slower than children from higher SES households and are more likely to display learning and behavior problems (Jensen, 2009; Morgan, Farkas, Hillemeier, & Maczuga, 2009). They frequently feel more disconnected from school (Langhout, Drake, & Rosselli, 2009). It is up to schools to develop methods of providing for the needs of all students regardless of student race or income, or of school funding and resources. If the relationship between emotional intelligence and teacher self-efficacy is even stronger in more challenging school environments, a stronger argument can be made to increase teacher candidate emotional intelligence preparation.

For this study it was hypothesized that emotional intelligence would be a positive precursor for higher levels of teacher self-efficacy and that the relationship may be more evident when school poverty levels are taken into consideration. Thus, the socioeconomic status of schools was thought to potentially play as a moderator between emotional intelligence and teacher self-efficacy. Low socioeconomic status of schools is often associated with more challenging teaching environments truly requiring higher levels of emotional intelligence in order to feel successful (high self-efficacy). This may exaggerate the relationship between emotional intelligence and teacher self-efficacy and

improve the predictability of teacher self-efficacy based on emotional intelligence and socioeconomic status of school. Improved emotional intelligence may improve a teacher's belief in his/her own teaching abilities in more challenging teaching environments.
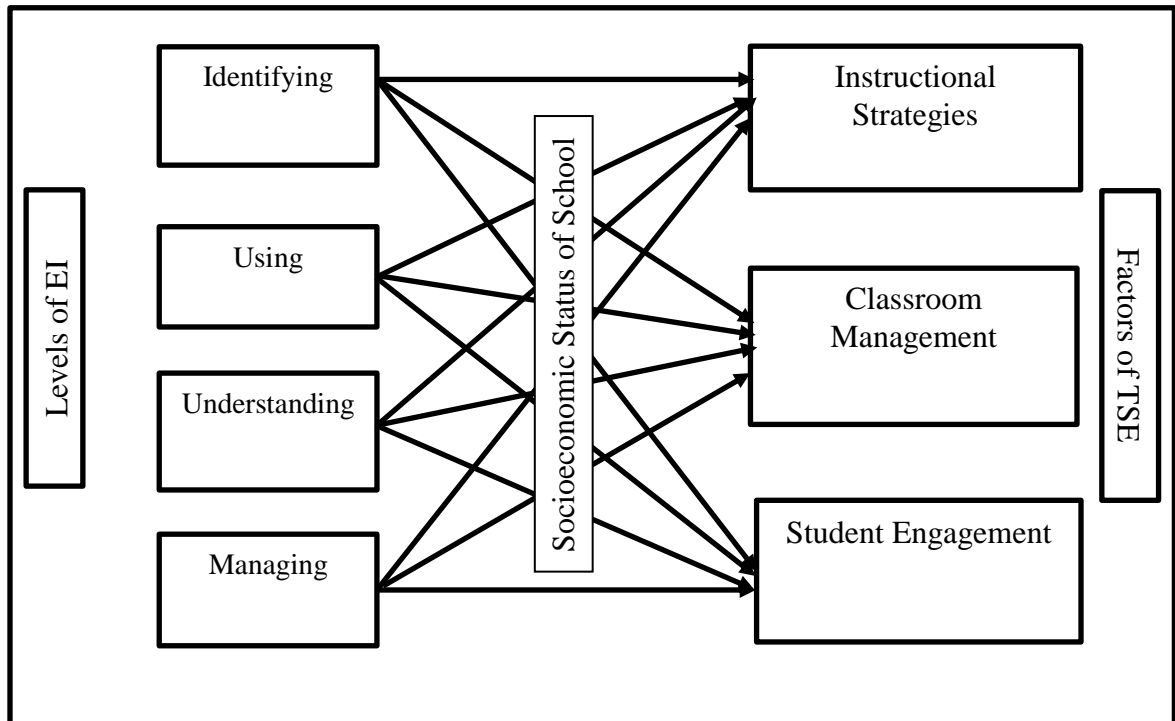
Figure 2. Conceptual relationship between emotional intelligence, teacher self-efficacy, and socioeconomic status of school.

Statement of Problem

There is more to teaching than knowing the content. The skill of teaching today entails delivering the content in ways best suited for the learner (Tomlinson, 2014) and in addition, motivating the learner to achieve (Davis, 1993). Teachers have become motivators of learning and achievement; they have become leaders in their classrooms. The challenge is often in managing the emotions of students as well as the emotions of the teacher. The following study attempted to uncover the relationship between levels of

10

teacher emotional intelligence and levels of teacher self-efficacy amongst full time public

school teachers in grades K-12. More specifically, the study attempted to determine the

degree to which teacher self-efficacy can be predicted by emotional intelligence while

controlling for the socioeconomic status of the school. The environment in which a

teacher works can have tremendous influence on a teacher's perception of his or her own

efficacy in the classroom. By taking into account school socioeconomic levels, it may be

possible to more accurately predict levels of teacher self-efficacy and uncover a stronger

relationship between teacher emotional intelligence and teacher self-efficacy.

Research Questions

1) To what extent is emotional intelligence related to teacher self-efficacy?

2) To what extent are the factors of emotional intelligence related to the factors of
   teacher self-efficacy?

3) To what extent are emotional intelligence and school socioeconomic status
   predictors of teacher self-efficacy?

4) To what extent are the factors of emotional intelligence and school socioeconomic
   status predictors of teacher self-efficacy?

Significance of the Study

The shrinking global landscape is requiring employers and employees to be more

sensitive to the cultural backgrounds of others (Livermore, 2011). Hard skills have been

defined as the technical skills often acquired through education or training, that are

needed to complete a task (James & James, 2004). A traditional focus on technical "hard

skills" amongst employees and employers has shifted to include "soft skills," which

Perreault (2004) defined as "those traits and capabilities that an individual possesses in

addition to the individual's technical and/or knowledge skill set" (p. 125). These changes are similarly evident in the shifting landscape of public education in the United States.

The student population in the United States is becoming more and more diverse especially regarding race. Between 2003 and 2013 the National Center for Education Statistics (NCES, 2013) has estimated that the population of White students decreased from 59 to 50% while the population of Hispanic students increased from 19 to 25%. It is predicted that by 2025, White student enrollment will account for 46% of total student enrollment in the United States and that the Hispanic population will account for 29% of total enrollment. The quickly diversifying student population is further requiring teachers to develop soft skills such as emotional intelligence, to accommodate the needs of students of various cultures and backgrounds. It may be important for emotional intelligence to make the jump from the business world to the education world.

Goleman (1998b) described emotional intelligence as encompassing "soft skills" and asserted the importance of emotional intelligence skills in effective leaders and managers. The need to include emotional intelligence into the prerequisites for teaching is evident in the significantly broadened and more challenging roles and responsibilities of the teacher throughout the last 20 years (Cornu, 2010). What was once a profession responsible for the delivery of information has shifted to a profession that facilitates or guides student learning in the classroom (Lanier, 1997). Lanier described some of the responsibilities accompanying the teacher as facilitator: teaching students how to learn, motivating students to learn, making the learning relevant and relatable and increasing confidence and self-esteem. Fulfilling these responsibilities requires more than content

knowledge and pedagogy; a softer set of thinking skills and social skills are necessary to build relationships and encourage students to learn.

Personality of teachers has been thought to affect teacher effectiveness (A. S. Barr, 1952; Murphy & Dzieweczynski, 2005). Tonelson (1981) for example, asserted that personality is highly correlated to the climate a teacher is able to establish in the classroom. Recent education research in personality has discovered that teachers with specific types of personality traits are more successful at building relationships, setting high expectations, and improving achievement. But personality has been described as being relatively stable, especially in adulthood (McCrae & Costa, 1982). If personality were to be seen as the best predictor of teacher effectiveness, there would conceivably be less impetus to improve the skills of teachers. Rather, the goal would be to simply hire teachers with specific personalities supporting the age-old adage, "Teachers are born, not made." The idea of teacher improvement might be negated because a teacher's performance would be more accurately defined by predefined personality traits. Viewing effective teaching as a skill as opposed to a trait allows for investments in efforts to improve teaching, managing, and leading skills.

Teachers are inherently leaders and managers of their classrooms. The teacher-centered classroom where the teacher said and the student did is shifting to a learner-centered classroom requiring teachers to truly engage and motivate students to be active co-creators in the teaching and learning process (Barr & Tagg, 1995). The "harder skills" involved in teaching, such as content knowledge and pedagogy, were sufficient when teachers lectured to students, but are no longer enough to encourage students to learn and achieve (Lanier, 1997). Teachers must have higher levels of emotional intelligence to

13

build rapport with students, relate to students, and understand their academic and emotional needs (Koçoğlu, 2011). Emotional intelligence may help teachers teach content in more engaging ways and may also improve teachers' awareness of their own actions and reactions to students in efforts to avoid classroom management challenges. Emotional intelligence may play a key role in determining a teacher's effectiveness.

The following study attempted to discover relationships between emotional intelligence and teacher self-efficacy amongst public school teachers in Grades K-12. The study attempted to determine to what degree emotional intelligence and school socioeconomic status are able to predict teacher levels of teacher self-efficacy. Prior studies on the relationship between emotional intelligence and self-efficacy have overlooked the impact of the school environment on self-report measures. Moderate correlations have been found between emotional intelligence and teacher self-efficacy as well as the subscales of emotional intelligence and the subscales of teacher self-efficacy. Of these limited studies, many have been on pre-service teachers, English as Second Language (ESL) teachers, or teachers and principals together (Koçoğlu, 2011; Penrose et al., 2007), and none have taken into account the socioeconomic levels of the schools in which the teachers teach. If emotional intelligence can predict self-efficacy, then preparation programs and school districts may consider emphasizing emotional intelligence more heavily when preparing, selecting, and retaining teachers. Considering the broadening role of teachers, this study sought to discover if emotional intelligence may play a key role in predicting levels of teacher self-efficacy with consideration of the socioeconomic levels of the students at the schools.

Definition of Terms

Ability. In emotional intelligence research, the term "ability" is used synonymously with the term "skill." The term ability is used to describe a skill that individuals can improve.

Affective aspects of teaching. Affective aspects of teaching refers to 1) a teacher's approach to teaching, which includes the way a teacher acts to build relationships with students (Crossman, 2007; Huyton, 2009), and 2) a teacher's approach to engage students by making the content more relevant and meaningful.

Emotional intelligence. Mayer and Salovey (1997) defined emotional intelligence as the "ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p. 189). Mayer and Salovey revised their model to include four branches of emotional intelligence: managing, understanding, using, and identifying emotions. The model represents a hierarchy of developmental levels reflecting the ability-based idea that emotional intelligence can be developed (Austin, Saklofske, Huang, & McKenney, 2004).

Experience. For this study, experience refers to the self-report number of years a teacher has taught in K-12 education.

Hard and soft skills. James and James (2004) define hard skills as the technical skills often acquired through education or training, that are needed to complete a task. Soft skills refer to "those traits and capabilities that an individual possesses in addition to the individual's technical and/or knowledge skill set" (Perreault, 2006, p. 125).

Teacher self-efficacy. Tschannen-Moran and Hoy (2001) described teacher self-efficacy as a teacher's belief in his/her ability to teach. Teacher self-efficacy is based upon three factors: self-efficacy for instructional strategies, for management, and for student engagement.

CHAPTER 2

REVIEW OF THE LITERATURE

The following study sought to discover the relationship between teacher levels of emotional intelligence and teacher self-efficacy as well as the moderating effect of socioeconomic status of the school. The following review of the literature is organized into five sections: 1) the changing landscape of teaching, 2) a review of the emotional intelligence literature, 3) a review of the teacher self-efficacy literature, 4) the relationship between emotional intelligence and teacher self-efficacy, and 5) an overview of relationships between emotional intelligence, teacher self-efficacy, and school socioeconomic status.

The Changing Student Demographic and Changing Role of the Teacher

The population of the United States has grown and has become more diverse over the past century. In the past 30 years, population by race has dramatically shifted. From 1970 to 2000, the United States Census Bureau (2016) reported that the percentage of only White persons in the United States dropped from 87.7% to 75.1%. The United States Census Bureau (2012) reported that the population of only White persons had dropped even further to 63% and predicts that by the year 2043, the United States will be a majority-minority country. The 2012 Census further found that the proportion of White babies to others had fallen to a minority and that the under-5 group of our population is now composed almost equally of White and non-White children. By 2017, the 2012

Census predicts that non-White children in the under-5 group will outnumber White children.

Socioeconomic diversity has also increased in the United States as well (NCES, 2013). Free and reduced-price meals rates have been a useful measure of socioeconomic status of students and between 2000 and 2012, the rates of students receiving free and reduced-price meals increased from 38% to 50%.

The growing population and growing diversity in our student population require teachers to be adept at working with students from various racial and ethnic backgrounds. However cultural backgrounds extend beyond race and ethnicity. Lynch (2012) asserted that the cultural backgrounds of students can include various influences such as nationality, socioeconomic status, family relationships, and religion. He further asserted that teachers must be adept at formally and informally assessing students in order to best determine how to meet their academic and emotional needs. Whereas Tomlinson (2000) advocated the idea of differentiating instruction to meet the needs of our students, emotional intelligence theorists assert that our behaviors must be differentiated to manage the emotional needs of others as well (Goleman, 1995).

The changing demographics of the classroom and Lynch's (2012) concept of cultural backgrounds require a change in the role of the teacher (Cornu, 2010). As an information provider, teachers were once able to teach classrooms through more direct teacher-centered instruction. As the standards for learning and needs of students increased, teachers have been encouraged to change their styles of teaching to meet the needs of all of their diverse learners (D. F. Brown, 2004; K. L. Brown 2003). The same skills once attributed to occupations requiring social interaction amongst leaders and

employees have been applied to counselors and now apply to school teachers (Pellitteri, Stern, Claudia, & Muller-Ackerman, 2006). Differentiating instruction once only encompassed the skills and ability to differentiate content and lesson delivery; differentiation is now also related to the skills and ability to provide for the emotional needs of students, which is referred to as one's emotional intelligence.

Teachers are increasingly being required to exhibit interpersonal skills formerly emphasized in counseling. Pellitteri et al. (2006) explained that the role of the school counselor entailed being able to effectively communicate with various stakeholders including students, teachers, parents, and administrators. In the profession of counseling, Pellitteri et al. explained that "human relationships are the medium in which counselors work" (p. 3). Counselor education has emphasized the emotional relationship necessary in the interpersonal dynamics between the counselor and client. Pellitteri et al. further posited that the role of the school counselor is unique in that "he or she consults with administrators, teachers of all grade levels, support service personnel, parents, and outside agencies" (p. 7) in addition to students. However communication with these stakeholders no longer lies only within the realm of counselors. The skill to build relationships with all of these stakeholders has become a requirement among teachers. Within the classroom especially, building relationships is asserted to be an essential element for student achievement (Canter, 2009; Marzano, 2003; Thompson, 1998).

Many schools have begun embracing a more holistic approach to educating our students. The overarching soft skills involved with developing relationships are encompassed by the theories of emotional intelligence but little is known about the emotional intelligence levels of our teachers. Herein may exist an extremely important

aspect of teacher effectiveness. Tomlinson (2003) explained that "human beings *are* varied and complex" and that "the varieties and complexities demand every bit as much study from the teacher as does curriculum content" (p. 12). Every child is different and brings a variety of factors such as economic status, family structure, race and nationality with them into schools. In order to meet the individual needs of their students, teachers must differentiate all aspects of the classroom for all students. They must be adept at consistently and continuously assessing the emotional and academic needs of their students, as well as gauging their own emotions and actions in the classroom in response to students.

Along with the changes in demographics and teacher responsibilities, new changes in teacher accountability have also emerged. *A Nation at Risk* (U.S. National Commission on Excellence in Education, 1983) kick started a sense of accountability among policy makers and within the teaching profession. International comparisons of reading and math scores continue to show that US students are lagging behind, threatening the intellectual and economic prowess of the United States in the world (OECD, 2014). No Child Left Behind (2002) dramatically shifted the accountability movement in education by setting benchmarks for reading and math among all students in all schools and labeling schools as passing or failing schools based on student standardized achievement scores. More recently, the Every Student Succeeds Act (ESSA, 2015-2016) provides some flexibility but also continues to uphold the accountability standards for all states.

Emotional Intelligence

The idea of improving levels of emotional intelligence amongst teachers may be a predictor for improving teacher effectiveness. In the past couple decades of leadership theory, emotional intelligence has been promoted as a pre-requisite to strong leadership (Bradberry & Greaves, 2005; Goleman, 1998a; Mayer, Caruso, & Salovey, 1999). Higher levels of emotional intelligence were theorized to be the stronger predictors of success, even stronger than IQ (Goleman, 1995). As leaders of the classroom, a teacher's emotional intelligence may be the determining factor especially regarding effective classroom management, and also in the realms of student engagement and instructional strategies. Two teachers may have the same training and preparation, and may be aware of the same instructional or management strategies. However their evaluation and management of situations may be very different and result in very different actions in the classroom. This evaluation of situations and reaction to situations is related to a teacher's emotional intelligence.

Higher levels of emotional intelligence have been found to help individuals manage challenges and stressors within organizations (Bar-On, 1997; Goleman, 1995; Mayer et al., 1999). Likewise, emotional intelligence has also been found to help teachers manage the challenges and stressors of the classroom (Brackett & Katulak, 2007). Goleman (1995) explained that the abilities to persist and stay motivated through frustrations, control impulses, extend empathy, regulate moods, and help individuals manage challenges in organizations. These skills involve awareness and management of one's own emotions as well as the awareness and management of the emotions of others.

In the teacher's case, the others would consist of the students. Within the classroom, these emotional intelligence skills may be crucial to improving a teacher's capability to lead, engage, and manage students. Student discipline problems and poor student motivation are examples of causes of dissatisfied new teacher attrition (Ingersoll & Smith, 2003). These are factors that are related to the "soft" relationship-building personal skills and thinking skills encompassed within emotional intelligence, reinforcing the importance of emotional intelligence regarding teacher preparation. It is also important to consider that the ability based model of emotional intelligence claims that emotional intelligence is an "ability" or "skill" that can be learned and improved.

In the business world, emotional intelligence has been found to be a common factor amongst top CEOs and leaders (Goleman, 1995). However little research has been done regarding improvement of emotional intelligence amongst teachers. Initial studies on emotional intelligence improvement have found that emotional intelligence levels can be improved amongst teachers (Carter, 2012; Hen & Sharabi-Nov, 2014); however there remains no clear unambiguous method to improve emotional intelligence.

Bradberry and Greaves (2005) stressed the importance of accurately assessing situations before taking action and called this skill emotional intelligence. Knowing exactly when to use instructional and management strategies, how to use the strategies appropriately with respect the specific students, and how to manage the emotional and academic needs of students, becomes a more challenging task for today's teachers, especially considering every child is unique in today's ever-diversifying classroom. High levels of emotional intelligence may be the key allowing teachers to better prepare

instruction, more appropriately size up students, as well as better manage situations in classrooms in order to deliver more effective, meaningful instruction.

History of Emotional Intelligence

Goleman (1995) cited an excerpt from Aristotle's *The Nicomacbean Ethics*, suggesting the idea of emotional intelligence: "Anyone can be angry – that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purposes, and the right way – that is not easy" (p. ix). Physiological evidence suggesting an idea of emotional intelligence was described by Harlow (1848) in his description of his medical case of Phineas Gage. Gage is described to have suffered severe trauma to his frontal lobe when a 43-inch tamping iron traveled through his face emerging from the top of his head, removing the frontal lobe region of his brain. Upon recovery, Gage seemed to be able to function physically and cognitively; however his behaviors were described as irrational, erratic, and impulsive, exhibited by soaring tempers uncontrollable cursing. Harlow described the effects of the injury as "the destruction of the equilibrium between his intellectual faculties and the animal propensities…The balance of his mind was gone" (pp. 339-340). This balance described by Harlow resembles today's acknowledgement of the theory of emotional intelligence.

The theory of emotional intelligence began to mature in the early 20th century as theories of intelligence were being researched and developed. Suggestion of emotional intelligence clearly resonated in Thorndike's (1920) social intelligence, which he described as "the ability to understand men and women, boys and girls—to act wisely in human relations" (p. 228). Elsewhere, Thorndike also asserted that social intelligence included one's awareness of one's own and others' "internal states, motives, and

23

behaviors, and to act toward them optimally on the basis of that information" (as cited in

Mayer & Salovey, 1997, p. 187). Some researchers described social intelligence simply

as the ability to get along with others (Moss & Hunt, 1927). In 1930, the Bureau of Public

Personnel Administration used a partially standardized social intelligence measure and

described social intelligence in a more manipulative light as the "ability to get others

consistently and voluntarily to do the things he wants them to do and even like doing so"

(p. 73).

In the 1980s, Gardner (1983) defined intelligence more broadly as "the ability to

solve problems and fashion products that are valued in one or more cultures" (p. x).

According to Gardner, the single IQ test was unable to measure the broad range of

intelligences, which he outlined as eight multiple intelligences: linguistic, logical-

mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and

naturalist. Gardner's (1999) interpersonal and intrapersonal intelligences would set the

stage for more contemporary models of emotional intelligence. He described

interpersonal intelligence as "a person's capacity to understand the intentions,

motivations, and desires of other people and, consequently, to work effectively with

others" (p. 43), and intrapersonal intelligence as the "capacity to understand oneself, to

have an effective working model of oneself- including one's own desires, fears, and

capacities – and to use such information effectively in regulating one's own life" (p. 43).

Emotional intelligence was popularized by Goleman (1995) when he appeared on

the cover of *Time Magazine* after he questioned why there were individuals with high IQs

who were not successful and individuals with lower IQs who became very successful. In

the 1990s, more contemporary theories of emotional intelligence emphasized the idea that

all individuals experienced emotions. It was the awareness of one's own emotions as well as the emotions of others that allowed individuals to properly manage situations. Early emotional intelligence theories focused on the need for leaders to have the ability to be aware of one's emotions as well as the emotions of employees in order to create a team that works well together.

It is popularly accepted that emotional intelligence is distinct from Wechsler's (1955) IQ, although there are two groups of thought regarding the conceptual framework of emotional intelligence. Some emotional intelligence researchers assert that emotional intelligence is a product of trait-based factors (Schutte et al., 1998). Others describe emotional intelligence as an ability-based factor (Salovey & Mayer, 1990). And a third group describes emotional intelligence as a mixed model made up of both ability and trait-based factors (Bar-On, 2006; Goleman, 1995).

Models of Emotional Intelligence

Various theories of emotional intelligence have been asserted to be the reason for these variations in success amongst individuals with varying IQs. These theories fall within the two major models: ability based and trait based. The three most prominent theories have been proposed by Bar-On (2006) and Goleman's (1995) mixed models of emotional intelligence, and Salovey and Mayer's (1990) ability-based model of emotional intelligence.

Salovey and Mayer Model. Salovey and Mayer (1990) interpreted emotional intelligence as a subset of both Thorndike's (1920) social intelligence and Gardner's (1983) intra and inter-personal intelligences. Salovey and Mayer described Thorndike's social intelligence as "the ability to perceive one's own and others' internal states,

motives, and behaviors, and to act toward them optimally on the basis of that information" (p. 187). Gardner's interpersonal intelligence referred to one's ability to monitor and manage the moods of others while intrapersonal intelligence referred to one's ability to detect and interpret one's own complex feelings. This was very similar to the idea of emotional intelligence due to the inclusion of the knowledge of oneself and of others.

Emotional intelligence has been designated by Salovey and Mayer (1990) as ability based. Salovey and Mayer described three distinct abilities regarding emotional intelligence: 1) the basic skill of perceiving and appraising one's own emotions and the emotions of others, 2) the ability to consciously regulate one's emotions and the emotions of others, and 3) the utilization of emotional intelligence in order to solve problems. Salovey and Mayer defined emotional intelligence as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p. 189). Feelings and emotions were described by Salovey and Mayer as affective information, which is prevalent in everyday actions of all individuals. It is this affective information that needs to be processed by individuals and some individuals are better skilled at processing this information than others. The ability to process affective information and then take appropriate action is asserted by Salovey and Mayer to be a skill that can be improved by individuals.

In 1997, Mayer and Salovey updated their definition of emotional intelligence in an attempt to create a more specific definition that also includes the idea of thinking about one's feelings. This revised definition which has been designated the Four Branch Model, was as follows:

Emotional intelligence involves the ability to perceive accurately,

appraise, and express emotion; the ability to access and/or generate

feelings when they facilitate thought (use emotion); the ability to

understand emotion and emotional knowledge; and the ability to regulate

emotions to promote emotional and intellectual growth. (Mayer &

Salovey, 1997, p. 35)

Perceiving emotions is described as simply identifying how people are feeling. It

involves the perception of emotions begins with an awareness of emotional clues

internally and within others. Using emotions is the ability to integrate emotions into the

way we think. Our moods have an effect on our thinking and actions. Being able to get

into an appropriate mood is a valuable skill. Understanding emotions refers to the

adeptness to determine the causes of emotions within oneself and within others.

Managing emotions involves the strategic use and management of emotions to achieve a

goal. The ability-based aspect of Mayer and Salovey's (1997) emotional intelligence

construct is appealing to education researchers who assert that emotional intelligence can

be learned and improved.

In addition to adding the branch regarding the ability to understand emotion,

Mayer and Salovey (1997) laid out a range of abilities for each branch, from more basic

psychological processes to more complex and demanding psychological processes.

Mayer and Salovey described perception, appraisal, and expression of emotion to include

the ability to:

- identify emotion in one's physical states, feelings, and thoughts

- identify emotions in other people, designs, artwork, etc., through language, sound, appearance, and behavior

- express emotions accurately, and to express needs related to those feelings

- discriminate between accurate and inaccurate, or honest versus dishonest expressions of feeling (p. 11)

Using emotion or emotional facilitation of thinking was described to include:

- prioritizing thinking by directing attention to important information

- vivid and available emotions that can be generated as aids to judgment and memory concerning feelings

- emotional mood swings changing the individual's perspective from optimistic to pessimistic, encouraging consideration of multiple points of view

- emotional states differentially encouraging specific problem approaches such as when happiness facilitates inductive reasoning and creativity (p. 11)

Understanding and analyzing emotions included the ability to:

- label emotions/recognize relations among words and emotions themselves

- interpret the meanings that emotions convey regarding relationships

- understand complex feelings

- recognize likely transitions among emotions (p. 11)

Managing emotions, or reflective regulation of emotions, included the ability to:

- stay open to both pleasant and unpleasant feelings

- reflectively engage or detach from an emotion

- reflectively monitor emotions in relation to oneself and others

- manage emotion in oneself and others by moderating negative emotions and

  enhancing positive emotions (p. 11)

EMOTIONAL INTELLIGENCE

Reflective Regulation of Emotions to Promote Emotional and Intellectual Growth

Ability to stay open to feelings, both those that are pleasant and those that are unpleasant.	Ability to reflectively engage or detach from an emotion depending upon its judged informativeness or utility.	Ability to reflectively monitor emotions in relation to oneself and others, such as recognizing how clear, typical, influential, or reasonable they are.	Ability to manage emotion in oneself and others by moderating negative emotions and enhancing pleasant ones, without repressing or exaggerating information they may convey.

Understanding and Analyzing Emotions; Employing Emotional Knowledge

Ability to label emotions/recognize relations among words and emotions themselves, such as the relation between liking & loving.	Ability to interpret the meanings that emotions convey regarding relationships, such as that sadness often accompanies a loss.	Ability to understand complex feelings: simultaneous feelings of love and hate, or blends such as awe: a combination of fear/surprise.	Ability to recognize likely transitions among emotions, such as the transition from anger to satisfaction, or from anger to shame.

Emotional Facilitation of Thinking

Emotions prioritize thinking by directing attention to important information.	Emotions are sufficiently vivid and available that they can be generated as aids to judgment and memory concerning feelings.	Emotional mood swings change the individual's perspective from optimistic to pessimistic, encouraging consideration of multiple points of view.	Emotional states differentially encourage specific problem approaches such as when happiness facilitates inductive reasoning and creativity.

Perception, Appraisal, and Expression of Emotion

Ability to identify emotion in one's physical states, feelings, and thoughts.	Ability to identify emotions in other people, designs, artwork, etc., through language, sound, appearance, and behavior.	Ability to express emotions accurately, and to express needs related to those feelings.	Ability to discriminate between accurate and inaccurate, or honest versus dishonest expressions of feeling.

Figure 3. Four Branch Model of Emotional Intelligence. Reprinted from *Emotional Development and Emotional Intelligence: Educational Implications* (p. 11), by J. D. Mayer & P. Salovey, 1997, New York, NY: Harper Collins. Reprinted with permission.

30

In an attempt to compare emotional levels of groups of teachers, Perry, Ball, and Stacey (2004) used Caruso, Mayer, and Salovey's (2002) four branch model to develop developed the Reactions to Teaching Situations (RTS), which provides scenarios teachers are likely to face and asks teachers to rate the likelihood of four provided reactions. The RTS is not a specific intelligence measure; it was not developed with the intention of measuring an individual's emotional quotient. However, it does provide a means to compare the emotional intelligence levels of a group of individuals. The RTS caters more specifically to the measure of emotional intelligence in teachers by using situations that would be more common in the experiences of teachers. The four branches include identifying, using, understanding, and managing emotions. In a study of teachers in Victoria, Australia, Penrose et al. (2007) found a moderate significant correlation between teacher levels of emotional intelligence and self-efficacy using the RTS.

The Goleman Model. Goleman's (1995) theory of emotional intelligence is also often considered a mixed model of emotional intelligence. His measure of emotional quotient (EQ) involved self-reported data as well as input from colleagues or peers of the participant being studied, and included measures of both skills and personality traits. According to Goleman (1998a), emotional intelligence is based on the five factors: self-awareness, self-regulation, internal motivation, empathy, and social skills. The original five factors were reorganized into four factors in what he called the "two by two model" which included the awareness of one's own emotions and the emotions of others, as well as the management of one's own emotions and other's emotions. Goleman (1998b) later began including motivation as a required capability of any successful leader.

31

It has been hypothesized that EQ was highly relevant to many of our interactions in our daily lives (Ciarrochi, Chan, Caputi, & Roberts, 2001). Goleman (1995) questioned the importance of IQ explaining that IQ alone was not a pure determinant of success. Why was it that there were individuals with high IQs that struggled professionally and others with moderate IQs who did so well? Goleman (1995)) asserted that:

> Emotional life is a domain that, as surely as math or reading, can be handled with greater or lesser skill, and requires its unique set of competencies. And how adept a person is at those is crucial to understanding why one person thrives in life while another, of equal intellect, dead ends. (p. 36)

Goleman (2000) further applied his theory of emotional intelligence to leaders and managers, explaining that a higher level of emotional intelligence was a prerequisite allowing effective leaders to seamlessly alternate between leadership styles.

Framed in organizational and leadership theory, Goleman (1995) strongly asserted that emotional intelligence may be more important as Wechsler's (1955) IQ, the historically accepted measure of intelligence. He further asserted that individuals may be born with a specific level of emotional intelligence but that emotional intelligence can be learned and improved. Goleman (2000) framed his theory of emotional intelligence around leadership in the business world. He explained emotional intelligence as "the ability to manage ourselves and our relationships effectively" (p. 80) and that the competencies were pre-requisites for effective leaders.

Goleman (1998b) organized these competencies into five areas: Self-awareness, self-management, motivation, social awareness, and relationship-management. Self-

awareness includes competencies such as emotional self-awareness, accurate self-assessment and self-confidence. Self-management competencies include self-control, trustworthiness, conscientiousness, and adaptability. Motivation includes achievement drive and initiative. Social awareness includes empathy, service orientation, and organizational awareness. And relationship management includes the competencies of developing others, influence, communication, leadership, change catalyst, building bonds, and teamwork.

More importantly, although traits such as teamwork, optimism, or initiative are personality traits, Goleman (1995) asserted that these competencies are not innate characteristics of individuals but rather traits/skills that can be learned. The idea of being aware of one's own emotions and the emotions of others in order to maintain positive, effective working relationships is also necessary for teachers not only in relation to other staff members, but more importantly, in relation to students.

Bradberry and Greaves (2009) developed the Emotional Intelligence Appraisal (EIA) based upon Goleman's theory of emotional intelligence and included four subscales: self-awareness, self-management, social awareness, and relationship management. Bradberry and Greaves (2009) defined emotional intelligence as "the ability to recognize and understand emotions in oneself and others, and the ability to use that awareness to manage behavior and relationships" (p. 17). They claimed that emotional intelligence is able to predict 58% of an employee's job performance, however only 38% are aware of their emotions as they occur. Bradberry and Greaves' mixed theory also incorporates personality traits but also includes cognitive ability aspect of emotional intelligence. However, based on Goleman's theory of emotional intelligence

they contend that the traits measured by their measure are reflective of observable skills and competencies that are able to be improved by individuals.

The Bar-On Model. Bar-On's (2006) theory of emotional intelligence is purely an ability-based theory consisting of five key components:

1) the ability to recognize, understand and express emotions and feelings;

2) the ability to understand how others feel and relate with them;

3) the ability to manage and control emotions;

4) the ability to manage change, adapt and solve problems of a personal and interpersonal nature; and

5) the ability to generate positive affect and be self-motivated. (p. 9)

Bar-On (2006) defined emotional-social intelligence as "a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands" (p. 9). His emotional quotient inventory (EQ-i) was based on five factors and 15 subscales, which included factors beyond Salovey and Mayer (1990) and Goleman (1995). The five factors included intrapersonal, interpersonal, stress management, adaptability, and general mood.

Bar-On's (2006) five factors were further organized into subscales. The intrapersonal factor included the following subscales: self-regard, emotional self-awareness, assertiveness, independence, and self-actualization. The interpersonal factor included the subscales empathy, social responsibility, and interpersonal relationships. The stress management factor consisted of the subscales stress tolerance and impulse control.

34

The factor of adaptability consisted of the subscales, reality-testing, flexibility, and problem-solving. The factor of mood consisted of the subscales, optimism and happiness.

Bar-On (2006) sought to find out why some individuals were more able to succeed in life than others. His emotional intelligence construct was composed of ability-based skills including the ability to manage and control emotions, but also included traits and moods, which were not ability based.

The Importance of Emotional Intelligence in Schools

Advocates of emotional intelligence theory strongly support the incorporation of emotional intelligence in classrooms. In the last 10 years, parents and leaders have raised concern over the social well-being of our students (Weissbourd, Jones, Anderson, Kahn, & Russell, 2014). Increases in violence, bullying, dropout, and youth suicide, have raised well-justified alarm. Jensen and Snider (2013) found that classroom climates were more negative and stern with a lot of redirection and very little praise. Zeidner, Matthews, and Roberts (2009) asserted that "A reasonable number of today's students may have adequate cognitive ability but are said to be lacking in emotional intelligence" (p. 226). It has also been found that schools no longer need to choose between focusing on only emotional intelligence or only cognitive intelligence; both can be achieved hand in hand with each other (Hawkins, Smith, & Catalano, 2004).

Goleman (1995) stressed the importance of incorporating emotional intelligence in the mission of schools specifically regarding the development of student emotional intelligence. He explained that "As family life no longer offers growing numbers of children a sure footing in life, schools are left as the one place communities can turn to for correctives to children's deficiencies in emotional and social competence" (p. 279).

35

Virtually every child goes to school making schools a very convenient venue to teach emotional literacy. Goleman goes on to explain that "There is perhaps no subject where the quality of the teacher matters so much, since how a teacher handles her class is in itself a model, a de facto lesson in emotional competence- or the lack thereof" (p. 279). The way in which a teacher handles him/herself in every situation serves as a lesson on emotional intelligence for all students in the class.

Teacher preparation programs have long strived to prepare our teachers for the classroom. Alternative routes to teaching have also recognized the value of some preparation for teachers. Content knowledge and pedagogy are typically intertwined with practical experience. Theories of development and learning are associated with practical classroom strategies. However what are often overlooked are the softer skills that are crucial to the success of any teacher: the emotional piece regarding one's own emotional self-awareness, as well as the awareness of the emotions of others, as well as the cultural awareness piece regarding the effectiveness in situations of cultural diversity.

More recently, a growing emphasis on the soft skills required for effective teaching has been considered to significantly impact student learning (Jones, Bouffard, & Weissbourd, 2013). The use of strategies such as differentiated instruction and building relationships with students have become encouraged by school leaders in attempts to engage in a more holistic education of each student. Even with the push by policymakers to focus only on test scores to measure student learning and achievement, research has begun to discover the significant benefits of developing the emotional intelligence of teachers and students, and has found links between emotional intelligence of students and student performance.

Along a similar thread, a growing body of research has begun to direct attention to the relationship between emotional intelligence and teacher effectiveness. Studies among pre-service teachers found that pre-service teachers with higher levels of emotional intelligence were more likely to be successful in the classroom than pre-service teachers with lower levels of emotional intelligence (Koçoğlu, 2011). A more limited but growing area of research has begun to uncover a similar relationship amongst practicing teachers (Penrose et al., 2007).

Criticisms of Emotional Intelligence

Emotional intelligence is not without its criticisms. The most prominent critique of emotional intelligence is regarding whether or not emotional intelligence can even be acknowledged as a legitimate construct due to the current lack of agreement within the emotional intelligence field (Cherniss, Extein, Goleman, & Weissberg, 2006; Waterhouse, 2006; Zeidner et al., 2009). Critics claim that the plethora of competing emotional intelligence constructs is evidence of the immaturity of the theory (Cherniss et al., 2006; Waterhouse, 2006). Murphy (2006) found that existing measures of emotional intelligence were inconsistent with each other and also questioned the legitimacy of emotional intelligence as an acceptable construct. The construct of emotional intelligence has also been shown to overlap heavily with personality dimensions, which also questions the significance of the ability of emotional intelligence to truly explain anything beyond personality (Gannon & Ranzijn, 2005; Cherniss et al., 2006; Waterhouse, 2006).

The predictive ability of emotional intelligence has also been questioned (Waterhouse, 2006). Although Cherniss et al. (2006) found that emotional intelligence

had predictive value, Waterhouse specifically pointed out holes in the statistical determination of the predictive value of emotional intelligence. Considering the lack of agreement regarding the construct of emotional intelligence, and the variation in the measures used to determine emotional intelligence, the predictive nature of the emotional intelligence is inherently in question. Gannon and Ranzijn (2005) found that emotional intelligence only added 1.3% predictability of life success beyond the 34.2% already predicted by personality.

Zeidner et al. (2009) proposed three conceptual issues with emotional intelligence. The first questions the extent to which emotional intelligence is actually a social intelligence. Zeidner et al. point out that although authors such as Goleman (1995) distinguish between self-related and other-related emotional intelligence, there really is no clear understanding of how much of emotional intelligence is dependent on the interactions with others. The second conceptual issue with emotional intelligence is the extent to which emotional intelligence is conscious or unconscious. Zeidner et al. distinguish between explicit and implicit processes. They describe explicit processes as those processes that are accessible to one's consciousness and able to be described, such as recalling the parts of a bicycle. Implicit processes are challenging to describe such as describing the skill of riding a bicycle. Social interactions with others involves implicit processes such as reading body language or facial expressions that may be more associated with our unconscious. Finally, Zeidner et al. question the extent to which context impacts emotional intelligence, particularly the extent to which cultural environments may impact one's measure of emotional intelligence. Understanding the cultural context has an inherent impact on one's level of emotional intelligence; the

ability to adapt more quickly to a foreign culture may be a determining factor of emotional intelligence as well.

Relative to personality and intelligence theories, emotional intelligence is still in its adolescent years. Although reasonable doubts have been raised regarding the theory of emotional intelligence, Zeidner et al. (YEAR) believe that further research of emotional intelligence may "broker a happy marriage between emotions and intellect" (p. 371) and that only time will tell whether or not emotional intelligence theory can substantively stand on its own.

Teacher Self-Efficacy

Teacher self-efficacy has been defined as a teacher's belief in his/her abilities as a teacher (Tschannen-Moran & Hoy, 2001). Bandura (1977) coined the idea of self-efficacy more generally as a measure of one's own belief in his/her abilities in pursuit of accomplishing a specific task. Bandura defined self-efficacy as "one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2), in other words, the belief in one's abilities to accomplish specific tasks. The greater one's self-efficacy, the stronger the belief he has in his ability to accomplish a task. Self-efficacy has been found to be related specifically to teachers and their beliefs regarding their ability to teach. Recent studies have shown positive relationships between teachers with higher levels of self-efficacy and student achievement (Guo, Connor, Yang, Roehrig, & Morrison, 2012).

However the idea of self-efficacy has been difficult to measure; this challenge is no different in the realm of education. Tschannen-Moran and Hoy (2001) described teacher self-efficacy as "an elusive construct," and that "persistent measurement

problems have plagued those who have sought to study teacher efficacy" (p. 783).

Numerous researchers have attempted to measure teacher self-efficacy and evidence of a

relationship between teacher self-efficacy and effective teacher qualities has been found,

however the search for a measure at the appropriate level of specificity for specific

purposes continues to be a challenge.

The History of Self-Efficacy

The roots of self-efficacy lie in the construct of Bandura's (1977) social cognitive

theory. Social cognitive theory attempts to explain how human behavior is developed and

influenced through the interplay between three factors: behavior, environment, and

internal personal factors. Our behaviors are not only a result of our environmental

experiences, nor are they the result of our personal characteristics. Rather, social

cognitive theory asserts that all three factors are continuously influencing each other and

molding our behavioral choices with very experience. Within the factor of personal

characteristics lies the idea of self-efficacy.

In the education field, measures of teacher self-efficacy have been based on

teacher perception of their control over student learning; teachers either feel external

factors such as home environment outweighing their impact as teachers on student

learning, or they are confident that they have the ability, regardless of environmental

factors, to impact student learning (Armor et al., 1976).

Early research on teacher self-efficacy was initiated by RAND researchers and

was based on Rotter's (1966) social learning theory. Rotter developed the Locus for

Control, a measure that determined whether individuals attributed rewards in life to

internal or external factors. Two core statements were proposed by RAND researchers

(Armor et al., 1976) asking teachers to indicate their level of agreement to the two statements. RAND researchers used the following two items to determine if teachers felt that their effectiveness as teachers was in their control (internal) or if their effectiveness as teachers was determined by environmental factors outside of their control (external).

RAND item 1: When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment. Teachers who believe more strongly in this statement attribute student motivation and performance to factors outside of the teacher's control such as demographics, socio-economic status of students, family life, or drug abuse. The comparison of the external factors to the influence of a teacher on students has been referred to as general teaching efficacy (GTE) (Ashton, Olejnik, Crocker, & McAuliffe, 1982).

RAND item 2: If I really try hard, I can get through to even the most difficult or unmotivated students. Teachers who believe more strongly in this statement attribute student motivation to the skills of the teacher and believe they are able to positively impact students regardless of outside influences. The idea that the teacher has the training, skills, and confidence to influence student learning places the responsibility of student learning on the teacher. This aspect of teacher efficacy has been referred to as personal teaching efficacy (PTE).

The Rand researchers found that teacher beliefs were related to a teacher's success in the classroom (Armor et al., 1976; Berman, McLaughlin, Bass, Pauly, Zellman, 1977). Further researchers attempted to develop more comprehensive measures based on the two Rand items in order to improve the reliability of the construct of teacher

self-efficacy. For example, Guskey's (1981) measure of teacher self-efficacy asked teachers to attribute teaching related events to the teacher or to factors outside the teacher's immediate control. Rose and Medway's (1981) *Teacher Locus of Control* asked teachers to assign responsibility for student successes or failures to the teacher or to outside factors, often the students. Gibson and Dembo (1984) developed the Teacher Efficacy Scale (TES), claiming that the two RAND questions corresponded directly to Bandura's (1977) factors of outcome expectancy and self-efficacy within social cognitive theory.

The overlap between Bandura's (1977) self-efficacy and Rotter's (1966) locus of control has caused some inherent confusion. Gibson and Dembo's (1984) TES seemed to be derived from both Rotter's locus of control and Bandura's self-efficacy theories. Bandura's (1977) teacher self-efficacy revolved around the idea that teachers were greatly impacted by their own beliefs about their teaching and ability to influence student learning which in turn is predicted by their motivation to help students. Motivation in turn is influenced by what Bandura described as outcome expectancy and self-efficacy expectation. Self-efficacy expectation is an individual's belief in his ability to influence or achieve a desired outcome. Outcome expectancy is the individual's assessment of how likely a specific outcome might be given a specific level of attainment. Self-efficacy is a strong predictor of motivation, while outcome expectancy is not.

Bandura (1977) asserted teacher self-efficacy does not stay uniform across all teacher tasks. Therefore, measures of teacher self-efficacy should include a multifaceted array of tasks to provide a more general measure of a teacher's sense of efficacy. His unpublished teacher self-efficacy measure included the following subscales: self-efficacy

42

to influence decision making, self-efficacy to influence school resources, instructional self-efficacy, disciplinary self-efficacy, self-efficacy to enlist parental involvement, self-efficacy to enlist community involvement, and self-efficacy to create a positive school climate. No validity or reliability data is available for this measure. Furthermore, this multifaceted measure has been criticized by educators because many items did not accurately reflect situations experienced by teachers.

A major challenge faced by teacher self-efficacy researchers has been determining the optimal level of specificity of the measures (Tschannen-Moran & Hoy, 2001). Teacher self-efficacy can be impacted by a teacher's comfort with a specific grade level, subject area, or even a specific topic within a specific subject area. Measures that are too general may be unreliable and unable to capture all aspects of teacher self-efficacy, however measures that are too specific may not allow for any predictability in research, diminishing relevance.

Tschannen-Moran and Hoy (2001) asserted that "In order to be useful and generalizable, measures of teacher self-efficacy need to tap teachers' assessments of their competence across the wide range of activities and tasks they are asked to perform" (p. 798). In an attempt to develop a more valid and reliable measure of teacher self-efficacy, Tschannen-Moran & Hoy developed the *Teachers' Sense of Efficacy Scale (TSES)*, which attempted to incorporate teacher analysis of given tasks and teacher belief that they can achieve the task given the specific circumstances. Henson (2001) explained that the TSES is more "consistent with Bandura's (1997) triadic reciprocal causation, such that teacher's efficacy belief stems from the dynamic interplay of the environment, behavior, and personal factors" (p. 7). The TSES measures three correlated factors: self-efficacy in

student engagement, self-efficacy in instructional strategies, and self-efficacy in classroom management.

The TSES was developed in attempts to capture teacher self-efficacy levels using a broader range of more relevant depictions of situations experienced by teachers. As with the RAND (Armor et al., 1976) and Gibson and Dembo (1984) instruments, the TSES included challenges with disruptive students. However the TSES further included a focus on self-efficacy in student engagement and instructional strategies such as assessments of teaching in support of student thinking, or assessment of a teacher's flexible application of teaching strategies.

The Relationship between Teacher Self-Efficacy and Effective Teaching

Tschannen-Moran and Hoy (2001) list an extensive list of research findings that associate teacher self-efficacy with positive influences on teaching. Teachers with stronger sense of self-efficacy:

- tend to exhibit greater levels of planning and organization (Allinder, 1994), are more open to new ideas and are more willing to experiment with new methods to better meet the needs of their students (Berman, et al., 1977; Guskey, 1988; Stein & Wang, 1988), exhibit higher levels of persistence and resilience when faced with challenges preventing them from leaving the teaching profession (Grant, 2006; Hong, 2012; Yost, 2006), are less critical of students when they make errors (Ashton & Webb, 1986), work longer with a student who is struggling (Gibson & Dembo, 1984), and are less inclined to refer a difficult student to special education (Meijer & Foster, 1988; Soodak & Podell, 1996). (Tschannen-Moran & Hoy, 2001, pp. 783-784).

Numerous studies have linked higher levels of teacher self-efficacy to higher student scores on standardized tests (Gordon; 2001; Henson, 2001; Lin & Tsai, 1999; Muijs & Reynolds, 2002). Moreover, Ross et al. (2001) found that teachers with higher levels of self-efficacy can improve student self-efficacy levels as well as student achievement. Further studies have looked into the trends in specific characteristics and behaviors of teachers who have higher levels of self-efficacy compared to those teachers who have lower levels of self-efficacy.

Characteristics of effective teachers have been identified and linked to instructional practices of teachers with higher self-efficacy beliefs (Raudenbush et al., 1992). For example, teachers with higher levels of teacher self-efficacy have been asserted to be more willing to try new instructional strategies end experiment more to ensure students do well, and not simply get by (Allinder, 1994; Raudenbush et al., 1992). These types of behaviors may reflect a teacher mentality that "the teacher has the ability to help students achieve and that it is more a matter the teacher finding out how to reach even some of the most challenging students. Goroshit and Hen (2014) describe Gibbs and Powell's teacher efficacy beliefs as "judgements of their capability to influence desired outcomes related to student performance, behavior, and motivation in the classroom" (p. 27). There is an abundance of evidence showing that teachers' beliefs about students in the classroom tend to have a tremendous effect on instruction.

Past experiences and outcomes serve as primary influences on one's self-efficacy (Bandura, 1977). More effective teachers will experience more mastery experiences regarding instructional or behavior challenges in the classroom, and mastery experiences are often related to higher levels of self-efficacy. Hoy and Woolfolk (1990) argued that

45

teacher preparation programs, especially the positive mastery experiences during student teaching, have significant influence on the level of self-efficacy amongst teacher candidates. Teacher preparation programs have focused on guiding student teachers to figure out how to be successful in the classroom.

However teacher self-efficacy is not without criticisms as well. Teacher self-efficacy has been found to be impacted based on environmental contexts; teachers who perceive a positive climate at their school often report higher levels of self-efficacy (Moore & Esselman, 1992). Two teachers of the same skill level may develop very different beliefs of their own self-efficacy based on the environment they teach in. A teacher in an environment that is conducive to his/her personal success may feel far more efficacious than the same qualified teacher in a more challenging environment. Teacher self-efficacy is not transferrable between varying environments especially if the environments are significantly different (Bandura, 1977; Tschannen-Moran et al., 1998). Tschannen-Moran and Hoy (2001) questions whether grade level, subject matter, or school demographics could further impact a teacher's self-efficacy.

Additional contextual factors such as administrative support, instructional leadership, professionalism of staff and leaders, as well as the school culture, have been found to impact the sense of efficacy amongst novice teachers (Tschannen-Moran & Hoy, 2007). Therefore, it is important to discover the context in which teachers measure their perception of their own teacher self-efficacy. The same teacher's reflection on his own efficacy may differ entirely depending on whether the school he works at has outstandingly supportive leadership and positive school culture, or unsupportive leaders and poor school culture. In this study, socioeconomic status of schools is used as the

46

environmental moderator between the relationship between teacher levels of emotional

intelligence and teacher self-efficacy.

Relationship Between Emotional Intelligence and Self-Efficacy

Bandura (1997) attributed the development of one's self-efficacy to higher levels

of self-awareness, self-regulation, and control of emotions. These factors, being very

related to the theory of emotional intelligence, have sparked interest in the relationship

between the two theories. Several studies have been done regarding the relationship

between emotional intelligence and self-efficacy in the past decade.

The evidence for the relationship between emotional intelligence and teacher self-

efficacy is mixed. Penrose, et al. (2007) found a significant relationship between

emotional intelligence and teacher self-efficacy in selected schools in the state of Victoria

in Australia. Teachers were categorized by status: graduate teacher, accomplished

teacher, expert teacher, leading teacher, and principal class. Lead teacher and principal

class teachers were found to have significantly higher levels of emotional intelligence and

self-efficacy. The type of teaching environment was not, however, taken into account. On

the other hand, a second study by Bryan (2011) replicated the Penrose et al. study

amongst elementary school teachers using the RTS in Southeast Michigan in the United

States. A significant inverse correlation was found between emotional intelligence and

teacher self-efficacy.

Correlations between emotional intelligence and self-efficacy amongst pre-service

teachers and teachers of various backgrounds have been found in numerous studies. In

Hong Kong, Chan (2008) found that higher levels of emotional intelligence allowed

individuals to manage different stressors better, improving their self-efficacy.

Abdolvahabi, Bagheri, and Kioumarsi (2012) discovered a significant relationship amongst physical education teachers. The relationship between emotional intelligence and self-efficacy was also found amongst pre-service foreign language teachers in Iran (Koçoğlu, 2011) as well as foreign language teachers in Iran (Rastegar & Memarpour, 2009). Sarkhosh and Rezaei (2014) also found correlations between emotional intelligence and self-efficacy amongst university teachers in Iran. However, none of these studies takes into account the environmental influences on teacher levels of emotional intelligence or self-efficacy.

Emotional Intelligence, Teacher Self-Efficacy, and School Socioeconomic Status

There is strong evidence that students learn from teachers with higher levels of teacher self-efficacy achieve at higher rates than from teachers with lower levels of teacher self-efficacy regardless of external factors (Bandura, 1993; Guskey, 1988; Smith, 1996; Tschannen-Moran et al., 1998; Ware & Kitsantas, 2007). There is some modest evidence that external factors such as socioeconomic status (SES) of students or administrative support are related to a teacher's belief in his/her abilities as a teacher (Tran & Le, 2015). In a correlational study on external factors and teacher self-efficacy, Wagler (2011) found that amongst preservice teachers, SES had a significant effect on the preservice teacher self-efficacy levels. Preservice teachers teaching in schools with free and reduced-price lunch student rates between 9.7% to 36.8% scored 0.29 higher on the teacher self-efficacy measure compared to preservice teachers teaching at schools with free and reduced-price lunch student rates between 58.8% to 100%.

Teachers at lower income schools often face more external challenges such as fewer resources, higher rates of student mobility, and more challenging behaviors

(Kincheloe, 2010). Although teacher levels of self-efficacy have been shown to be correlated to student achievement regardless of external factors, it is crucial to acknowledge the effects of the environment on teacher levels of teacher self-efficacy.

No research was found regarding the relationship between teacher levels of emotional intelligence and SES levels of schools. A far more substantial amount of research on the relationship between social-emotional levels of children and SES exist however. There is a strong consensus that poverty is strongly related to student social-emotional skills (Ghosh, 2014; Jensen, 2009; McCoy, Connors, Morris, Yoshikawa, & Friedman-Krauss, 2015; Talebinejad & Fard, 2012). Organizations such as the Collaborative for Academic, Social, and Emotional Learning (CASEL, 2015) strongly support the need to bring back social-emotional instruction to school curriculum. CASEL has been committed to establishing "social and emotional learning (SEL) as an essential part of education" (CASEL, 2015, Mission & Vision, para. 1). The focus is currently on the development of SEL amongst students and CASEL has developed standards and guides to promote SEL education in schools.

If students from lower SES backgrounds more frequently have lower emotional intelligence levels, it would be even more important to make sure that teachers in those low-income schools have high levels of intelligence levels in order to best meet the needs of the students. Various studies have been done on the relationship between intelligence levels and teacher self-efficacy but none have taken into account the environmental factor of SES of the school.

Summary

As can be seen in the literature review, there is no single agreed upon construct of emotional intelligence. Each construct, in addition, uses different instruments in attempts to capture and measure emotional intelligence. However, the current study uses a measure of emotional intelligence that was constructed on the basis that emotional intelligence can be learned and improved, and that is specific to an educational context.

The constructs of emotional intelligence described strongly support the importance of emotional intelligence and the impact it can have on a leader's effectiveness. A serious gap in the literature exists in the world of educators, more specifically in the empirical study of our teachers in our public school classrooms. If emotional intelligence is such an important factor in leaders and leaders are individuals who "move us…ignite our passion and inspire the best in us" (Goleman, n.d., para 1), then emotional intelligence inherently may be an important factor in the leading of a classroom of students.

CHAPTER 3

METHODS

This study investigated the relationship among teacher emotional intelligence and teacher self-efficacy, as well as the degree to which school socioeconomic status moderated the relationship among K-12 public school teachers. This chapter describes the survey research methods and the application of correlation and regression analysis to investigate the research questions. The participants consisted of public school K-12 teachers from "Mid-Atlantic Public Schools," a large metropolitan school district in the mid-Atlantic region. Participants completed two measures: *Reactions to Teaching Situations* (Perry et al., 2004) to measure emotional intelligence and *Teachers' Sense of Efficacy Scale* (Tschannen-Moran & Hoy, 2001) to measure teacher self-efficacy. Relationships between emotional intelligence, teacher self-efficacy, and school socioeconomic status were analyzed. The research questions for this study were as follows:

Research Questions

1) To what extent is emotional intelligence related to teacher self-efficacy?

2) To what extent are the factors of emotional intelligence related to the factors of teacher self-efficacy?

3) To what extent are emotional intelligence and school socioeconomic status predictors of teacher self-efficacy?

4) To what extent are the factors of emotional intelligence and school socioeconomic status predictors of teacher self-efficacy?

Research Design

The purpose of this study was to determine the relationship between teacher emotional intelligence and teacher self-efficacy, as well as how well teacher levels of emotional intelligence and socioeconomic status of the school at which they work are able to predict for the respective teacher's teacher self-efficacy. This was a quantitative study using correlation and regression analysis.

Participants and Data Collection

Purposeful stratified convenience sampling was used for this study. Surveys were made available to all public school teachers (Grades K-12) in a metropolitan school district in the mid-Atlantic region through the use of a Qualtrics survey tool. In 2014-2015, this school district employed over 10,000 teachers. Only the responses of full time teachers were included in the analyses.

Once permission from The College of William & Mary as well as the participating county was obtained, a link to the Qualtrics survey was emailed to all K-12 public school teachers and kept secure through password protected access to the Qualtrics account and password protected access to the data file folder. Participants received an explanation of the study, including the purpose. An assent page allowed participants to click to consent to participation in the study. The study was estimated to take approximately 10 minutes. In order to improve participation rates, four $25 gift card rewards were raffled off to all participants who completed the survey. It was noted that the final report would be available upon request.

Description of Sample

Of a total of 10,794 surveys that were distributed, 839 surveys were started and 616 were fully completed, yielding a 5.7% response rate. The data were screened for errors and cases with any missing data were eliminated. Gall, Gall, and Borg (2007) recommend at least 100 participants for correlation research. Garson (2008) recommended an n:p ratio of 10:1. The survey consisted of a total of 52 items, thus the recommended sample size would be 520 participants (10 x 52 items). Of 839 participant responses, 586 useable responses were used in the data analysis, which satisfied both recommended criteria for correlation research.

Cases with missing data were eliminated: 125 participants agreed to the consent form but did not begin the survey; 93 participant responses were eliminated due to missing data, 50 of which were missing more than half of the survey data. In addition, 27 participants identified as part-time teachers and were eliminated for analysis. Eight cases were identified as outliers using SPSS, which identified cases with total emotional intelligence scores and teacher self-efficacy scores that were over three standard deviations away from the mean. Removed cases were not used in any analysis for this study. Alpha was set at 0.05 and an examination of descriptive statistics such as histograms, scatterplots, skewness, and kurtosis resulted in no violations of normality.

Of the 586 participants, 254 (43.3%) were secondary level teachers (Grades 6-12) and 332 (56.7%) were primary level teachers (Grades K-5). More females (83.4%) participated in the study, which is slightly lower than the 89.5% of females in "Mid-Atlantic" school district's workforce in 2015-2016.

A question on the survey asked participants to identify the school at which they taught most often. Free and Reduced-Price Meals (FARMs) rates were pre-coded to corresponding schools using public 2015-2016 FARMs rate documents for the school district. Figure 4 displays the distribution of FARMs rates at the schools in which participants worked. Participants taught at schools with rates ranging from less than 5% up to 90% FARMs. The average FARMs rate was 39.7%. Approximately 34% of participants taught at schools with FARMs rates of more than 50% while approximately 27% of participants taught at schools with FARMs rates of less than 10%. Rates were based on public data provided by the county.
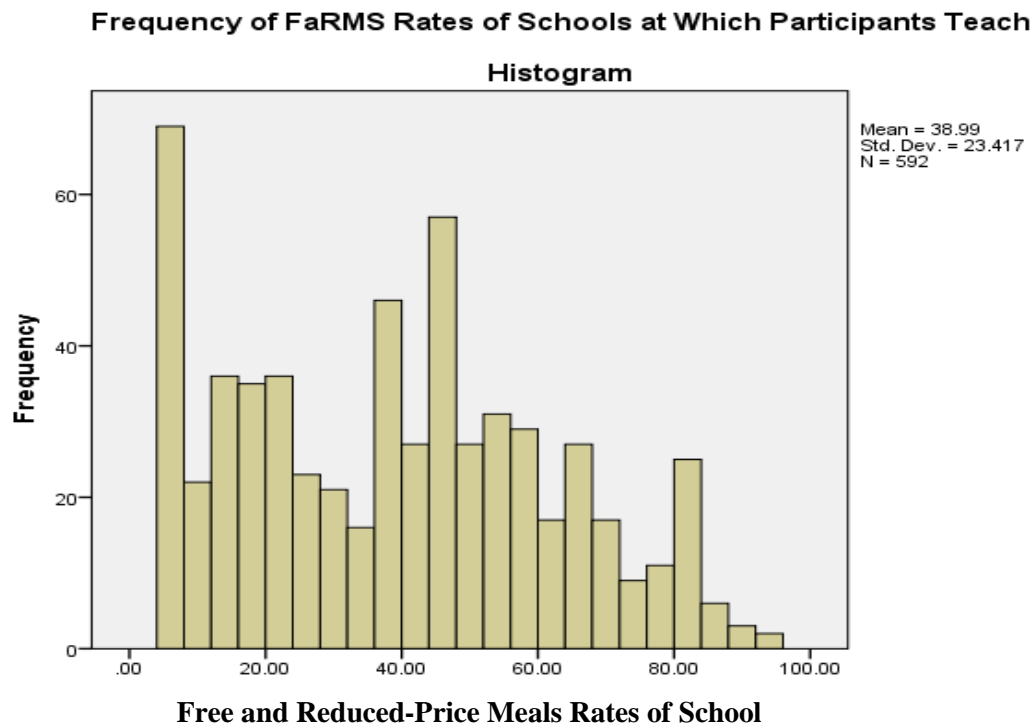
Figure 4. Percentage of students receiving free and reduced-price meals at school of participant.

Figure 5 displays the distribution of years of teaching experience amongst the participants. Participants had taught for an average of 13 years, ranging from first year teachers to teachers with 47 years of teaching experience.
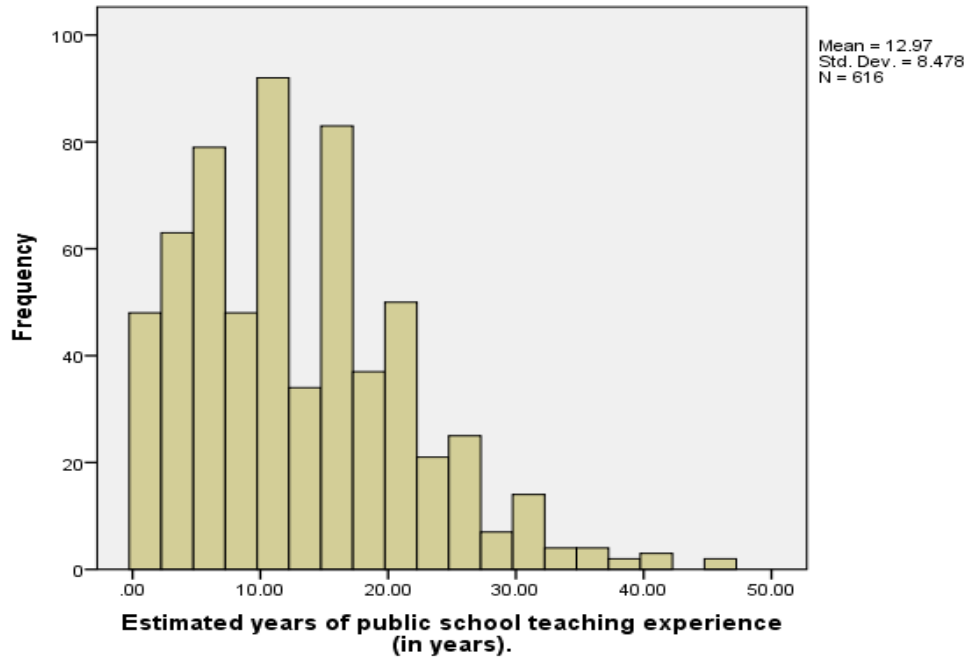
Figure 5. Estimated years of public school teaching experience (in years).

Slightly more females than males participated from the elementary level compared to the secondary level. Secondary teacher participants had on average approximately 1 more year of teaching experience. Overall emotional intelligence and teacher self-efficacy means were very similar between elementary and secondary teacher participants.

Data Sources

This study used three data sources. Emotional intelligence was measured using the Reactions to Teaching Situations (RTS) (Perry et al., 2004) and teacher self-efficacy was measured using the Teachers' Sense of Efficacy Scale short form (TSES) (Tschannen-Moran & Hoy, 2001). School socioeconomic status was identified based

upon 2015 free and reduced-price meals (FARMs) percentages of the schools in the district.

Reactions to Teaching Situations. The RTS is based on Mayer and Salovey's (1997) four-branch model of emotional intelligence. Mayer and Salovey's four-branch model is an ability based theoretical framework for emotional intelligence and is broken down into the four abilities related to emotional intelligence: the ability to identify emotions (identify), use emotions to facilitate thought (use), understand emotions (understand), and manage emotions to promote personal growth (manage). The RTS consists of 40 items. Ten situations related to the experiences of teachers are provided. Each situation is followed by four possible reactions, each relating to one of the four branches of emotional intelligence—identifying, understanding, using, and managing. The four corresponding reactions are randomly assorted per situation. Participants are asked to identify how likely they are likely to react to each of the four reactions described for each situation based on a five-point unidirectional response scale ranging from 1 = *Never Likely*, to 5 = *Always Likely*.

Two items were changed with the permission of the authors of the RTS (C. Perry, personal communication, January 1, 2016). The following were the original and proposed changes that were deemed acceptable by the authors:

- Original Situation 4: Your level co-ordinator calls you in and says: "Your CSF student assessments have been too generous, and you need to do them all again."

- Proposed Situation 4: Your administrator calls you in and says: "Your summative student assessments have been too generous, and you need to do them all again."

56

Rationale: The participating county did not have a CSF student assessment. However the county did use summative assessments at the ends of quarters and semesters. Situation 4 is more likely to happen regarding our summative assessments.

- Original Situation 9: While on yard duty you hear one student making a negative comment about a student from a racial group to which you also belong.

- Proposed Situation 9: While in the hallways you hear one student making a negative comment about a student from a racial group to which you also belong.

Rationale: Not all of schools in the participating county offered a recess or outside time. All of teachers do have hallway responsibilities where they are to monitor the hallways between classes. This situation would be more likely to occur during a hallway transition time.

The RTS was chosen due to its relevance to the experience of teachers. It had an acceptable Cronbach's alpha reliability of 0.82 (Perry et al., 2004) as well as evidence of construct validity, specifically through factorial structure, and discriminant validity (Perry & Ball, 2005). Initial reliability was based on a study of 357 students in the second year of a four-year teacher preparation program at a university. Participation was voluntary. Students consisted of primary and secondary teacher candidates who had 20 days of teaching experience. Participants could score a maximum score of 20 for each of the ten scenarios, if they were to select "Always Likely" for all four reactions related to the four branches. In the current study, out of a possible high score of 200, the range of responses for emotional intelligence was 102 to 178. The using subscale score ranged from 29 to 50. The understanding subscale score ranged from 17 to 49. The identifying subscale score ranged from 17 to 48. The managing subscale score ranged from 20 to 48.

Teachers' Sense of Efficacy Scale. The TSES short form (Tschannen-Moran & Hoy, 2001) is comprised of 12 items, 4 items for each of the three sub factors: self-efficacy for student engagement, self-efficacy for classroom management, and self-efficacy for instructional strategies. Participants identify to what degree they are able to influence or have control over different situations related to teaching on a nine-point unidirectional scale ranging from 1 = *None at all*, to 9 = *a great deal*. The TSES was also chosen due to high reliability and content validity based on factor analysis. The current study resulted in a Cronbach's Alpha reliability of 0.88. Out of a possible high score of 108, participant responses ranged from 61 to 108. The student engagement subscale ranged from 11 to 36. The instructional strategies subscale ranged from 20 to 36. The classroom management subscale ranged from 14 to 36.

Demographics. Teacher demographics such as gender, school at which the teacher teaches, full-time or part-time teaching status, and years of teaching experience were assessed on the survey.

Socioeconomic Status (SES). Socioeconomic status of school was defined by the percentage rate of FARMs during the 2015 school year. Data were obtained from online public records from the school district website.

Data Analysis

Statistical Package for the Social Sciences (SPSS) was used to analyze the results. Initial descriptive statistics were analyzed in order to first attempt to detect incomplete data. A scatterplot was also used in attempts to detect any clear outliers. Tabachnick and Fidell's (2007) recommendation to eliminate data with z-scores greater than absolute value of 3.29 was used to identify and remove additional outliers. Listwise deletion was

used for outliers and any incomplete data. Incomplete data included participant responses

that were missing even one piece of data. Descriptive statistics also helped determine

normality of distribution. Pearson Product-Moment Correlation was used to evaluate the

relationships between subscales of emotional intelligence and teacher self-efficacy. This

was followed by a multiple regression analysis to determine the predictability of self-

efficacy or factors of self-efficacy based on emotional intelligence or factors of emotional

intelligence while controlling for the SES of schools. A hierarchical multiple regression

analysis was also run to see if greater predictability could be found if SES was used as

the primary predictor. The alpha was set at 0.05 due to the exploratory nature of this

study.

Table 1

Research Questions, Data Sources and Data Analysis

Research Question	Data Sources	Data Analysis
RQ1. To what extent is ability-based emotional intelligence related to teacher self-efficacy?	RTS, TSES	Pearson Correlation of total RTS and TSES responses.
RQ2. To what extent are the subscales of ability-based emotional intelligence related to the subscales of teacher self-efficacy?	RTS, TSES	Pearson Correlation of RTS subscale responses and TSES subscale responses.
RQ3. To what extent are emotional intelligence and school socioeconomic status predictors of teacher self-efficacy?	RTS, TSES, SES	Linear regression analysis
RQ4. To what extent are subscales of emotional intelligence and school socioeconomic status predictors of teacher self-efficacy?	RTS, TSES, SES	Linear regression analysis

Note. The Reactions to Teaching Situations has been abbreviated to RTS; the Teacher Self-Efficacy Scale has been abbreviated to TSES; socioeconomic status has been abbreviated to SES.

Ethical Safeguards and Considerations

The current study was completed in partial fulfillment of the requirements for a degree in education at The College of William & Mary. Permission was requested to conduct research from the William & Mary School of Education Institutional Review Committee (EDIRC) and the research department of the public school district. The purpose and brief explanation of the study was shared with all participants. All data collected was kept confidential by the researcher. The county in which the data were collected will remain confidential. Participants were informed that they were free to withdraw consent and discontinue participation in the study at any time by simply discontinuing the survey or by notifying the researcher by e-mail, at which time the respective participant's data would be removed and destroyed. It was made clear that participation in this study would not be made public and that there would be no impact on participant relationships with the researcher, school faculty and administration, or with the College of William & Mary in general.

Incentives were used to encourage participation. Within the invitation to participate and consent form, participants were made aware that they had the option to receive a copy of the findings and were also be informed of four $25 gift cards to Target that would be raffled off at the end of the participation window.

<div align="center">

Assumptions, Limitations, and Delimitations

</div>

The following assumptions, limitations, and delimitations were taken into account in the current study:

Assumptions

- It was assumed that the participants took the survey seriously and answered honestly and that they were sufficiently self-aware to answer accurately. Participants were informed that their responses remained confidential so it was assumed that they did not feel a need to distort their answers out of a sense of social desirability.

Limitations

- The study could not be generalized to the general population of teachers because a convenience sample was used.

- High rates of missing or incomplete data reduced accuracy of the representation of the population. It was important to observe participation rates prior to deciding how to proceed with the analysis of the data.

- Emotional Intelligence theories are still being researched and debated. They are relatively new theories with accompanying measures that are still in need of stronger validation. Furthermore, there is no objective measure of emotional intelligence. All measures of emotional intelligence require subjective data from either the participant or those observing the participant. In this study, self-report data were collected.

- Teacher self-efficacy is a measure of self-belief that requires self-report.

- Time of year when the survey was administered was a limitation; every school level and every school has more specific events that occur at various times of the year which may impact the responses of the participants. The survey was given

after the second quarter in an attempt to avoid stressful testing windows but

provide enough time for teachers to adjust to a new year and to new students.

Delimitations

- Participants included only K-12 public school teachers in "Mid-Atlantic Public Schools."

- An online survey (no hard copies) was used to administer the self-report measures, requiring access to an electronic device.

- Subject area and grade level were not included in data collection due to the overlapping of grades and subject areas by teachers, especially in the elementary levels regarding subject area, and grade levels in the secondary level.

- The study is a multi-level model because socioeconomic status is at the school level while the surveys are at the individual participant level. However, a multi-level analysis was not conducted.

CHAPTER 4

RESULTS

The following section will report the pertinent data and analysis conducted. The tests of the validity and reliability of the measures will be shared first, followed by descriptive statistics and finally the results associated with each of the research questions in order by question.

Validity and Reliability of the Reactions to Teaching situations (RTS) and Teacher Self-Efficacy Scale (TSES)

To test the validity and reliability of the measures,-maximum likelihood factor analysis and Cronbach's alpha analyses was run on the responses to the RTS measure (Perry et al., 2004) and the TSES.

Reactions to Teaching Situations. The factor analysis demonstrated that the Kaiser-Meyer-Olkin (KMO) test was acceptable (0.85) suggesting an acceptable sample size. Varimax rotation, however, revealed 11 components that explained 56% of the variance in the sample. However, only four subscales theoretically make up this measure of emotional intelligence. Each of the 10 situations in the measure was designed to include a response representing each of the four branches of Emotional Intelligence (identifying, using, understanding, and managing) and none of the sets of items designed to measure each branch covaried as expected. Furthermore, it was found that situations 6, 7, and 10 tended to cluster within the first factor instead of by subscale. Moreover, three of the four items in situation 1 clustered in factor 4. Five of the 10 Understanding items

clustered in factor 2, but that was the only clustering in any subscale that emerged for half or more of the items. These results raised concerns about the RTS. Table 2 displays the detailed rotated component matrix of the TSES results.

Table 2

Initial Rotated Component Matrix of Factor Analysis of All RTS Responses

Rotated Component Matrix[a]

						Factor Coefficients					
	1	2	3	4	5	6	7	8	9	10	11
Situation 1: Identifying				.752							
Situation 2: Identifying						.661					
Situation 3: Identifying			.774								
Situation 4: Identifying						.611					
Situation 5: Identifying			.691								
Situation 6: Identifying	.569										
Situation 7: Identifying	.573										
Situation 8: Identifying					.699						
Situation 9: Identifying										.555	
Situation 10: Identifying	.673										
Situation 1: Using				.706							
Situation 2: Using							.779				
Situation 3: Using			-.652								
Situation 4: Using							.620				
Situation 5: Using			.365								
Situation 6: Using									.683		
Situation 7: Using								.665			
Situation 8: Using					.717						
Situation 9: Using										.731	
Situation 10: Using	.745										
Situation 1: Understanding				.729							
Situation 2: Understanding						.682					
Situation 3: Understanding		.616									
Situation 4: Understanding		.627									
Situation 5: Understanding		.645									
Situation 6: Understanding									.406		
Situation 7: Understanding	.563										
Situation 8: Understanding		.515			.407						

64

Situation 9: Understanding		.561									
Situation 10: Understanding	.707										
Situation 1: Managing											.590
Situation 2: Managing											.610
Situation 3: Managing								.569			
Situation 4: Managing						.390					
Situation 5: Managing									.371		
Situation 6: Managing	.507										
Situation 7: Managing	.617										
Situation 8: Managing					.747						
Situation 9: Managing											.415
Situation 10: Managing	.754										
Eigenvalue	4.32	2.36	2.19	2.18	2.13	2.11	1.54	1.52	1.48	1.36	1.31
Percent of Variance Explained	10.79	5.89	5.46	5.45	5.32	5.28	3.84	3.79	3.71	3.40	3.27
Cumulative Var Explained	10.79	16.69	22.16	27.61	32.93	38.21	42.04	45.84	49.54	52.95	56.22

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

Due to concerns regarding the validity of the RTS upon initial data analysis, a maximum likelihood factor analysis was conducted to eliminate RTS items in hopes of improving the validity of the results. All items with communalities under 2.0 were identified. These 10 items were 1-4, 2-2, 3-3, 4-1, 4-2, 5-1, 5-2, 6-3, 9-1, and 9-2. The specific wording of each item can be found in table 3.

Table 3

Description of Items That Were Eliminated Due to Communalities Under 2.0

Situation Description	Eliminated Reaction Item Descriptions
Situation 1: One of your students, whose learning is generally slow and erratic, has just made a breakthrough and has acquired a concept you have been teaching for some time now.	1-4 I would wonder about how to make the best use of this situation.
Situation 2: A parent has lodged a formal complaint about your teaching methods which you feel is totally unjustified and blown out of all proportion. Moreover you are unsure about how 'just' the Principal will be in handling this issue.	2-2 I would think there was too much confusion about teaching methods.
Situation 3: Your students are actively involved in their group work, but you sense that a few are taking advantage of you, and becoming noisy and unproductive.	3-3 I would introduce another way of doing this in the future.
Situation 4: Your administrator calls you in and says: "Your summative student assessment scores have been too generous, and you need to assess all students again."	4-1 I would be angry but it would be best to accept this and get on with the job. 4-2 Momentarily I would want to wring the administrator's neck.
Situation 5: A student, who has the reputation of being difficult to handle, loses it totally on an excursion where you are in charge, and puts on a temper tantrum.	5-1 I would feel concerned but it would be appropriate to ignore the behavior at first. 5-2 My feeling of embarrassment would lead me to think about what I'd done in similar situations.
Situation 6. A student, who has recently made a special effort with a piece of work, says: "You are the best teacher I've ever had."	6-3 I would say that they did well because of their effort not mine.
Situation 9. While in the hallways you hear one student making a negative comment about a student from a racial group to which you also belong.	9-1 I would feel insulted. 9-2 It would be unwise to let it pass and not do something about it.

A factor analysis with the 10 items removed from the RTS resulted in 8 factors explaining 58.38% of the variance. The original factor analysis used all components with eigenvalues greater than 1.0. Theory behind the RTS supports four subscales so four subscales were forced. When four factors were forced, they explained 42.5% of the

variance, however, there was no pattern of alignment with the factor items of the RTS. This raises further questions about the psychometric properties of the measure.

Even with manipulation of the data, the RTS did not seem to accurately identify the four major subscales of the RTS, continuing to raise concern with the validity of the RTS. Factor analysis of the RTS using the data with the ten items removed can be found in table 4 below. That the four factors do not align with the theoretical subscales of the RTS raises concerns about the analyses that depend upon these subscales.

Table 4

Rotated Component Matrix of RTS Responses Using Only Top Four Factors

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
Situation 10-3: Using	.703			
Situation 6-2: Identifying	.702			
Situation 10-4: Managing	.679			
Situation 1-3 : Identifying	.660			
Situation 10-1: Understanding	.658			
Situation 6-1: Managing	.631			
Situation 7-3: Managing	.630			
Situation 7-2: Identifying	.592			
Situation 10-2: Identifying	.584			
Situation 1-1: Using	.564			
Situation 7-1: Understanding	.551			
Situation 1-2: Understanding	.540			
Situation 6-4: Understanding	.384			
Situation 7-4 : Using	.370			
Situation 4-4: Understanding		.684		
Situation 4-3: Using		.613		
Situation 3-1: Understanding		.608		
Situation 9-4: Understanding		.545		
Situation 5-3: Understanding		.543		
Situation 2-1: Using		.419		
Situation 3-2: Identifying			.742	
Situation 5-4: Identifying			.698	

Situation 2-3: Identifying			.581	
Situation 3-4: Using			-.561	
Situation 2-4: Understanding			.487	
Situation 8-2: Identifying				.722
Situation 8-3: Using				.705
Situation 8-4: Managing				.696
Situation 8-1: Understanding				.431
Situation 9-3: Managing				.322
Eigenvalues	6.21	2.98	2.12	1.45
% of Variance	20.73	9.93	7.06	4.83
Cum % Variance	20.73	30.66	37.71	42.55

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

The RTS (Perry et al., 2004) was used to measure emotional intelligence of participants. In the case of this current study, the Cronbach's alpha reliability of the RTS was found to be 0.83, which indicates an acceptable level of internal consistency. The alpha reliabilities of the subscales however, were significantly lower and were as follows: Identifying ($\alpha = .64$), Using ($\alpha = .49$), Understanding ($\alpha = .69$), Managing ($\alpha = .58$). The implications of the lower subscale reliabilities will be discussed in the following chapter.

Teacher Sense of Efficacy Scale. Tschannen Moran and Hoy (2001) also recommended conducting a factor analysis to observe how participants responded to survey questions as well as to see if the participant responses clustered into groupings consistent to the theoretical basis of the TSES. Table 5 shows similar groupings. The current study found the following reliabilities for the TSES: Overall reliability ($\alpha=0.88$), student engagement ($\alpha=0.80$), instructional strategies ($\alpha=0.77$), and classroom management ($\alpha=0.85$).

Table 5

Rotated Component Matrix of TSES Responses Factor Analysis

| | Factor Coefficients[a] | | |
	Classroom Management	Student Engagement	Instructional Strategies
Item 1	.831		
Item 6	.817		
Item 8	.767		
Item 3	.767		
Item 7		.785	
Item 4		.783	
Item 2		.684	
Item 11	.465	.667	
Item 10			.797
Item 9			.781
Item 5			.744
Item 12			.641

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Descriptive Statistics

Table 7 provides the means and standard deviations for the overall emotional intelligence score as well as the subscale scores with the ten items found not to covary removed. A more detailed table of means for each branch of each of the ten situations can be found in Table 6. It should be noted that the Identifying subscale reaction in situations three (1.64) and five (1.80) had extremely low means that raised some concern that will be discussed further in chapter 5.

Table 6

Detailed Descriptive Statistics of Emotional Intelligence Subscales with Items That Did Not Covary and Were Removed Per Situation

	M	SD
1-3 Identifying	4.34	.777
1-1 Using	4.62	.568
1-2 Understanding	3.92	.955
~~1-4 Managing~~	~~4.16~~	~~.983~~
2-3 Identifying	3.31	1.211
2-1 Using	4.46	.725
2-4 Understanding	3.50	1.145
~~2-2 Managing~~	~~2.76~~	~~1.059~~
3-2 Identifying	1.64	.779
3-4 Using	4.39	.795
3-1 Understanding	3.34	1.080
~~3-3 Managing~~	~~3.92~~	~~.820~~
~~4-2 Identifying~~	~~2.67~~	~~1.399~~
4-3 Using	4.01	.874
4-4 Understanding	3.49	.998
~~4-1 Managing~~	~~3.36~~	~~1.081~~
5-4 Identifying	1.80	.969
~~5-2 Using~~	~~2.85~~	~~1.138~~
5-3 Understanding	3.23	1.064
~~5-1 Managing~~	~~2.94~~	~~1.206~~
6-2 Identifying	4.52	.692
~~6-3 Using~~	~~4.44~~	~~.765~~
6-4 Understanding	3.94	1.041
6-1 Managing	4.25	.926
7-2 Identifying	4.36	.682
7-4 Using	4.24	.832
7-1 Understanding	3.79	.967
7-3 Managing	3.90	1.066
8-2 Identifying	2.91	1.222
8-3 Using	3.10	1.340
8-1 Understanding	3.58	1.072
8-4 Managing	2.98	1.154
~~9-1 Identifying~~	~~2.83~~	~~1.207~~
~~9-2 Using~~	~~3.85~~	~~1.014~~
9-4 Understanding	3.81	.956
9-3 Managing	2.99	1.126
10-2 Identifying	3.99	.972
10-3 Using	4.51	.677
10-1 Understanding	4.39	.766
10-4 Managing	4.37	.783

Notes. N=586

The overall mean score on the RTS calculated with specified items removed was 3.72 and the mean of the subscales were as follows: Identifying, 3.36; Understanding, 4.12; Using 3.70; Managing, 3.70. Results and analysis that will be discussed have been calculated after the problematic items, shown in Table 6, were removed.

The TSES (Tschannen-Moran & Hoy, 2004) short form consisted of 12 items to which participants responded based on a unidirectional scale ranging from "1-None at all" to "9-A great deal." Out of a possible total score of 108, the highest score for teacher self-efficacy was 108 and the lowest was 44. The highest possible subscale score was 36. The means of total TSES score and subscale scores were determined as well: total TSES, 7.58; student engagement, 7.16; instructional strategies, 7.95; classroom management, 7.64. More specific descriptive details (means, standard deviations, and ranges) are provided for each of the individual items in Table 8.

Table 7

Detailed Descriptive Statistics of TSES Subscales Per Situation

	M	*SD*	Range
Item 2- Student Engagement	7.03	1.456	2-9
Item 4- Student Engagement	7.32	1.345	2-9
Item 7- Student Engagement	7.68	1.124	4-9
Item 11- Student Engagement	6.61	1.628	1-9
Item 5- Instructional Strategies	8.02	1.108	4-9
Item 9- Instructional Strategies	7.88	1.193	2-9
Item 10- Instructional Strategies	8.21	.945	3-9
Item 12- Instructional Strategies	7.68	1.206	3-9
Item 1- Classroom Management	7.69	1.229	3-9
Item 3- Classroom Management	7.37	1.234	3-9
Item 6- Classroom Management	7.69	1.047	3-9
Item 8- Classroom Management	7.83	1.175	2-9

Note. *N*=586

Table 8 presents the means and standard deviations of total teacher self-efficacy (TSES), total emotional intelligence (RTS), the four subscales of emotional intelligence (using, understanding, identifying, managing), and the three subscales of teacher self-efficacy (student engagement, instructional strategies, classroom management).

Table 8

Descriptive Statistics of Total Teacher Self-efficacy (TSES), Total Emotional Intelligence (RTS), FARMs Rates, Subscales of TSES, and Subscales of RTS

Variable	*M*	*SD*	Range
Total_EI_Score	3.72	.40	2.57-4.67
Total_TSE_Score	7.58	.81	5.08-9.00
FARMs Rate	38.90	23.46	5.00-95.00
EI_Identifying	3.36	.50	1.88-4.88
EI_Using	4.12	.43	2.86-5.00
EI_Understanding	3.70	.52	1.70-4.90
EI_Managing	3.70	.62	1.40-5.00
TSE_Student Engagement	7.16	1.11	2.75-9.00
TSE_Instructional Strategy	7.95	.86	5.00-9.00
TSE_Classroom Management	7.64	.98	3.50-9.00

Note. N=586

Research Question 1: To what extent is ability-based emotional intelligence related to teacher self-efficacy?

Correlational analysis was conducted using a Pearson Product-Moment Correlation between adjusted total EI scores and total TSES scores resulted in a weak, statistically-significant, positive relationship between emotional intelligence and teacher self-efficacy ($r = .187$, $n = 586$, $p < 0.01$). Cohen's (1988) conventions were used to interpret effect size: .1 = weak, .3 = moderate, .5 or above = strong. The scatterplot in Figure 6 displays the results.
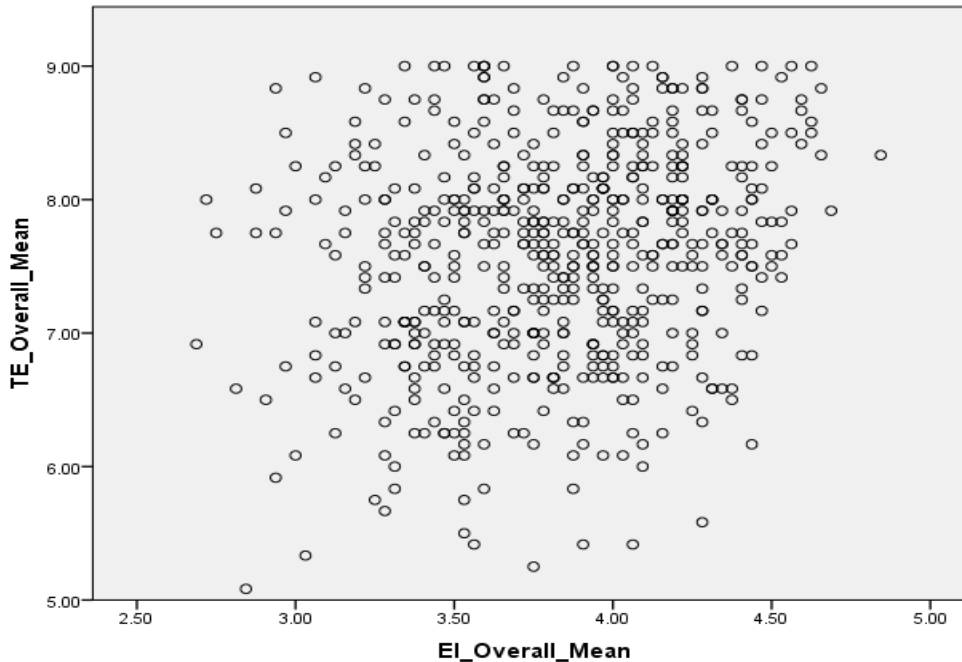
Figure 6. Scatterplot diagram of emotional intelligence (RTS mean score) and teacher self-efficacy (TSES mean score)

Research Question 2: To what extent are the subscales of ability-based emotional intelligence related to the subscales of teacher self-efficacy?

Of the 12 correlations between subscales of the RTS and subscales of the TSES, it can be seen that 9 are significant at the .05 level. Table 9 below displays these correlations. All 9 of the significant correlations are positive. Moderate to weak correlations were found amongst the significant correlations. The only moderate positive correlation existed between the "using" subscale of emotional intelligence and the "student engagement" subscale of teacher self-efficacy ($r = 0.345$, $n = 586$, $p < 0.01$). The "using" subscale of emotional intelligence was also weakly, positively correlated to the instructional strategies ($r = 0.264$, $n = 586$, $p < 0.01$) and classroom management ($r = 0.265$, $n = 586$, $p < 0.01$) subscales of teacher efficacy. A weak positive correlation was

73

found between the "identifying" subscale of emotional intelligence and teacher efficacy subscales of "instructional strategies" ($r = -.086$, $n = 586$, $p < 0.05$) and "classroom management" ($r = -.171$, $n = 586$, $p < 0.05$). Weak, positive relationships were also found between the "understanding" subscale of emotional intelligence and all three subscales of teacher efficacy: "student engagement" ($r = 0.238$, $n = 586$, $p < 0.01$) and "classroom management" ($r = 0.143$, $n = 586$, $p < 0.01$). A single weak, positive correlation was found between the "managing" subscale of emotional intelligence and the "student engagement" subscale of teacher efficacy. Table 9 displays the full correlation matrix between the full scales and the subscales of both the RTS and the TSES.

Table 9
Full Correlation Table Between All Scales And Subscales Of Emotional Intelligence and Teacher Self-efficacy

	Total EI Score	Total TE Score	EI Identifying	EI Using	EI Understanding	EI Managing	TE Stud Engage	TE Instr Strat	TE Class Manag	FARMs Rate of School
Total EI Score	1	.187**	.719**	.710**	.848**	.808**	.229**	.134**	.086*	.028
Total TE Score		1	.359**	.359**	.230**	.136**	.865**	.756**	.831**	.118**
EI Identifying			1	.283**	.405**	.529**	-.039	-.086*	-.171*	.039
EI Using				1	.526**	.513**	.345**	.264**	.265**	.026
EI Understanding					1	.551**	.238**	.178	.143**	.010
EI Managing						1	.196**	.072	.052	.014
TE Stud Engage							1	.481**	.587**	.148**
TE Instr Strategies								1	.448**	.042
TE Clsrm Manage									1	.089*
FARMs Rate										1

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).
a. Listwise N=586

Research Question 3: To what extent are emotional intelligence and school socioeconomic status predictors of teacher self-efficacy?

A hierarchical multiple linear regression was run to predict TSES mean scores based on and free and reduced-price meals rates (FARMs) of the school of each participant and RTS (Emotional Intelligence) average scores. These variables predicted TSES overall mean scores. Participants' predicted Teacher self-efficacy level is equal to 6.036 + .004 (School FARMs Rate) + .375 (Overall EI Mean Score), where FARMS is measured by percentage of students receiving free and reduced-price meals and EI is measured by overall RTS mean score. Teacher self-efficacy increased by .375 ($p<.01$) for each increase in teacher emotional intelligence and increased by .004 ($p<.01$) for every point of FARMs rate. Both EI and SES independently added statistically significantly to the prediction of teacher self-efficacy, R^2 = .048, $F(2,583)$ = 14.660, $p<.01$. However only 4.8% of the variability of teacher self-efficacy overall mean scores was explained by FARMs rates of schools and emotional intelligence (see Table 10). Analysis of standard error and homoscedasticity revealed homogeneity of the data.

Table 10
Model summary of RQ3 equation and Coefficients for RQ3 equation with school FARMs rate and EI as the independent variables and teacher self-efficacy as the dependent variable

	R^2	Adjusted R^2	*SE* of the Estimate	Durbin-Watson
RQ3 Model 1	.048	.045	.790	.051

Source	*B*	*SE B*	β	*t*	*p*
FARMs Rate	.004	.001	.113	2.804	.005
Total_EI_Score	.375	.082	.184	4.553	.000

Research Question 4: To what extent are the subscales of emotional intelligence and school socioeconomic status predictors of teacher self-efficacy?

A multiple regression was conducted to predict total teacher self-efficacy based on the subscales of emotional intelligence (identifying, using, understanding, managing) and socioeconomic status of school (FARMs rate). Analysis of standard error and homoscedasticity once again revealed homogeneity of the data. A significant regression equation was found with an R^2 of .211. Participants' predicted teacher self-efficacy is equal to 5.318 - .484 (EI_Identifying_Mean) + .647 (EI_Using_Mean) + .234 (EI_Understanding_Mean) + .004 (School FARMs Rate) when EI subscale scores were measured as a mean score between 1 and 5 and FARMS is measured by percentage of students receiving free and reduced-price meals. The subscales of EI and school FARMs rate were able to predict 21.1% of the variability within teacher self-efficacy. School FARMs rate and Identifying, Using, and Understanding subscales of Emotional Intelligence were significant predictors of teacher self-efficacy ($R^2 = .211$, $F(5,580) = 31.090$, p<.01). The Managing subscale was not a significant independent predictor of teacher self-efficacy. Table 11 displays details of the model summary and coefficients.

Table 11

Model Summary of RQ4 Multiple Regression Equation as well as Coefficients and Collinearity Statistics for RQ4 Equation with EI Subscales and School FARMs Rate as the Independent Variables and Teacher Self-Efficacy as the Dependent Variable

Model	R^2	Adjusted R^2	SE of the Estimate	Durbin-Watson
RQ4 Model 1	.211	.205	.721	.350

Source	B	SE B	β	t	p
EI_Identifying_Score	-.484	.072	-.297	-6.740	.000
EI_Using_Score	.647	.086	.344	7.529	.000
EI_Understanding_Score	.234	.074	.150	3.154	.002
EI_Managing_Score	.041	.066	.032	.630	.529
FARMs Rate	.004	.001	.119	3.231	.001

Note. Emotional Intelligence is denoted as EI, Free and Reduced-priced Meals is denoted as FARMs;

Tolerance for all independent variables is above 0.2 and VIF below 5.0, which was evidence that multicollinearity probably was not an issue.

Because strong predictability was not discovered for overall teacher self-efficacy, multiple regression analyses were also conducted to predict each factor of teacher self-efficacy (student engagement, instructional strategies, and classroom management) based on the subscales of emotional intelligence (identifying, using, understanding, managing) and socioeconomic status of school (FARMs rate). When predicting for the TSES subscale of student engagement, a significant regression equation was found, $F(5, 580) = 25.320$, $p < 0.01$, with an adjusted R^2 of .172 and R^2 of .179. When predicting the TSES subscale of instructional strategies, a significant regression equation was found, $F(5, 580) = 14.498$, $p < 0.01$, with an adjusted R^2 of .103 and R^2 of .111. When predicting the TSES

subscale of classroom management, a significant regression equation was found, $F(5, 580) = 20.899$, p < 0.01, with an adjusted R^2 of .145 and R^2 of .153.

Overall, it was found that a weak, positive, significant relationship existed between total emotional intelligence (RTS) score and total teacher self-efficacy (TSES) score. The strongest correlation found between subscales of emotional intelligence and teacher self-efficacy existed between the EI using subscale and the TSE student engagement subscale. It was found that the RTS and FARMs rates of schools could only account for 4.8% of the variation in total teacher self-efficacy scores. Using the subscales of EI along with the FARMs rate of schools did not improve the prediction of teacher self-efficacy.

CHAPTER 5

CONCLUSIONS

The findings from this study have discovered possible major flaws with the Reactions to Teaching Situations (RTS, Perry et al., 2004) measure of emotional intelligence. Taking into account validity concerns of the RTS, the findings may still provide some insight on the relationship between emotional intelligence as measured by the RTS and its impact on teacher self-efficacy as measured by the Teacher Self-Efficacy Scale (TSES, Tschannen-Moran & Hoy, 2001). Although emotional intelligence and school socioeconomic status did not strongly predict teacher self-efficacy, significant relationships between the subscales were uncovered in this study. This final chapter summarizes the major findings, discusses implications, and recommends areas of further study.

The Relationship between Emotional Intelligence and Teacher Self-efficacy

Statistical analyses revealed a weak but significant relationship between the emotional intelligence and teacher self-efficacy amongst a sample of K-12 school teachers in a mid-Atlantic public school system. This is quite different from previous studies that have found moderate to strong positive relationships between levels of teacher emotional intelligence and teacher self-efficacy (Penrose et al., 2007; Okech, 2004). Penrose et al. discovered a moderate strong relationship between emotional intelligence and self-efficacy amongst a sample of 211 primary and secondary teachers within Victoria, Australia. The RTS (Perry et al., 2004) was used to measure teacher

emotional intelligence and The Teaching Efficacy Scale (TES; Gibson & Dembo, 1984) was used to measure teaching efficacy. Okech (2004) found very strong significant positive correlations between emotional intelligence and teacher self-efficacy amongst a sample of 180 elementary science teachers in south Texas. In this case, the Multifactor Emotional Intelligence Scale (Mayer et al., 1999) was used to measure emotional intelligence while the Science Teaching Efficacy Beliefs Instrument (Riggs & Enochs, 1990) was used to measure the teacher self-efficacy amongst science teachers.

The Relationship between the Subscales of Emotional Intelligence and Subscales of Teacher Self-efficacy

It was predicted that particular subscales of emotional intelligence would predict related subscales of the TSES (Tschannen-Moran & Hoy, 2001). For example, it was predicted that the "managing" subscale of emotional intelligence would be most positively related to student engagement and classroom management subscales of teacher self-efficacy, however, only one significant, weak correlation was found between "managing" and "student engagement." However, the results from this study do not seem to support the existence of a strong relationship between emotional intelligence and teacher self-efficacy or the subscales of emotional intelligence and subscales of teacher self-efficacy, when emotional intelligence is measured by the RTS (Perry et al., 2004). Only one moderate positive relationship was found amongst all correlations between the "using" subscale of emotional intelligence and the "student engagement" subscale of teacher self-efficacy. In addition, one negative relationship between the emotional intelligence subscales of "identifying" and "classroom management" was found to be significant. The negative correlation suggests that lower levels of identifying emotional

80

intelligence was related to higher levels of teacher self-efficacy for classroom management.

The moderate to weak relationships between the RTS sub-scales and the TSES student engagement subscale support the idea that higher levels of emotional intelligence may help a teacher motivate students, assist families and students, help students value learning, and help student believe they can do well. It would be reasonable to predict that that the TSES subscale of classroom management would also have been related to the subscales of the RTS. Considering classroom management often entails reactions and careful decision-making in response to disruptions, I would have predicted that higher levels of identifying, using, understanding, and managing emotions would have been highly correlated to classroom management.

The Extent to Which Emotional Intelligence and School Socioeconomic Status Predict Teacher Self-efficacy

Teacher self-efficacy and socioeconomic status (free and reduced-price meals [FARMs]) rates were weak yet significant predictors of teacher self-efficacy. According to the results of this study, only 5.1% of the variability of teacher self-efficacy was predicted by emotional intelligence alone, and only 6.4% of the variability of teacher self-efficacy predicted by emotional intelligence and FARMs rates. The results of this study suggest neither emotional intelligence nor school socioeconomic status were strong predictors of teacher levels of teacher self-efficacy.

Discussion

Overall, a weak positive relationship between emotional intelligence and teacher self-efficacy was found. Although the relationship between emotional intelligence and

teacher self-efficacy was not as strong as prior studies had found, there was still evidence that the two constructs are related. However, before delving into a discussion about the results, it is crucial to share serious concerns that arose regarding the RTS (Perry et al., 2004) measure of emotional intelligence of teachers. Initial reliability and validity analysis uncovered concerns with the validity of the RTS measure, which has serious implications on the validity of the results from the current study.

Validity of the Reactions to Teaching Situations Measure

The validity of the RTS arose as a major concern. A factor analysis of the RTS responses revealed 11 components rather than the four that were expected. Further analysis uncovered possible content validity issues as well as concerns with the scoring and design of the RTS.

Factor analysis. A major concern is that some items on the RTS that theoretically represent specific subscales of emotional intelligence are not independent of the other subscales. For example, in Situation 1, the using, understanding, and identifying subscales all fell under the same factor. Theoretically, each of the four scenarios in Situation 1 would represent a different factor. This issue was observed in almost every situation, and most extremely in situations 1, 7, 8, and 10. When forcing four factors, extreme concerns were still observed in situations 1, 7, 8, and 10. It could be argued that the subscales are not meant to be independent of each other; individuals can have high scores in each of the subscales of emotional intelligence. However, if this is the case, there is concern with the wording of the directions of the RTS, which will also be discussed shortly.

Theoretical coherence. The factor analysis also resulted in concerns regarding the alignment of the scenario reactions with the subscales they were meant to represent. There are reactions to situations that may be aligned to the respective subscale in theory but do not seem to describe a common reaction to the respective situation.

Some of the reactions raise concern, including reactions that have significantly lower means on a scale of one to five. An example of the misalignment can be observed in situation four which reads, "Your administrator calls you in and says: 'Your summative student assessment scores have been too generous, and you need to assess all students again.'" The identifying reaction to this situation had a mean of 2.67 and states, "Momentarily I would want to wring the administrator's neck." The use of such an extreme response may not capture the identifying aspect for most teachers. According to Mayer and Salovey (1997), the identifying branch of emotional intelligence entails the ability to perceive accurate emotions in oneself and others. A more appropriate identifying reaction that would be more relatable to teachers may be, "I would initially feel confused and upset." This is a more general, relatable reaction that still detects whether or not the participant is identifying and perceiving his own emotions. In the same situation, the managing reaction also does not seem representative of the respective subscale. The managing reaction states that the participant would feel "angry but it would be best to accept this and get on with the job." In fact, it seems a more appropriate managing response may be "I would be angry and would find an opportunity to discuss the feedback from my administrator and see if the only resolution is to reassess all students again." This response would be more representative of the ability to manage emotion in oneself and others.

The identifying reaction to situation five also presents one of these extreme negative reactions. Situation five states, "A student, who has the reputation of being difficult to handle, loses it totally on an excursion where you are in charge, and puts on a temper tantrum." The identifying reaction states, "I would feel like a failure," however this extreme negative does not seem like an accurate identifying reaction to this situation as represented by the second lowest mean of 1.82 out of all reactions. A more appropriate description of an identifying reaction to this situation may be, "I would feel frustrated and upset that the student is throwing a tantrum."

Another very clear example of the misrepresentation of a subscale reaction is in situation three, which reads, "Your students are actively involved in their group work, but you sense that a few are taking advantage of you, and becoming noisy and unproductive." The identifying reaction had one of the two lowest means out of all reactions (1.65); it states, "I would feel trapped in such a situation," however it would seem more likely that an identifying reaction to be on the lines of "I would feel upset and disappointed that students were not on task." The managing reaction states, "I would introduce another way of doing this in the future." However, this reaction does not represent an immediate managing of emotions. Rather, it represents an ability to reflect and develop strategies to manage the classroom. A more accurate managing reaction would be, "Although the few off-task students would anger me, I would find a way to calmly and respectfully redirect the students." This reaction better describes the ability to moderate one's emotions.

Logic of scoring design. There is also an issue with the RTS' ability to distinguish between subscales of emotional intelligence. In situation one, it is not unlikely that a teacher would react in ways representing all four of the provided reactions.

84

Situation one reads as follows: "One of your students, whose learning is generally slow and erratic, has just made a breakthrough and has acquired a concept you have been teaching for some time." It seems likely that a teacher would feel pleased knowing that the strategies used helped students (using), feel as though his/her feelings reflected the part played in the situation as a teacher (understanding), feel validated as a teacher (identifying), and think about how to make best use of the situation (managing). Mayer, Salovey, and Caruso (2008) explain that "individuals high in emotional intelligence pay attention to, use, understand, and manage emotions, and these skills serve adaptive functions that potentially benefit themselves and others" (pp. 503-517). Therefore, the design of the RTS instrument exhibits a crucial flaw if attempting to measure an individual's emotional intelligence subscale score.

The concerns with theoretical coherence draw attention to the intended purpose and scoring design of the RTS. There is a concern with the identifying of individual levels of emotional intelligence in relation to the four branches, as well as the averaging of overall RTS scores to determine an overall emotional intelligence score using the RTS. The RTS attempts to measure emotional intelligence by asking how participants would react to specific teaching situations. The choices each represent one of the four tiered branches of Mayer and Salovey's (1997) model of emotional intelligence. Those levels from most basic to most complex, are identifying, using, understanding, and managing. An individual who exhibits high levels of emotional intelligence according to the RTS would respond that they experience all four branches of emotional intelligence.

In order to ultimately manage emotions we must be able to identify emotions. However, the RTS may not be accurately capturing individuals with higher levels of

emotional intelligence because they are overlooking their initial more basic emotional intelligence based reactions. For example, an individual with a high level of emotional intelligence may react consistently on a managing level of emotional intelligence and may not even realize that they unconsciously process through the identifying, using, and understanding branches of emotional intelligence. Therefore, it may be the case that participants who hover around the understanding and managing branches of emotional intelligence may ultimately score lower on the overall RTS score because they do not acknowledge that they experience the identifying or using branches.

If the intended purpose of the RTS is to determine the likelihood of an individual's reaction in reference to the four branches of emotional intelligence, it may be beneficial to eliminate the time frame of the reaction. The directions ask participants to identify how likely they are to react to situations immediately after the situation occurs. Eliminating the time frame allows participants to freely identify the likelihood of each type of reaction as opposed to suggesting there is only one immediate reaction to a situation. The results would indicate how likely an individual is to react regarding the four branches of emotional intelligence.

This however, does not resolve the issue that some individuals truly may not experience all branches of emotional intelligence and may be at a level where they react in a management behavior. This not only supports the concern with using the RTS and its subscales as summative measures of emotional intelligence and subscales of emotional intelligence, but also raises a concern with the hierarchical nature of the Mayer and Salovey (1997) model of emotional intelligence.

Alpha reliability of the RTS and subscales. The concerns with the validity of

the RTS may explain an inconsistency between the reliability of the subscales of the RTS

and the overall RTS score. Typically, reliabilities of subscales of a specific measure tend

to reflect the reliability of the overall measure. However, in the case of the current study,

although the overall alpha reliability was .85, the subscale reliabilities were as follows:

identifying $\alpha = .62$, using $\alpha = .50$, understanding $\alpha = .69$, managing $\alpha = .59$. One

explanation may simply be that subscales of the RTS are not accurately reflecting the

theoretical subscales. Instead, the items of the RTS are grouping together consistently in

groups that do not reflect the theoretical subscales. This can be seen in the factor analysis

of the RTS manipulated data. Situations 1 and 10 show clear examples of the items

grouping together by situation, rather than by subscale. This once again is a concern that

further reflects the larger concerns with the validity of the RTS.

Possible Interpretations Assuming Acceptable Validity

The relationship between the subscales of emotional intelligence and teacher self-

efficacy uncovered many weak positive relationships that provided little insight into the

relationship between emotional intelligence and teacher self-efficacy. Negative

correlations were found between the identifying subscale of emotional intelligence and

both the instructional strategies and classroom management subscales of teacher self-

efficacy. This may imply that as a teacher reacts more on an identifying level, they are

more likely to show weakened beliefs in their instructional strategies and classroom

management abilities. The many weak but significant relationships between subscales of

emotional intelligence and teacher self-efficacy supported the hypothesis that the

subscales together along with school socioeconomic status may have been able to better

predict for teacher self-efficacy. Unfortunately this was not the case. Teacher levels of emotional intelligence and socioeconomic status of the school were not able to explain a substantial portion of the variation in the teacher self-efficacy scores.

The inconsistent results may be attributed to the specific participant sample. Teachers in "Mid-Atlantic Public Schools" in the United States may share similar experiences that differ from participants in Turkey (Koçoğlu, 2011), Australia (Penrose et al., 2007), and even south Texas (Okech, 2004), where significant strong relationships between emotional intelligence and teacher self-efficacy were discovered. Furthermore, the more diverse range of participants in the current study may have uncovered a weaker general relationship between emotional intelligence and teacher self-efficacy amongst teachers. Koçoğlu for example, studied a population of 90 Turkish English as a Second Language pre-service teachers and Okech studied a population of 180 elementary school science teachers in Texas. The current study surveyed a wide range of 586 K-12 public school teachers within the very large mid-Atlantic school district.

The results may have also been impacted by the low response rate of approximately 6%. In education research, Nulty (2008) found that online surveys resulted in a 23% lower response rate than paper surveys. Nulty further claimed that a 50% response rate in the social sciences is an acceptable response rate. There is a more general acceptance that 10% response rates are acceptable for online surveys, however, even with this lower benchmark of response rate, the 6% response rate in the current study is still concerning. The low response rate makes the results susceptible to bias. Gall et al. (2007) discuss the possible difference between those who volunteer to participate in a study and those who do not. The low response rate may result in representation of teachers with

specific characteristics. For example, the low response rate may have been impacted by familiarity with the online survey technology. It would not be unreasonable to hypothesize that teachers with high levels of emotional intelligence and teacher self-efficacy include a large population of veteran teachers who may still be more comfortable with paper and pencil based surveys. There is also something to be said about the type of teacher that volunteers to participate in studies. Volunteer teachers may be more likely to also attempt to answer with what they may perceive as an appropriate response as opposed to their true response.

Another finding that may support the evidence of a different population of teachers in the current study can be found in the factor analysis of the teacher self-efficacy instrument. Tschannen-Moran and Hoy (2001) recommended factor analysis of results from the TSES in order to determine if the population is representative of the teacher self-efficacy framework. Factor analysis revealed similar clustering for self-efficacy in student engagement and instructional strategies, but differed slightly in the area of self-efficacy in classroom management. This could mean that the sample population differs slightly from expected normal clustering of subscales, which could definitely impact correlations between emotional intelligence and teacher self-efficacy, as well as the predictability of teacher self-efficacy based on emotional intelligence and socioeconomic status of school.

For this study, the impact of socioeconomic status on the predictability of teacher self-efficacy would suggest that socioeconomic status does not play a substantial role in a teacher's feeling of success in a classroom. Tschannen-Moran (2007) suggested that the environment may play a factor in determining teacher self-efficacy mainly among novice

89

teachers. Bandura (1977) also asserted that once veteran teacher self-efficacy beliefs were established, environment had little effect on self-efficacy beliefs. The current study found that environment, defined as socioeconomic status, was found to have very little additional impact on the predictability of teacher self-efficacy, potentially due to the established self-efficacy beliefs amongst teacher participants. Tschannen-Moran and Hoy (2007) also found that environment of the school did not have a large impact on the self-efficacy of veteran teachers.

The lack of impact of socioeconomic status on teacher self-efficacy may also be due to the type of teachers who are choosing to work at lower-income schools. There may be a mindset amongst very competent and effective teachers who are looking to make a difference and choosing to work in low-income areas. Although they are working in a stressful or challenging environment, they still feel as though they can be successful in the classroom. Mobility rates continue to be higher at low-income schools (TNTP, 2012), however the stressors may be pushing teachers to move to less challenging school environments, but not necessarily due to low self-efficacy beliefs held by the teacher.

The National Forum on Education Statistics (NFES, 2015) suggests that FARMs rates are not the most accurate measure of poverty because the threshold defining students who are eligible for FARMs changes and FARMs rates are not based on true poverty rate thresholds. However, NFES does contend that FARMs rates can provide relative socioeconomic levels. That free and reduced-price meals (FARMs) rates are an imperfect measure of poverty should be taken into consideration as well regarding the minimal relationship observed in the current study between free and reduced-price meals rates and teacher self-efficacy.

90

Although previous research has uncovered relationships between emotional intelligence and teacher self-efficacy, the results from the current study suggest that overall emotional intelligence and overall teacher self-efficacy may not be closely related. In fact, a few more recent studies have found similar results to the current study amongst small populations of student teachers (Corcoran & Tormey, 2013; Hall & West, 2011). The environmental factor of free and reduced-price meals rates further resulted in very weak impacts on the predictability of teacher self-efficacy, suggesting that the environment as measured by FARMs rates is not closely related to the relationship between emotional intelligence and teacher self-efficacy.

Implications for Practice

In the current study, the construct of teacher emotional intelligence, as measured by the RTS was only weakly related to teacher self-efficacy, as measured by the Teacher Self-Efficacy Scale. Nonetheless, there may still be good reason to promote the importance of emotional intelligence and teacher self-efficacy independent of each other, especially considering teacher self-efficacy is theorized to stabilize once teachers are established. If so, emotional intelligence may still be important for success of our teachers, especially considering the push for social-emotional curriculum and instruction for our students (CASEL, 2017).

Among the factors within the school, teacher effectiveness has been asserted to have the most influence on student learning (Barber & Mourshed, 2007; Darling-Hammond, 2000; OECD, 2005). Gibbs (2002) found that effective teachers have higher levels of self-efficacy. Teachers with higher levels of self-efficacy have been found to be more creative in lesson development and more successful with classroom management

(Tschannen-Moran et al., 1998). The responsibilities and stressors involved with teaching are broadening and although this study did not find emotional intelligence to be a key predictor of teacher's self-efficacy, it is still a factor worth delving further into considering the weak relationships uncovered from this study and the inconsistent results from similar investigations into the relationship between emotional intelligence and teacher self-efficacy.

Despite the failure to find a strong relationship between emotional intelligence and teacher self-efficacy, the skills entailed within Salovey and Mayer's (1990) branches of emotional intelligence may be beneficial for schools and teacher preparation programs to teach. The weak significant correlations found may provide some evidence that emotional intelligence is related to teacher self-efficacy, even on a more minimal level. In theory and as evidenced by research in the field, ability-based emotional intelligence continues to seem like a likely predictor of teacher self-efficacy, although in the case of the current study, flaws in the RTS measure may have corrupted a possible relationship.

Inclusion of emotional intelligence in preparation programs may shed light on individual teacher levels of emotional intelligence in efforts to improve teacher self-efficacy in the classroom, especially in teacher preparation system where pedagogy, content knowledge, and assessment continue to remain as staples in the curricular requirements of teacher preparation programs (Nagy & Wang, 2006; NCATE, 2008). It may be beneficial to teach skills involved with Salovey and Mayer's (1990) four branches of emotional intelligence. It is only relatively recently that emotional intelligence has become a topic of interest in relation to topics of teacher preparation, improving teacher effectiveness, and improving teacher self-efficacy. Guiding teachers to

become more aware of their own emotions and behaviors throughout instruction may also help teachers determine if their own behaviors are possible antecedents to common classroom challenges including management and student engagement.

The weak predictability of self-efficacy by the factors of the RTS still suggests that it may be important for teachers to be more aware of their own emotions and behaviors and also be aware of the emotions of students and staff in order to better manage situations involving students and staff. Considering the growing awareness of the diverse needs of students, it seems plausible that the affective emotional intelligence aspects contribute to a teacher's effectiveness, and by extension his or her self-efficacy, specifically the ability to engage students, manage students, and apply effective instruction in the classroom.

The results of the current study support Tschannen-Moran and Hoy's (2007) finding that the environment, defined by free and reduced-price meals (FARM) rate of school, does not seem to be a strong predictor for teacher self-efficacy among teachers. This contradicts a common idea in teacher mobility research, which often asserts that low-income school environments may impact a teacher's feeling of success. Turnover at low-income schools is higher than non-low-income schools (TNTP, 2012) suggesting teachers want to move to schools where they are able to have more of an impact on student achievement or work in environments where they may experience higher levels of teacher self-efficacy. This may suggest school leaders and preparation programs continue to focus on setting teachers up for success to improve teachers' self-efficacy and keeping teachers from leaving, especially at low-income schools.

<center>**Directions for Future Research**</center>

Researchers continue to advocate the importance of emotional intelligence in in areas of business leadership and teaching (Goleman, 2001). Results from the current study revealed four major directions for future research: 1) further analysis of the RTS (Perry et al., 2004) to challenge and improve the construct validity of the measure, 2) further research on the measurement of the construct of emotional intelligence in the teaching field specifically regarding the four branches of Mayer and Salovey's (1997) emotional intelligence construct, 3) further research on the factors that may predict teacher self-efficacy, and 4) replication of the study with another measure of emotional intelligence to confirm the validity of the results.

Further Analysis of RTS Scale

There are some concerns that arose with the RTS (Perry et al., 2004) measure of emotional intelligence. The RTS was developed based on Mayer and Salovey's (1997) four branch model of emotional intelligence. Mayer and Salovey proposed that the four subscales of emotional intelligence are identifying, using, understanding, and managing. The RTS measure included ten situations, each with four possible reactions representative of the four subscales of emotional intelligence. Factor analysis of the RTS measure, however, initially revealed eleven components rather than the four expected. Upon face validity, the situations and scenarios seemed aligned with the respective branch of emotional intelligence. However due to the difference in revealed factors, it can be concluded that either the RTS is flawed or that the population in the current study did not interpret the items the same way as prior sample populations. It would be wise to perform a confirmatory factor analysis of the RTS to determine the construct validity before it is

<center>94</center>

used in future studies. Furthermore, because varimax rotation forces factors not to be related, a principle axis factor analysis with an oblique rotation would also be recommended to see if interrelatedness between the four reactions resulted in cleaner, more aligned, factor components.

Another concern regarding the RTS is that the total emotional intelligence score may not accurately represent participants who are actually reacting to situations at a higher emotional intelligence level. Although each scenario includes a reaction representative of each branch of Mayer and Salovey's (1997) construct of emotional intelligence, the RTS measure assumes that participants who react at higher managing levels will acknowledge experiencing each of the less complex branches of emotional intelligence. However, it is possible that participants who react on a managing level of emotional intelligence may not consciously experience the identifying or using levels. This would result in an overall lower emotional intelligence score even though the participant is actually reacting to situations at a more complex managing level. If the RTS questionnaire measured emotional intelligence with each scenario structured as a multiple choice question where participants could only select one of the four reactions representing branches of emotional intelligence, this might help to alleviate this problem. This strategy might test the conceptualization of these four branches as increasing in complexity.

Further Research on the Construct of Mayer and Salovey's Emotional Intelligence

Further research on the construct of emotional intelligence and the effects of teacher levels of emotional intelligence on teacher effectiveness and student achievement should also be considered. The literature on emotional intelligence, teacher self-efficacy,

and socioeconomic status seemed to support the possibility of relatedness among the three factors. However, because similar results were not revealed in this study, it is suggested that future research, especially in the United States, delve deeper into the possible reasons behind the difference in teacher self-efficacy as well as the weaker apparent relationships between emotional intelligence and teacher self-efficacy within this study's population of public school teachers. For example, it would be valuable to determine if similar samples of teachers have similar self-efficacy and emotional intelligence levels. No studies have used such a large sample of only secondary teachers.

Furthermore, it would be extremely valuable to analyze if the four subscales of the RTS measure were observed as specific subscales in prior studies by simply running a factor analysis and measuring the alpha reliabilities of the subscales. If the responses do not cluster into the subscales and low alpha reliabilities are found for the subscales, there would be strong reason to discard or to seriously improve the RTS measure so the items more accurately depict reactions better representing each branch. Determining the cause of the current "outlying" findings regarding the relationship between emotional intelligence and teacher self-efficacy would either expand our knowledge of emotional intelligence, teacher self-efficacy, and the relationship between the two. It may also help improve the validity of the RTS emotional intelligence measure. On a similar but broader note, it would be beneficial to study the discriminant or concurrent validity of Mayer and Salovey's (1997) theory of emotional intelligence with other measures of emotional intelligence.

Lastly, it would be valuable to delve deeper into the data by qualitatively researching the teachers' beliefs in their teaching and to observe teachers with strengths

96

in various levels of emotional intelligence. A qualitative study could uncover two major findings. First, it could help determine whether the hierarchical nature of the Mayer and Salovey (1997) theory or emotional intelligence is experienced by teachers. Do teachers who are at the managing level truly experience the identifying, using, and understanding levels prior to acting in a more skilled managing manner? A qualitative study could also help determine if a teacher's emotional intelligence is related to the way a teacher self-reports his belief in his own teaching ability. A teacher with high "managing" levels of emotional intelligence may have a more accurate reflection of his abilities regarding engaging and managing students, whereas a teacher with lower "identifying" or "using" levels may hold less accurate self-perceptions of his ability to engage and manage a class.

Predictability of Teacher Self-efficacy

Interestingly, although overall emotional intelligence and socioeconomic status were unable to strongly predict teacher self-efficacy, the subscales of emotional intelligence and socioeconomic status did significantly predict teacher self-efficacy in a regression analysis. The subscales of emotional intelligence and socioeconomic status of the school were able to predict 21.1% of the variability within teacher self-efficacy. The EI using score, EI identifying score, and socioeconomic status of school variables each made significant independent contributions to explaining variance in teacher self-efficacy. However, considering that the understanding and managing branches of emotional intelligence are representative of higher levels of emotional intelligence (Mayer & Salovey, 1997), it was expected that understanding and managing would be significant and strong predictors of teacher self-efficacy. It may be the case that teachers need only to master the identifying and using levels of emotional intelligence in order to

97

experience successes in the classroom and report high levels of teacher self-efficacy. Future studies may want to analyze the relationship between school level, years of teaching experience, emotional intelligence, and teacher self-efficacy, to see if stronger relationships and predictability are more evident when studying populations of novice teachers prior to the "stabilizing" years of teacher self-efficacy.

It would be also valuable to determine why the subscales of emotional intelligence and socioeconomic status were better predictors than overall emotional intelligence and socioeconomic status. As stated in the prior section, there is some concern with the total value of emotional intelligence and the design of the RTS measure that may be the reason behind the inconsistency between the subscales and the overall score.

One of the critiques by Zeidner et al. (2009) was that cultural environments may impact one's measure of emotional intelligence. It would be recommended to explore how cultural awareness and ability to adapt to different cultures can impact an individual's emotional intelligence. It would be reasonable to suggest that situations posed in a measure of emotional intelligence such as the RTS, may be interpreted differently by individuals from different cultures, affecting their raw emotional intelligence scores.

Replication of the Study

It is strongly recommended that the study be replicated. The current study is one of few conducted in the United States, none of which have attempted to uncover the impact of school socioeconomic status and emotional intelligence on teacher levels of teacher self-efficacy. It would therefore be recommended to replicate a similar scale

study to help confirm results. The differences in findings amongst the few studies in the United States regarding the relationship between teacher levels of emotional intelligence and teacher self-efficacy warrant further more specific investigation. Considering the various degrees of positive correlation discovered between emotional intelligence and teacher self-efficacy, it would be valuable to replicate the study with similar samples.

Replicating studies has been a constant struggle in the realm of social sciences. However as researchers continue to tout emotional intelligence as significant predictors of effective teaching, it would be valuable to uncover the reasons behind the inconsistencies. The field of emotional intelligence continues to struggle to find agreement and consistency (Zeidner et al., 2009). It would interesting to compare the major models and measures of emotional intelligence, specifically the RTS instrument (Perry et al., 2004), to determine the validity between various measures of emotional intelligence.

Future research may also replicate research on the comparison of teacher self-efficacy between teachers from high and low income schools. More qualitative data through interviews could help uncover details and data that surveys cannot. Interviews with participants could reveal participant interpretations of their responses. This would be valuable specifically regarding the clarifying responses on the RTS. Interview data could also reveal more detailed relationships between environmental aspects of the school and potential relationships with teacher self-efficacy. Environment, specifically socioeconomic status of the school, may have an impact on a teacher's self-efficacy that is not observable through quantitative analysis of TSES responses.

Conclusion

The current study aimed to uncover the relationship between emotional intelligence, teacher self-efficacy, and school socioeconomic status amongst K-12 public school teachers. Although previous research had revealed moderate to strong relationships between emotional intelligence and teacher self-efficacy, the current study found weak overall relationships as well as weak relationships between the subscales of emotional intelligence and teacher self-efficacy. Free and reduced-price meals rates of schools minimally explained the variance of or predicted for teacher self-efficacy. Furthermore, overall emotional intelligence and its subscales were also weak predictors for teacher self-efficacy. Theoretically, a relationship between emotional intelligence, teacher self-efficacy, and the school socioeconomic status is likely to exist. It is important to determine if a relationship truly exists, and if it does, why the relationship was not evident in this study. The current study has contributed to the literature by revealing concerns with the RTS measure of emotional intelligence, by revealing potential inconsistencies in the asserted relationship between emotional intelligence and teacher self-efficacy, and by opening up questions regarding the measures of emotional intelligence, specifically the Perry et al. (2004) RTS measure.

In the business world, emotional intelligence continues to be touted as a strong predictor of successful leaders. Considering teachers are leaders of classrooms, it was predicted that emotional intelligence would be highly related to teacher levels of self-efficacy in the classroom. The limited response rate may have resulted in the collection of only specific types of teacher participants, further biasing the data. Furthermore, the construct validity of the RTS may need to be further studied to either improve the

100

measure or discard it as a valid measure of Mayer and Salovey's (1997) emotional intelligence.

Demand on teachers continues to increase as education has been turned to as the vehicle to implement societal change. Endeavors to counter some of society's challenges such as poverty, hunger, drugs, obesity, and bullying, have been laid upon schools to resolve. Although emotional intelligence and school socioeconomic status were not shown to have large effects on teacher levels of self-efficacy, the weak to moderate correlations between emotional intelligence and teacher efficacy may still suggest the importance of applying emotional intelligence skills in order to boost teacher capacity and success in the classroom, ultimately improving teacher self-efficacy.

Appendix A

The Effects of Teacher Emotional Intelligence and Socioeconomic Status of School on
Teacher self-efficacy in K-12 Public Schools
Consent Form

I agree to participate in a quantitative study involving individuals teaching middle and
high school students in … County Public Schools in ... The purpose of this study is to
better understand the relationship between the emotional intelligence levels,
socioeconomic status of school, and teacher self-efficacy levels amongst public school
teachers.

Emotional intelligence is one's ability to be aware of and manage one's own emotions
and the emotions of others. Teacher self-efficacy is one's belief in his/her skills as a
teacher. Because teaching involves the emotions of so many students in the classroom in
addition to the teacher's ability to be aware of and manage his/her own emotions, a
relationship may exist between a teacher's EI and teaching self-efficacy. Furthermore,
this study will also attempt to determine if school socioeconomic status is related to
teacher EI and teacher self-efficacy, as well as the possible impact socioeconomic status
of school may have on the relationship between EI and teacher self-efficacy.

As a participant, I understand that my involvement in this study is purposeful in that
higher levels of teacher emotional intelligence may be able to predict a teacher's success
in the classroom. I understand I will be asked to respond to 52 items regarding my
hypothetical feelings and beliefs about ordinary events that may take place at school, as
well as my beliefs about my own teaching. I understand that the honesty and accuracy of
my responses are crucial for this study. The entire questionnaire is estimated to take
approximately 10 minutes. I understand that all efforts will be made to keep my
responses confidential.

Because of the sensitivity of the focus for this study, I understand that there may be some
minimal psychological discomfort that I may experience by participating in this research,
and that I am free to withdraw my consent and discontinue participation in this study at
any time by simply closing the online survey window. I understand that my decision to
participate or not participate will not impact me professionally or personally. If I have
any questions that arise in connection with my participation in this study, I should contact
Dr. Megan Tschannen-Moran, the project director at 757-221-2334 or mxtsch@wm.edu.
I understand that I may report any problems or dissatisfaction to Dr. Thomas Ward, chair
of the School of Education Internal Review Committee at 757-221-2358 or
tjward@wm.edu or Dr. Lee Kirkpatrick, chair of the Protection of Human Subjects
Committee at the College of William and Mary at 757-221-3997 or phsc-chair@wm.edu.

□ By clicking on this box, I signify that I am at least 18 years of age and that I consent to
allowing the researchers to use the data generated as a part of this study.

Augustine Kang, Co-Principal Investigator, March 2, 2016

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM & MARY PROTECTION OF HUMAN SUBJECT COMMITTEE (PHONE: 757 221-3901) ON _____ AND EXPIRES ON _____.

Appendix B

Demographic Items on Questionnaire

The following items will be asked prior to the items on the Reactions to Teaching Situations (RTS) questionnaire and Teachers' Sense of Efficacy Scale (TSES) questionnaire.

Item	Justification
Name	Necessary on consent form but will be kept confidential
Gender	To assess variety of participants
School at which you team most of the time	Needed to determine the FARMs rate of school teacher teaches at
Full-time vs. Part-time	Normality of data
Years public school teaching experience (total)	Normality of data

Appendix C

Reactions to Teaching Situations Questionnaire

We appreciate your participation in completing this questionnaire. Various teaching situations will be described. For each situation, please consider how you would feel and think, and then rate the likelihood of the described reaction by clicking in the appropriate column. Please note that we are looking for the likelihood that you would respond in the particular way described *immediately* after the situation occurs.

Please also note that there are no right or wrong, or better or worse answers. Your responses to the situations should indicate the **likelihood** of the reaction for you. In other words, your responses should reflect how you think you would typically deal with these particular emotional aspects of teaching. Your answers are confidential.

Situation 1:

One of your students, whose learning is generally slow and erratic, has just made a breakthrough and has acquired a concept you have been teaching for some time.

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would feel pleased knowing that I have strategies that work to help students.					
I would consider my feelings reflected the part I have played in this.					
I would feel validated as a teacher.					
I would wonder about how to make best use of this situation.					

Situation 2:

A parent has lodged a formal complaint about your teaching methods which you feel is totally unjustified and blown out of all proportion. Moreover you are unsure about how 'just' the Principal will be in handling this issue.

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would think about what might have made the parent so angry so that I can start to deal with the situation.					
I would think there was too much confusion about teaching methods.					
I would be feeling insecure in this situation.					
I would remember that things like this tend to upset me.					

Situation 3:

Your students are actively involved in their group work, but you sense that a few are taking advantage of you, and becoming noisy and unproductive.

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would realize that my feelings will affect what I do next.					
I would feel trapped in such a situation.					
I would introduce another way of doing this in the future.					
I would feel comfortable about being able to handle this.					

Situation 4

Your administrator calls you in and says: "Your summative student assessment scores have been too generous, and you need to assess all students again."

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would be angry but it would be best to accept this and get on with the job.					
Momentarily I would want to wring the administrator's neck.					
I would focus on the administrator's concerns to see if there was any justification in the comment.					
I would remember that my initial reaction may soon change into another feeling.					

Situation 5:

A student, who has the reputation of being difficult to handle, loses it totally on an excursion where you are in charge, and puts on a temper tantrum.

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would feel concerned but it would be appropriate to ignore the behavior at first.					
My feeling of embarrassment would lead me to think about what I'd done in similar situations.					
I would consider that any emotion I feel will soon pass.					
I would feel like a real failure.					

Situation 6:

A student, who has recently made a special effort with a piece of work, says: "You are the best teacher I've ever had".

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would enjoy a feeling of pride and know that it would help me through difficult classroom situations in the future.					
I would feel acknowledged.					
I would say that they did well because of their effort not mine.					
I would know that my reaction to this comment is linked to my knowledge of learners.					

Situation 7:

Your initial ideas have been highly valued and adopted in practice by your teaching team.

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would know that my pleasure is often linked to feedback from others.					
I would be happy that they understood my contribution.					
I would be proud and want to use this in my performance review.					
I would praise their contributions to these ideas and offer to help provide additional input into their practice.					

Situation 8:

You find that you were not included in a staff group invitation to go for drinks after school.

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would understand that it is normal to feel sensitive about such incidents.					
I would feel upset that I had not been included.					
I would remember my hurt response and include all the staff in my next Christmas function.					
I would feel hurt but would make more of an effort to join the social interaction in the staff room.					

Situation 9:

While in the hallways you hear one student making a negative comment about a student from a racial group to which you also belong.

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would feel insulted.					
It would be unwise to let it pass and not do something about it.					
I would hold back my reaction and it would trigger the need to talk about harassment in a subsequent lesson.					
I would understand that strong emotions are often triggered by these types of events.					

Situation 10:

In your most recent performance review, your team leader gives you very positive feedback and states your performance has exceeded expectation.

	Never likely	Seldom likely	Sometimes likely	Usually likely	Always likely
I would realize that being recognized is often linked with feelings of satisfaction.					
I would not be afraid to show my feelings of joy.					
I would feel reassured that the effort I had put in had paid off.					
I would be pleased and realise that such valuing can lead to growing as a person.					

Perry, C., Ball, I., & Stacey, E. (2004). Emotional intelligence and teaching situations:

Development of a new measure. *Issues in Educational Research, 14*(1), 29-43.

Retrieved from http://www.iier.org.au/iier14/perry.html

Appendix D

Teachers' Sense of Efficacy Scale

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for teachers. Your answers are confidential.

Directions: Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) "None at all" to (9) "A Great Deal" as each represents a degree on the continuum.

Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position.

	None at all		Very Little		Some Degree		Quite a Bit		A Great Deal
1. How much can you do to control disruptive behavior in the classroom?	1	2	3	4	5	6	7	8	9
2. How much can you do to motivate students who show low interest in school work?	1	2	3	4	5	6	7	8	9
3. How much can you do to calm a student who is disruptive or noisy?	1	2	3	4	5	6	7	8	9
4. How much can you do to help your students value learning?	1	2	3	4	5	6	7	8	9
5. To what extent can you craft good questions for your students?	1	2	3	4	5	6	7	8	9
6. How much can you do to get children to follow classroom rules?	1	2	3	4	5	6	7	8	9
7. How much can you do to get students to believe they can do well in school work?	1	2	3	4	5	6	7	8	9
8. How well can you establish a classroom management system with each group of students?	1	2	3	4	5	6	7	8	9
9. To what extent can you use a variety of assessment strategies?	1	2	3	4	5	6	7	8	9
10. To what extent can you provide an alternative explanation or example when students are confused?	1	2	3	4	5	6	7	8	9
11. How much can you assist families in helping their children do well in school?	1	2	3	4	5	6	7	8	9
12. How well can you implement alternative teaching strategies in your classroom?	1	2	3	4	5	6	7	8	9

References

Abdolvahabi, Z., Bagheri, S., & Kioumarsi, F. (2012). Relationship between emotional
intelligence and self-efficacy in research among Tehran physical education
teachers. *European Journal of Experimental Biology, 2*(6), 2337-2343.

Allinder, R. M. (1994). The relationship between efficacy and the instructional practices
of special education teachers and consultants. *Teacher Education and Special
Education, 17*, 86-95.

Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly,
E., & Zellman, G. (1976). *Analysis of the school preferred reading programs in
selected Los Angeles minority schools* (Report No. R-2007-LAUSD)*.* Santa
Monica, CA: Rand Corporation.

Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy
and student achievement*. New York, NY: Longman.

Ashton, P. T., Olejnik, S., Crocker, L., & McAuliffe, M. (1982). Measurement problems
in the study of teachers' sense of efficacy. *Paper presented at the annual meeting
of the American Educational Research Association,* New York.

Austin, E. J., Saklofske, D. H., Huang, S. H. S., & McKenney, D. (2004). Measurement
of trait emotional intelligence: Testing and cross-validating a modified version of
Schutte et al.'s (1998) measure. *Personality and Individual Differences, 36*, 555–
562.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change*.
Psychological Review, 84*(2), 191-215.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*, 117-148.

Bandura, A. (1997). *Self-Efficacy: The exercise of control.* New York, NY: Freeman and Company.

Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top.* London, UK: McKinsey and Company.

Bar-On, R. (1997). *The emotional quotient inventory (EQ-i): A test of emotional intelligence.* Toronto, Canada: Multi-Health Systems.

Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI). *Psicothema, 18*, 13-25.

Barr, A. S. (1952). The measurement of teacher characteristics and prediction of teaching efficiency. *Review of Educational Research, 22*(3), 169-174.

Barr, R., & Tagg, J. (1995). From teaching to learning—A new paradigm for undergraduate education. *Change Magazine, 27*(6), 12-25. Retrieved from http://cet.usc.edu/resources/teaching_learning/docs/teaching_to_learning.pdf.

Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal programs supporting educational change: Factors affecting implementation and continuation* (Report No. R-1589/7-HEW). Santa Monica, CA: The Rand Corporation.

Brackett, M. A., & Katulak, N. (2007). The emotionally intelligent classroom: Skill-based training for teachers and students. In J. Ciarrochi & J. D. Mayer (Eds.), *Improving emotional intelligence: A practitioner's guide* (pp. 1 – 27). New York, NY: Psychology Press/Taylor & Francis.

113

Bradberry, T. R., & Greaves, J. M. (2005). *The emotional intelligence quick book.* New

    York, NY: Simon and Schuster.

Bradberry, T. R., & Greaves, J. M. (2009). *Emotional intelligence 2.0.* San Diego, CA:

    TalentSmart.

Brotheridge, C., & Grandey, A. (2002). Emotional labor and burnout: Comparing two

    perspectives of "people work." *Journal of Vocational Behavior, 60*, 17-39.

Brown, D. F. (2004). Urban teachers professed classroom management strategies:

    Reflections of culturally responsive teaching. *Urban Education, 39*(3), 266-289.

Brown, K. L. (2003). From teacher-centered to learner-centered curriculum: Improving

    learning in diverse classrooms. *Education, 124*(1), 49-54.

Bryan, D. (2011). *Examining the relationship between emotional intelligence and teacher*

    self-efficacy among elementary teachers in southeast Michigan (Doctoral

    dissertation). Retrieved from http://commons.emich.edu/theses/357/

Bureau of Personnel Administration. (1930). Partially standardized tests of social

    intelligence. *Public Personnel Studies, 8*, 73-79.

Canter, L. (2009). *Assertive discipline: positive behavior management for today's*

    classroom. New York, NY: Canter & Associates Canter & Associates

Carter, C. B. (2012). *Empathy as a crucial skill for instructional coaches: Can it be*

    taught? (Doctoral dissertation). Retrieved from ProQuest Dissertations and Thesis

    Global. (Accession No. 3529078)

Cantrell, S. C., Almasi, J. F., Carter, J. C., & Rintamaa, M. (2013). Reading intervention

    in middle and high schools: Implementation fidelity, teacher efficacy, and student

achievement. *Reading Psychology, 34*, 26-58.

doi:10.1080/02702711.2011.577695

Caruso, D., Mayer, J. & Salovey, P. (2002). Relation of an ability measure of emotional

intelligence to personality. *Journal of Personality Assessment, 79*(2), 306-320.

Collaborative for Academic, Social, and Emotional Learning (CASEL). (2015). About

CASEL, Mission and Vision. Para 1. Retrieved from http://www.casel.org/about/.

Collaborative for Academic, Social, and Emotional Learning (CASEL). (2017). What is

SEL? Retrieved from http://www.casel.org/what-is-sel/

Chan, D. W. (2004). Perceived emotional intelligence and self-efficacy among Chinese

secondary school teachers in Hong Kong. *Personality and Individual Differences,
36*(8), 1781-1795.

Chan, D. W. (2008). Emotional intelligence, self-efficacy, and coping among Chinese

prospective and in service teachers in Hong Kong. *Educational Psychology,
28*(4), 397–408. doi:10.1080/01443410701668372.

Chang, Y. (2015). Examining relationships among elementary mathematics teachers'

efficacy and their students' mathematics self-efficacy and achievement. *Eurasia

Journal of Mathematics, Science & Technology Education, 11*(6), 1307-1320.

doi:10.12973/eurasia.2015.1387a

Cherniss, C., Extein, M., Goleman, D., & Weissberg, R. P. (2006). Emotional

intelligence: What does the research really indicate? *Educational Psychologist,
41*, 239-245.

Ciarrochi, J., Chan, A. Y., Caputi, P., & Roberts, R. (2001). Measuring emotional

intelligence (EI). In J. Ciarrochi, J. P. Forgas, & J. D. Mayer (Eds.), *Emotional*

intelligence in everyday life: A scientific inquiry (pp. 25-45). New York, NY: Psychology Press.

Corcoran, R. P., & Tormey, R. (2013). Does emotional intelligence predict student teachers' performance? *Teaching & Teacher Education*, *35*, 34-42.

Cornu, R. L. (2010). Changing roles, relationships and responsibilities in changing times. *Asia-Pacific Journal of Teacher Education, 38*(3). doi:20.1080/1359866X.2010.493298.

Crossman, J. (2007). The role of relationships and emotions in student perceptions of learning and assessment. *Higher Education and Research Development, 26*, 313–327.

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives, 8*(1). Retrieved from http://epaa.asu.edu/ojs/article/view/392/515

Davis, B. G. (1993). *Tools for teaching*. Jossey-Bass Inc.: San Francisco, CA.

Emmer, E. T., & Hickman, J. (1991). Teacher efficacy in classroom management and discipline. *Educational and Psychological Measurement, 51*, 755-765.

Every Student Succeeds Act of 2015, Pub. L. No. 114-95 § 114 Stat. 1177 (2015-2016).

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction*. Boston, MA: Pearson Education.

Gannon, N., & Ranzijn, R. (2005). Does emotional intelligence predict unique variance in life satisfaction beyond IQ and personality? *Personality and Individual Differences, 38*, 1353–1364.

116

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century.* New York, NY: Basic Books.

Gardner, H. (1983). *Frames of mind.* New York, NY: Basic Books.

Garson, D. G. (2008). *Factor analysis: Statnotes.* Retrieved from http://tx.liberal.ntu.edu.tw/~PurpleWoo/Literature/!DataAnalysis/Factor%20Analysis-types.htm

Gettinger, M., & Ball, C. (2007). Best practices in increasing academic engaged time. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology V* (pp. 1043-1075). Bethesda, MD: National Association of School Psychologists.

Gettinger, M., & Walter, M. J. (2012). Classroom strategies to enhance academic engaged time. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 653-673). New York, NY: Springer.

Ghosh, S. M. (2014). Emotional intelligence and academic achievement among advantage and disadvantage children. *The International Journal of Indian Psychology, 2*(1), 111-117. Retrieved from http://oaji.net/articles/2014/1170-1418814286.pdf

Gibbs, C. (2003). Explaining effective teaching: self-efficacy and thought control of action. *Journal of Educational Inquiry, 4*(2), 1-14.

Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*, 569-582.

Goleman, D. (n.d.). On "primal leadership". Retrieved from http://www.danielgoleman.info/topics/leadership/

Goleman, D. (1995). Emotional intelligence: Why it can matter more than IQ. Bantam

    Books: New York, NY.

Goleman, D. (1998a). What makes a leader? *Harvard Business Review, 76*(6), 93-102.

Goleman, D. (1998b). *Working with emotional intelligence*. Bantam Book: NY, New

    York.

Goleman, D. (2000). Leadership that gets results. *Harvard Business Review*, 78, 78-90.

Gordon, L. M. (2001, October). *High teacher efficacy as a marker of teacher*

    effectiveness in the domain of classroom management. Paper presented at the

    Annual Meeting of the California Council on Teacher Education. San Diego, CA.

    Retrieved August 4, 2017, from ERIC.

Goroshit, M., & Hen, M. (2014). Does emotional self-efficacy predict teachers' self-

    efficacy and empathy? *Journal of Education and Training Studies, 2*(3), 26-32.

    doi:10.11114/jets.v2i3.359.

Grant, L. W. (2006). Persistence and self-efficacy: A key to understanding teacher

    turnover. *The Delta Kappa Gamma Bulletin, 72*(2), 50-54.

Guo, Y., Connor, C. M., Yang, Y., Roehrig, A. D., & Morrison, F. J. (2012). The effects

    of teacher qualification, teacher self-efficacy, and classroom practices on fifth

    graders' literacy outcomes. *The Elementary School Journal, 113*(1), 3-24.

Guskey, T. R. (1981). Measurement of responsibility teachers assume for academic

    successes and failures in the classroom. *Journal of Teacher Education, 32*, 44-51.

Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the

    implementation of instructional innovation. *Teaching and Teacher Education, 4*,

    63-69.

Hall, P. C., & West, J. H. (2011). Potential predictors of student teaching performance: Considering emotional intelligence. *Issues in Educational Research, 21*(2), 145-161.

Harlow, J. M. (1848). Passage of an iron rod through the head. *Boston Medical and Surgical Journal., 39,* 389-393.

Hawkins, J. D., Smith, B. H., & Catalano, R. F. (2004). Social development and social and emotional learning. In J. E. Zins, R. P. Weissberg, M. C. Wang, & H. J. Walberg (Eds.), *Building academic success on social and emotional learning: What does the research say?* (pp. 135-150). New York, NY: Teachers College Press.

Hen, M., & Sharabi-Nov, A. (2014). Teaching the teachers: emotional intelligence training for teachers. *Teaching Education, 25*(4), 375-390. doi:10.1080/10476210.2014.908838

Henson, R. K. (2001, January). *Teacher self-efficacy: Substantive implications and measurement dilemmas*. Paper presented at the annual meeting of the Educational Research Exchange, College Station, TX. Texas A & M University. Retrieved August 4, 2017, from ERIC.

Hong, J. Y. (2012). Why do some beginning teachers leave the school, and others stay? Understanding teacher resilience through psychological lenses. *Teachers ad Teaching: Theory and Practice, 18*(4), 417-440.

Hoy, W. K., & Woolfolk, A. E. (1990). Socialization of student teachers. *American Educational Research Journal, 27*, 279-300.

Huyton, J. (2009). Significant personal disclosure: Exploring the support and

    development needs of HE tutors engaged in the emotion work associated with

    supporting students. *Journal of Learning Development in Higher Education, 1,* 1–

    18.

Iacoboni, M. (2008). *Mirroring people: The new science of how we connect with others*.

    New York, NY: Farrar, Straus and Giroux.

Ingersoll, R. M., & Smith, T. M. (2003). The wrong solution to the teacher shortage.

    Educational Leadership, 60(8), 30-33. Retrieved from

    http://www.gse.upenn.edu/pdf/rmi/EL_TheWrongSolution_to_theTeacherShortag

    e.pdf

James, R. F., & James, M. L. (2004). Teaching career and technical skills in a "mini"

    business world. *Business Education Forum, 59*(2), 39-41.

Jensen, E. (2009). *Teaching with poverty in mind: What being poor does to kids' brains

    and what schools can do about it.* Alexandria, VA: ASCD.

Jensen, E., & Snider, C. (2013). *Turnaround tools for the teenage brain: Helping

    underperforming students become lifelong learners.* San Francisco, CA: Jossey-

    Bass.

Jones, S. M., Bouffard, S. M., & Weissbourd, R. (2013). Educators' social and emotional

    skills vital to learning. *Phi Delta Kappan, 94*(8), 62-65.

Kincheloe, J. L. (2010). Why a book on urban education? In S. R. Steinberg, & J. L.

    Kincheloe (Eds.), *19 urban questions: Teaching in the city* (pp. 1-27). New York,

    NY: Peter Lang.

Koçoğlu, Z. (2011). Emotional intelligence and teacher efficacy: A study of Turkish EFL pre-service teachers. *Teacher Development: An International Journal of Teachers' Professional Development, 15*(4), 471–484. doi:10.1080/13664530.2011.642647

Koedel, C., Parsons, E., Podgursky, M., & Ehlert, M. (2012). Teacher preparation programs ad teacher quality: Are there real differences across programs? *Education Finance and Policy, 10*(4), 508-534.

Langhout, R. D., Drake, P., & Rosselli, F. (2009). Classism in the university setting: Examining student antecedents and outcomes. *Journal of Diversity in Higher Education, 2*, 166-181.

Lanier, J. T. (1997, July 1). Redefining the role of the teacher: It's a multifaceted profession. [Blog post]. Retrieved from http://www.edutopia.org/redefining-role-teacher.

Leroy, C., & Symes, B. (2001). Teachers' perspectives on the family backgrounds of children at risk. *McGill Journal of Education, 36*(1), 45-60.

Lin, S. J., & Tsai, C. (1999, March). *Teaching efficacy along the development of teaching expertise among science and math teachers in Taiwan*. A paper presented at the meeting of the National Association for Research in Science Teaching, Boston, MA.

Livermore, D. (2011). *The cultural intelligence difference: Master the one skill you can't do without in today's global economy*. AMA: New York, NY.

Lynch, M. (2012). Culturally responsive trainings: Exploring your students' cultural backgrounds. [Blog post]. Retrieved from

http://www.huffingtonpost.com/matthew-lynch-edd/culturally-responsive-tra_b_1176982.html

Marzano, R. J. (2003). *What works in schools?* Alexandria, VA; Association for Supervision and Curriculum Development

Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence, 27*, 267–98

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3-34). New York, NY: Harper Collins.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2008). Emotional intelligence: New ability or eclectic traits? *American Psychologist, 63*(6), 503-517.

McCoy, D. C., Connors, M. C., Morris, P. A., Yoshikawa, H., & Friedman-Krauss, A. H. (2015). Neighborhood economic disadvantage and children's academic and social-emotional development: Exploring Head Start classroom quality as a mediating mechanism. *Early Childhood Research Quarterly, 32*, 150-159.

McCrae, R. R., & Costa, P. T. Jr. (1982). Self-concept and the stability of personality: Cross-sectional comparisons of self-reports and ratings. *Journal of Personality and Social Psychology, 43*, 1282-92.

Mehta, A. (2013). A study of how emotional intelligence reduces occupational stress among teachers. *Journal of Research In Management and Technology, 2*, 19-28.

Meijer, C., & Foster, S. (1988). The effect of teacher self-efficacy on referral chance. *Journal of Special Education, 22*, 378-385.

Moore, W., & Esselman, M. (1992, April). *Teacher efficacy, power, school climate and achievement: A desegregating district's experience.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Morgan, P. L., Farkas, G., Hillemeier, M. M., & Maczuga, S. (2009). Risk factors for learning-related behavior problems at 24 months of age: Population-based estimates. *Journal of Abnormal Child Psychology, 37*, 401-413.

Moss, F. A., & Hunt, T. (1927). Are you socially intelligent? *Scientific American*, *137*, 108-110.

Muijs, D., & Reynolds, D. (2002). Teachers' beliefs and behaviors: What really matters? *Journal of Classroom Interaction, 37*(2), 3-15.

Murphy, K. (Ed.). (2006). *Critique of emotional intelligence: What are the problems and how can they be fixed?* Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Murphy, K. R., & Dzieweczynski, J. L. (2005). Why don't measures of broad dimensions of personality perform better as predictors of job performance? *Human Performance, 18*, 343–358.

Nagy, C., & Wang, N. (2006, Month). *The alternate route teachers' transition to the classroom:*

Preparation, support, and retention. Report presented at the annual meeting of American Educational Research Association in San Francisco, CA.

National Center for Education Statistics. (2013). Racial breakdown. Retrieved from http://nces.ed.gov/programs/digest/d13/tables/dt13_203.50.asp

NCATE. (2008). Unit standards in effect 2008. Retrieved from

    http://www.ncate.org/Standards/UnitStandards/UnitStandardsineffect2008/tabid/4

    76/Default.aspx.

National Forum on Education Statistics. (2015). *Forum guide to alternative measures of*

    socioeconomic status in education data systems. (NFES Publication No. 2015-

    158). Retrieved from https://nces.ed.gov/pubs2015/2015158.pdf

No Child Left Behind Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002).

Noguera, P. A. (2003). The trouble with Black boys: The role and influence of

    environmental and cultural factors on the academic performance of Africa

    American males. *Urban Education, 38*(4), 431-459.

    doi:10.1177/0042085903038004005

Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: What

    can be done? *Assessment & Evaluation in Higher Education, 33*(3), 301-314.

OECD. (2005). *Teachers matter: Attracting, developing and retaining effective teachers*.

    Retrieved from http://www.oecd.org/edu/school/34990905.pdf

OECD. (2014). *PISA 2012 Results in focus: What 15-year-olds know and what they can*

    do with what they know. Retrieved from

    http://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf

Okech, A. P. (2004). *An exploratory examination of the relationships among emotional*

    intelligence, elementary school science teachers, self-efficacy, length of teaching,

    experience, race/ ethnicity, gender and age (Doctoral dissertation). Retrieved

    from ProQuest Dissertations and Theses. (Accession Order No. 305045327)

Pellitteri, J., Stern, R., Claudia, S., & Muller-Ackerman, B. (2006). *Emotionally intelligent school counseling.* Lawrence Erlbaum Associates, Publishers: Mahwah, NJ.

Penrose, A., Perry, C., & Ball, I. (2007). Emotional intelligence and teacher self-efficacy: The contribution of teacher status and length of experience. *Issues in Educational Research, 17*, 20–34.

Perreault, H. (2004). Business educators can take a leadership role in character education. *Business Education Forum, 59*(1), 23-24.

Perreault, H. (2006). What makes the soft skills so hard? *Delta Pi Epsilon Journal, 48*(3), 125-127.

Perry, C., & Ball, I. (2005). Emotional intelligence and teaching: Further validation evidence. *Issues in Educational Research, 15*(2), 175-192.

Perry, C., Ball, I., & Stacey, E. (2004). Emotional intelligence and teaching situations: Development of a new measure. *Issues in Educational Research, 14*(1), 29-43. Retrieved from http://www.iier.org.au/iier14/perry.html

Podell, D., & Soodak, L. (1993). Teacher efficacy and bias in special education referrals. *Journal of Educational Research, 86*, 247-253.

Rastegar, M., & Memarpour, S. (2009). The relationship between emotional intelligence and self-efficacy among Iranian EFL teachers. *System, 37*(1), 700–707. doi:10.1016/j.system.2009.09.013.

Raudenbush, S. W., Rowan, B., & Cheong, Y. F. (1992). Contextual effects on the self-perceived efficacy of high school teachers. *Sociology of Education, 65*, 150-167.

Reissman, R. (2006). Raising your new teacher's emotional intelligence: How using

    social-emotional competencies can make your first year of teaching less stressful

    and more successful. In M. Elias & H. Arnold (Eds.), *The educator's guide to*

    emotional intelligence and academic achievement: Social-emotional learning in

    the classroom. (pp. 76-82). Thousand Oaks, CA: Corwin Press.

Riggs, I., & Enochs, L. (1990). Toward the development of an efficacy belief instrument

    for elementary teachers. *Science Education, 74*(6), 625-637.

Ross, J. A. (1995). Strategies for enhancing teachers' beliefs in their effectiveness:

    Research on a school improvement Teacher Efficacy Beliefs 89 hypothesis.

    Teachers College Record, 97, 227–250.

Ross, J. A., Hogaboam-Gray, A., & Hannay, L. (2001). Effects of teacher efficacy on

    computer skills and computer cognitions of K-3 students. *Elementary School*

    Journal, 102(2), 141-156.

Rose, J. S., & Medway, F. J. (1981). Measurement of teachers' beliefs in their control

    over student outcome. *Journal of Educational Research, 74*, 185-190.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of

    reinforcement. *Psychological Monographs, 80*, 1-28.

Saklofske, D., Michaluk, B., & Randhawa, B. (1988). Teachers' efficacy and teaching

    behaviors. *Psychological Report, 63*, 407-414.

Salovey, P. & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and*

    Personality, 9, 185-211. doi:0.2190/DUGG-P24E-52WK-6CDG

Sarkhosh, M., & Rezaei, A. (2014). How university teachers' emotional intelligence

    relate to their self-efficacy beliefs. *Journal of Porto Linguarm, 11*, 85-100.

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*(2), 167–177.

Smith, J. P. (1996). Efficacy and teaching mathematics by telling: A challenge for reform. *Journal of Research in Mathematics Education, 27*(4), 587-616.

Soodak, L., & Podell, D. (1996). Teaching efficacy: Toward the understanding of a multi-faceted construct. *Teaching and Teacher Education, 12,* 401-412.

Stein, M. K., & Wang, M. C. (1988). Teacher development and school improvement: The process of teacher change. *Teaching and Teacher Education, 4,* 171-187.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Boston, MA: Pearson Education, Inc.

Talebinejad, M. R., & Fard, Z. R. (2012). The relationship between emotional quotients, socioeconomic status and performance in reading comprehension: A case study of Iranian high school students. *Journal of Language and Research, 3*(5), 844-850. Retrieved from

http://ojs.academypublisher.com/index.php/jltr/article/view/jltr0305844850/5284

Thompson, A. (1998). Not the color purple: Black feminist lessons for educational caring. *Harvard Educational Review, 68*(4), 522-554.

Thorndike, R. K. (1920, January). Intelligence and its uses, *Harper's Magazine,* Retrieved from http://www.unz.org/Pub/Harpers-1920jan-00227

TNTP. (2012). *The irreplaceables: Understanding the real retention crisis in America's urban schools*. Retrieved from

https://tntp.org/assets/documents/TNTP_Irreplaceables_2012.pdf

Tomlinson, C. A. (2000). *Differentiation of instruction in the elementary grades.*

    Retrieved from ERIC database. (ED443572)

Tomlinson, C. (2003). *Fulfilling the promise of the differentiated classroom: Strategies*

    and tools for responsive teaching. Alexandria, VA: Association for Supervision

    and Curriculum Development.

Tomlinson, C. (2014). *The differentiated classroom: Responding to the needs of all*

    learners. Alexandria, VA: Association for Supervision and Curriculum

    Development.

Tonelson, S. W. (1981). The importance of teacher self-concept to create a healthy

    psychological environment for learning. *Education 102,* 96-100.

Tran, V. D., & Le, M. T. L. (2015). School environment factors as predictors for

    teachers' teaching efficacy, teacher stress and job satisfaction. *International*

    Education Research, 3(2), 28-46.

Tschannen-Moran, M. (2014). *Trust matters: leadership for successful schools* (2nd

    ed.). San Francisco, CA: Jossey-Bass.

Tschannen-Moran, M. & Hoy, A. (2001). Teacher efficacy: Capturing an elusive

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

Tschannen-Moran, M., & Hoy, A. (2007). The differential antecedents of self-efficacy

    beliefs of novice and experienced teachers. *Teaching and Teacher Education, 23*,

    944-956.

Tschannen-Moran, M., Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and

    measure. *Review of Educational Research, 68*, 202-248.

U.S. Census Bureau. (2012). 2012 National population projections. Retrieved from

      https://www.census.gov/data/datasets/2012/demo/popproj/2012-popproj.html

U.S. Census Bureau. (2016). *A look at the 1940 census*. Retrieved from

      https://www.census.gov/newsroom/cspan/1940census/CSPAN_1940slides.pdf

U.S. National Commission on Excellence in Education. (1983). *A nation at risk: The*

      imperative for educational reform. Retrieved from

      https://www2.ed.gov/pubs/NatAtRisk/index.html

Wagler, R. (2011). The impact of vicarious experiences and field experience classroom

      characteristics on preservice elementary science teaching. *Electronic Journal of*

      Science Education, 15(2), 1-28.

Ware, H., & Kitsantas, A. (2007). Teacher and collective efficacy beliefs as predictors of

      professional commitment. *The Journal of Educational Research, 100*(5), 303-309.

Waterhouse, L. (2006). Inadequate evidence for multiple intelligences, Mozart Effect,

      and emotional intelligence theories. *Educational Psychologist, 41*(4), 247-255.

      Retrieved from

      http://alliance.la.asu.edu/temporary/students/katie/MultipleIntelligenceMusic2.pdf

Wechsler, D. (1955). *Wechsler Adult Intelligence Scale Manual*. New York, NY:

      Psychological Corporation.

Weissbourd, R., Jones, S., Anderson, T. R., Kahn, J., & Russell, M. (2014). *The children*

      we mean to raise: The real messages adults are sending about values. Retrieved

      from http://sites.gse.harvard.edu/sites/default/files/making-caring-

      common/files/mcc_report_7.2.14.pdf

Yost, D. S. (2006). Reflection and self-efficacy: Enhancing the retention of qualified

    teachers from a teacher education perspective. *Teacher Education Quarterly,*

    33(4), 59-76.

Zeidner, M., Matthews, G., & Roberts, R. D. (2009). *What we know about emotional*

    intelligence: How it affects learning, work, relationships, and our mental health.

    Massachusetts Institute of Technology: Cambridge, MA.

VITA

Augustine Kang

Birthdate: October 7, 1982

Birthplace: Houston, TX

Education: 2011-2017   The College of William & Mary
                             Williamsburg, Virginia
                             Doctor of Philosophy
                             Education Policy, Planning, and Leadership

               2005-2006   The College of William & Mary
                             Williamsburg, Virginia
                             Master of Education

               2000-2004   The College of William & Mary
                             Williamsburg, Virginia
                             Bachelor of Science