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## The Relationship Between Elementary School Administrators' and Teachers' Perceptions of the Influence of Male Teachers and Schools' Male Student Achievement Growth in English Language Arts

Kathleen Elizabeth Kaump Truitt

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Is There a Relationship Between Elementary School Administrators and Teachers  
Perceptions of the Influence of Male Teachers and a School's Male Students  
Achievement Growth in English Language Arts?

by Kathleen Elizabeth Kaump Truitt

This dissertation has been read and approved as fulfilling the partial requirement for the  
Degree of Doctor of Education in Curriculum and Leadership.

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THE RELATIONSHIP BETWEEN ELEMENTARY SCHOOL ADMINISTRATORS’  
AND TEACHERS’ PERCEPTIONS OF THE INFLUENCE OF MALE TEACHERS  
AND A SCHOOLS’ MALE STUDENT ACHIEVEMENT GROWTH  
IN ENGLISH LANGUAGE ARTS

by

Kathleen Elizabeth Kaump Truitt

A Dissertation  
Submitted in Partial Fulfillment of  
the Requirements for  
the Degree of Doctor of Education  
in Curriculum and Leadership  
(EDUCATIONAL LEADERSHIP)

Columbus State University  
Columbus, GA

December 2019

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## DEDICATION

I dedicate this dissertation to my husband, Dennis Truitt, the words will never be enough. Not only has he been my thought partner, my sounding board, shoulder to cry on, motivator, and supporter through this project, he has also been my best friend for most of my life. He has been a never-ending supply of patience for my use of the comma, for which I am eternally grateful. I simply could not have completed this degree without him.

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There is an African proverb, “it takes a village to raise a child,” that is widely used to demonstrate the emphasis on family and community in bringing a child to adulthood. In that very same vein, without the ever-present encouragement, advise, and intellectual guidance from my “village,” this study would have not been possible. There is a definite inadequacy in the use of words to express my appreciation towards these individuals.

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## ABSTRACT

There is a national achievement gap between male and female students in the United States. A common recommendation to reduce this achievement gap has been to hire more male teachers. The purpose of this study was to examine the perceptions that elementary administrators and teachers have of male teachers' influence on male student growth in English Language Arts. In order to measure perceptions, a five-point Likert scale survey was adapted from an existing qualitative questionnaire. A pilot study was conducted, an Exploratory and Confirmatory Factor Analyses were performed, and the survey was found valid and reliable to measure four constructs of teacher influence: Relationships, Role Models, Classroom Management and Achievement/Learning. Using a quantitative correlational research design, the survey was administered online to 153 teachers and administrators. Correlation analysis was conducted, and non-linear regressions were used to examine four individual research questions. There were no statistically significant results revealed in any of the regression equations. Major conclusions drawn were that elementary administrators and teachers perceive that more male teachers are needed, elementary administrators and teachers rate female teachers higher on the four constructs, male teachers are perceived to be better role models for male students, and the perception of male teachers' influence did not impact the male Student Growth Percentile on the Georgia Milestones End of Grade Assessment.

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## CHAPTER I

### INTRODUCTION

Beginning in 2001, the United States initiated an increased focus on school performance. The implementation of “No Child Left Behind” legislation heightened the measurement of school quality based on student achievement performance ratings of all students (Husband & Hunt, 2015). Husband and Hunt (2015) discussed that an increased focus on student achievement, more specifically on the performance of sub-groups of students, exposed a disproportionate level of student performance of students in sub-group bands as compared to all student performance. The subgroup that represented the largest number of significantly underperforming students nationally was males.

There has consistently been an achievement gap in the academic performance of male and female children (Borusic, Babarovic, & Seric, 2012; Heyder & Kessels, 2013). Voyer and Voyer (2014) noted general agreement that the school achievement of male students was pointedly lower than that of their female counterparts. Female students scored consistently higher in the area of reading from kindergarten through 12th grade (Owens, 2016). Although gender differences in standardized measures followed traditional stereotypical strands, female students showed consistently better grades and school performance (Voyer & Voyer, 2014). Voyer and Voyer (2014) further found that the gender achievement gap for male students becomes even more significant when you review sub-groups, such as race.

## National Achievement Gap for Males

The U.S. Department of Education's Office for Civil Rights (OCR) performed data collection for the 2013-2014 school year that indicated 781,228 male students enrolled in Advanced Placement (AP) classes participated in the AP exam. During this span, 1,002,783 of female students enrolled in AP classes participated in the AP exam process. The OCR's data collection (2016) also indicated that only 43 % of the total national participants on the AP exams were males. In addition, the National Assessment of Educational Progress (NAEP) math scores showed that males had a one percent advantage in math but performed six percent lower than females in fourth grade, and 10% lower than females in eighth grade. Owen's (2016) research indicated that males were less probable than females to successfully complete high school, and to seek and receive a bachelor's degree. Autor and Wasserman (2013) indicated that the male high school graduation rate was five percent lower than that of females, and the male college graduation rate was seven percent lower.

Schippers, Scheepers, and Peterson (2015) found that the male achievement gap was evident and potentially growing. A great amount of research examined why male students at all levels of education underperformed their female counterparts. Male students' academic performance continued to be a concern in the educational forum (Voyer & Voyer, 2014). Researchers in the past have examined the influence of stereotypes on student and teacher behavior and on school context (Lewegie & DePrete, 2012; Owens, 2016; Riley, 2014).

## Impact of Gender Stereotypes and Bias

Legewie and DiPrete (2012) found that male achievement was negatively impacted by traditional gender roles alignment of both teachers and students.. When teachers stereotyped males as being more active and less likely to attend, the male students perceived that they would be less successful at activities that require attention and focus (Wolter, Braun, & Hannover, 2015). If male students embraced traditional gender role stereotypes and saw activities such as reading as being more feminine, they may lack engagement or reduce the frequency of practice in the activity (Chick & Corle, 2012). If female students saw themselves as inadequate at stereotypically male activities such as building, they may have resisted attempting such activities. Recent research discovered that as early as elementary school through middle school, students believe that girls achieve higher levels academically and demonstrate better learning habits (Hartley & Sutton, 2013; Latsch & Hannover, 2014). The window of time in which gender roles and stereotypes are formed is very small. By the time a student reaches the age of 10 years, their gender stereotypes were found to be like that of an adult (Winters, Haight, Swaim, & Pickering, 2013).

The stereotypes that teachers utilized to filter their views of the world had a substantial impact on their decision making, which impacts students (Riley, 2014). Teachers often make decisions about and for students that have a long-lasting impact. For example, teachers make decisions daily about class placements for enrichment opportunities, remediation, and leadership potential. If the teachers' filters cause them to make decisions based on stereotypes and not on a set of core standards or requirements, the individual education of the student could be negatively impacted (Riley, 2014). For

example, Owens (2016) found that when similar data and behavior were found in primary grades students, boys were more likely to be retained than their female counterparts.

Owens (2016) also stated that researchers had found that teachers believe boys are more likely to misbehave in classroom settings. These beliefs may lead to higher levels of retention and higher levels of discipline for male students (Owens, 2016). In addition, teachers also communicate these beliefs to their students through their emotional reactions, the structures in their classrooms, and their verbal and written feedback (Upadyaya & Eccles, 2014).

The gender bias and stereotypes can impact a student's perspective related to school; however, male achievement may be more greatly affected by the general feminization of the school setting. The perspective that school is a feminine domain may be due to the fact that actions and outcomes related to the female gender role are common expectations, and compliance derives positive feedback (Heyder & Kessels, 2013). Students are rewarded for displaying what has been stereotyped as female behavior: sitting still, being quiet, and following directions (Heyder & Kessels, 2013).

#### The Impact of Instruction and Learning Materials

In addition to gender stereotypes and bias, school context and the importance of material or text selection also impacts the learning of male students. Learning is reinforced as a feminine activity when materials consistently reinforce traditional male stereotypes, as in picture books in which more than two-thirds of male characters work outside of the home as the family's main support (Chick & Corle, 2012). Legewie and DiPrete (2012) further supported the connection that the class environment shapes how masculinity is constructed. Additionally, this construct was found to be reinforced

through peer culture (Legewie & DiPrete, 2012). The instructional materials that a teacher selected under the influence of their own perceptions and stereotypes were found to be influencing the stereotypes and creating a class environment that had a high level of influence on both male and female learning (Legewie & DiPrete, 2012; Riley, 2014).

Researchers concluded that stereotypes and gender bias in the classroom can negatively impact male learning outcomes (Chick & Corle; 2012; Legewie & DiPrete, 2012; Winters et al., 2013). Lowe (2013) concluded that teacher bias affected their choice of instructional materials and therefore recommended that teachers be cognizant of bias, both cultural and gender, when selecting learning materials for students in the classroom. Teachers controlled the material that students were exposed to and set the climate in the classroom. Teachers need to make intentional choices of reading material to create a positive learning climate for all students, both male and female (Ellefsen, 2015).

Ellefsen (2015) concluded that materials that display traditional gender roles in their text reinforce those roles in the classroom setting. However, this issue was not just for the primary schools and teachers to examine. Researchers concluded that traditional gender stereotypes had negatively impacted the learning climate for males in the classroom and some indicated the impact being most significantly noted in the middle grades (Lowe, 2013; Park, 2013; Wolter et al., 2015). Falch and Naper (2013) found that the grading and assessment bias against males was negated by a blind assessment, thus teachers may be reinforcing stereotypes related to males and learning.

Although studies (Lowe, 2013; Park, 2013; Wolter et al., 2015) indicated that stereotypes and gender roles may influence the gender achievement gap, others argued

teacher quality rather than awareness was the solution. Beatty (2013) indicated that the ability of the teacher had the most significant impact on the climate of the classroom and student achievement. Walkey, McClure, Meyer, and Weir (2013) argued that classroom climate can raise or lower achievement more than a student's direct relationship with their teacher. Students attained higher levels of engagement and success when classroom strategies were engaging and relevant (Webb & Thomas, 2015). Students had higher achievement when they set goals and high expectations were communicated from their teachers (Walkey et al., 2013).

Quality teachers tend to use instructional strategies that they have found were successful, not necessarily adjusted to either male or female students (Dickey, 2014). As well as academic outcomes, teachers that were effective impacted "non-cognitive" measures and a student's self-efficacy or grit. These traits were seen to be important in successful learning and in the workforce (Araujo, Carnerio, Cruz-Aguayo, & Schady, 2016). The importance of a quality teacher became critical to the achievement of students that were male in the classroom (Dickey, 2014). The idea of a teacher that is similar to the student, a male teacher with a male student, a Hispanic teacher with a Hispanic student, has been studied for educational impact. A student's outlook on their educational potential was found to be impacted more than likely by their teachers (Burgess & Greaves, 2013; Dee, 2015). Similarly, the bias and perception of students can impact the manner in which a student was evaluated by the teacher, thus impacting grading (McGrady & Reynolds, 2013). Gershenson, Holt, and Papageorge (2015) found that female, non-black teachers had lower expectations for students that were male and

Black. The non-Black teachers were less likely to expect male students that were Black to complete college by 12% over other groups of students.

To counteract the stereotypes and low expectations, students may learn better and achieve more with a teacher that is similar to them (Paredes, 2014). Paredes (2014) indicated that there was evidence to support that students may identify with a like gender teacher due to environmental and gender stereotype influences. Watson (2017) indicated that male teachers have biological traits that make them better to teach male students.

Multiple researchers (Dickey, 2014; Jupp, 2013; Şahin & Sak, 2016; Split, Koomen, & Jak, 2012; Watson, 2017) indicated that the call for the increase of male teachers has been used as the universal solution to the achievement gap in male academic performance. Even without assessing the validity of that solution, it was problematic. Teaching, especially in the elementary grade levels, is a female-dominated profession, with a minimal male presence (Bhana & Moosa, 2016; Kreitz-Sanberg, 2013; Moosa & Bhana, 2017; Skelton, 2012; Tucker, 2015). There has been a consistent increase since the 1980s of the proportion of U.S. teachers that were female (Ingersoll, Merrill, & Stuckey, 2014). Ingersoll et al. (2014) indicated that in 2011-2012, 89% of primary school teachers were female. The U.S. Bureau of Labor Statistics (2017) reports that only 2.3% of Pre-K and kindergarten teachers were male. Male elementary and middle school teachers only represent 20.8% of the teaching force at those levels (U.S. Bureau of Labor Statistics, 2017).

Researchers (Bhana & Moosa, 2016; Brownhill, 2014; Fordice & Nielsen, 2013, Lovett, 2014; Moosa & Bhana, 2017; Peterson, 2014; Skelton, 2012) indicated that males were not entering the field of education for a variety of reasons including discrimination

and traditional gender roles. Researchers (Kim & Weseley, 2017; Şahin & Sak, 2016) showed that men who seek positions as elementary teachers had been categorized as homosexual or weak, thus creating an uninviting environment. The fact that early education has been predominately viewed as caregiving or women's work is another bias. (Petersen, 2014). Although there had been extensive attempts to grow the number of male teachers in the younger grades of education worldwide, the results had not yielded significant success (Weaver-Hightower, 2011). It was also unclear if the impact of male teachers warrants the efforts to increase the population (Weaver-Hightower, 2011).

#### Statement of the Problem

There were a significant shortage of male teachers nationally, and considerable resources and efforts would be needed to recruit and retain male instructional staff. Males have not entered teacher preparation programs and were said to be facing a feminization of teaching and education (Saigol & Danish, 2016). In addition, male teachers are faced with conflicting messages for gender expectations through their presence in the classroom (Fordice & Nielsen, 2013). District and school leaders continued to seek male teaching faculty; however, it has been unclear if these leaders perceived the goal of the teacher increase as higher student achievement outcomes, role model impact, relationships, or classroom management impact. Teacher gender role alignment (gender stereotypes), quality, and classroom climate influence student learning outcomes both positively and negatively (Pahlke, Hyde, & Allison, 2014; Park, 2013; Wolter et al., 2015). The Every Student Succeeds Act of 2018 continued the pressure for student improvement in general, and specifically directed states to focus on closing achievement gaps. States, districts, and schools were on a quest for methods and



practices to create growth in student learning performance. In 2014, male students' academic performance continued to be a concern in the educational forum (Voyer & Voyer, 2014). This achievement gap has been pervasive in spite of significant efforts of intervention. One solution that was found to be linked to improved male student performance was that of an increase of male teachers (Crisp & King, 2016).

There is historical research indicating that a teacher that is similar to the student, for example a male teacher and a male student, can result in higher learning results (Dee, 2006). However, the research that connected higher student achievement to like teachers is conflicting (Burusic et al., 2012; Rimm-Kaufman, Baroody, Larsen, Curby, & Abry, 2014; Spilt et al., 2012). By examining variations in leader and teacher perceptions of the relationship of male teachers on the impact on students and schools, the researchers questioned the impact on student growth measures in English language arts (ELA).

#### Purpose of the Study

The purpose of the study was to understand the perceptions of need and effectiveness of school districts in general and elementary schools specifically to recruit and retain male teachers. This study was conducted by investigating administrator and teacher perceptions of the relationship between male teachers and male student growth performance in ELA in a metropolitan school system in Georgia. The constructs examined were principal and teacher perceptions of the influence of male teachers through role model, relationships, classroom management, and achievement on the final outcome of student growth in ELA. Student growth was measured by the Georgia Milestones End of Course Assessment School Average Student Growth Percentile (SGP) by gender. Classroom management was measured by the perceptions that administrators

and teachers held about how student behavior was evidenced in the classrooms of male teachers. The central phenomenon was to study what perceptions leaders and teachers had that may cause them to want an increase in the number of male teachers in elementary schools. The research explored perceptions of leaders and teachers of male teachers and the relationship they had to achievement growth that may impact male students indirectly through other factors, rather than student growth performance.

### Theoretical Framework

The theoretical framework that served as the underpinning for this research was embedded in the perceptions of teachers and principals on the relationship of male teachers to student academic growth on a school perspective. To examine the results of these perceptions, a filter was based on the influence teachers had on how students learn, based on how they perceive gender and the impact of gender in the world. This theoretical framework would support the presence of male teachers in a school being important for male students, as well as the perception that the relationships they may have had on male academic growth for a school.

Social Cognitive Theory (Bussey & Bandura, 1999) states that children create their view of gender and how they see the world through the lens of gender through a triad of reciprocal interaction between environmental factors, behavioral factors, and personal factors. These factors interact with each other to ultimately form the lens that children use to view and interact with the world around them (Bussey & Bandura, 1999). The influence of school in the development of gender orientations recognized through Social Cognitive Theory was specifically visited in the work of Bussey and Bandura (1999).

Schools in general and teachers specifically influenced students' gender orientations through behavioral factors during their interactions with students (Bussey & Bandura, 1999). If teachers praised or reprimanded students for expected behaviors, this then influenced students' views of what was correct for their gender (Bussey and Bandura, 1999). In addition to the influence of teachers on behaviors, the influence of environment was discussed (Bussey & Bandura, 1999). Teachers make decisions about the type of activities offered to students or the encouragement that they give to students about which activities to choose. The learning style in the classroom could influence a student's gender orientation; if a teacher steers a male student towards math and science activities and not reading due to their own personal gender stereotypes, this could impact a male student's view of gender and reading (Bussey & Bandura, 1999). In turn, as students were influenced strongly by peers, the environment that was supported by the teacher at school was reinforced by peers' views of gender appropriate activities (Bussey & Bandura, 1999). Behavioral factors were also influenced with the interactions that students had with peers, parents, siblings, and others (Bussey & Bandura, 1999).

The third portion of the triad influenced through the school setting and teacher are personal factors. Bussey and Bandura (1999) discussed the influence of role models as being one of the most key influences in transmitting values, attitudes of thoughts, and actions in the construction of gender views (Bandura, 1986). Bussey and Bandura's (2012) work incorporated the work of Bem (1983) in Gender Schema Theory. Gender Schema Theory (Bem, 1983) embodies components of both Cognitive Developmental Theory and Social Learning Theory (Martin, Ruble, & Szkrybalo, 2002; Starr & Zyrbrigen, 2016). An individual child processes gender category as schemas only with

the influence and attributions of social context (Bem, 1983). Gender Schema Theory supports the concept that if elementary children participate in schools with only female teachers, then teaching becomes a profession associated with the female gender.

Alternatively, if elementary children were exposed to more male teachers in a school, they would have an alternative schema related to teaching. Elementary schools currently have a lack of male teachers, thus a lack of available models for the male gender exist for both male and female students. In addition, children who did not have male caregivers in the home could also be influenced by a Gender Schema that either supports or dispels traditional gender stereotypes. Using Social Cognitive Theory, this would influence a child through environmental and personal factors (Bussey & Bandura, 1999).

Bussey and Bandura (1999) expanded the original theory to include more than external factors that influence a child's learning. However, Social Cognitive Theory (Bussey & Bandura, 1999; Martin et al., 2002) continued to embrace the impact of role models and modeling as key components for influencing a child's learning behaviors. The researchers included a child's ability to observe several different models and utilize internal cognitive processing to combine the models, thus impacting the behavior of the child (Martin et al., 2002).

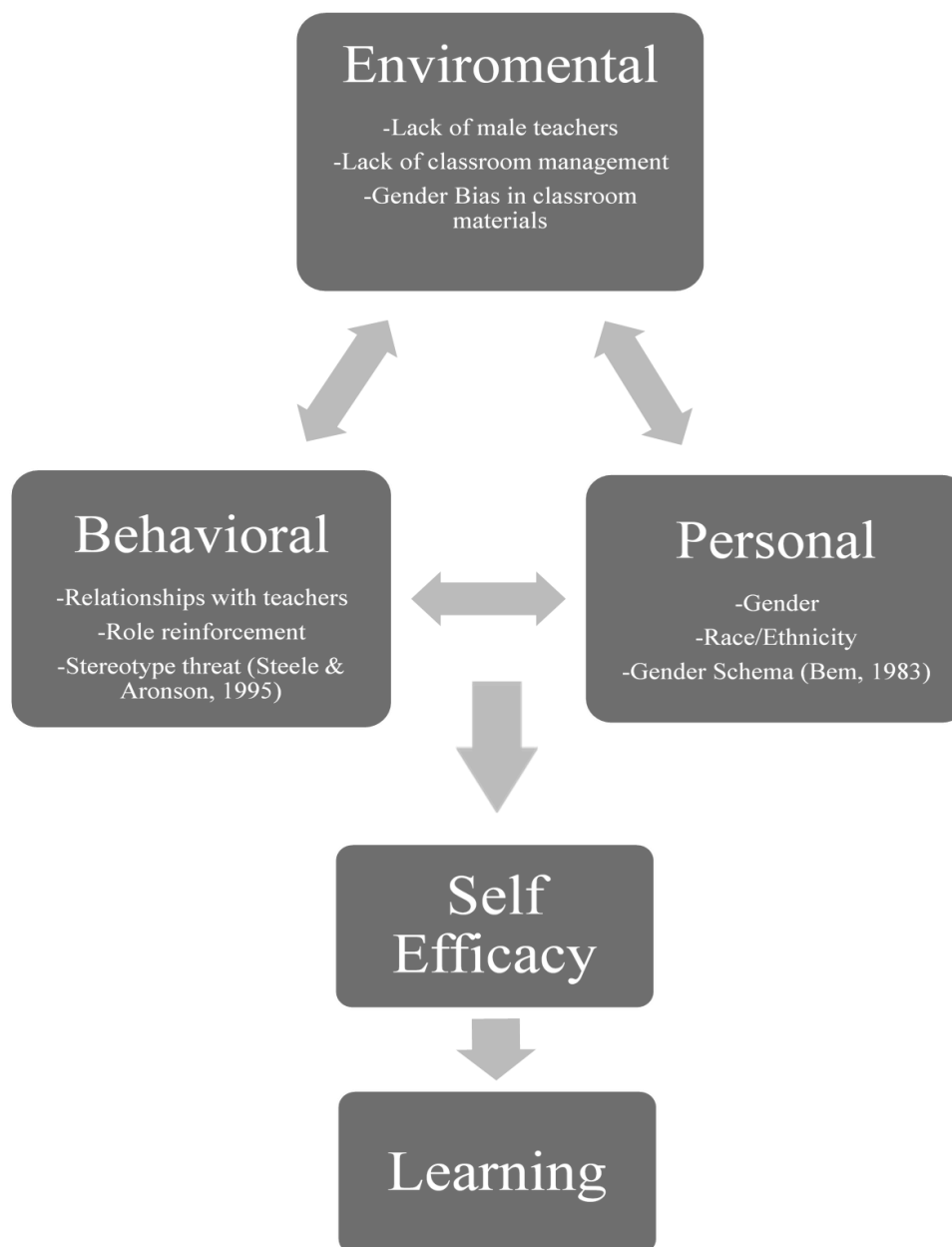
As an influence of the behavioral section of the triad in Social Cognitive Theory, Stereotype Threat Theory needed to be evaluated as a potential influence. Stereotype Threat Theory (Steele & Aronson, 1995) was used additionally to process principal and teacher perceptions of the influence of male instructional staff. Steele and Aronson (1995) found that when students were reinforced with negative stereotypes, they performed lower than if the stereotype was not reinforced. As Bussey and Bandura

(1999) stated, the students' interactions with people influenced their behaviors and the impact of stereotype threat could directly influence the behavioral component of the triad of influence. Students who were considered at risk, lower income, and minority students were at an even greater risk for stereotype threats (Wang, Yu, Pedram, & Chen, 2018).

The stereotype threat is that without male role models or examples that males are successful with reading, then male students may perceive that being good at reading is a female trait. The stereotype of males being poor in reading can become a self-fulfilling prophecy. The influence socially to adhere to gender roles was found to be greater for males, and boys tend to attend to same sex models more than girls (Bussey & Bandura, 1999). This self-fulfilling prophecy is consistent with other research on societal role models, as males tend to choose male role models over female role models (Estrada, Garcia-Ael, & Martorell, 2015). Thus, having more male teachers as role models potentially could impact student achievement growth at a higher rate for male students.

Bussey and Bandura's (1999) Social Cognitive Theory's three triads on influence work simultaneously to create the manner in which a child views and interacts with the world around them. This triad of influence impacts a student's self-efficacy (Bussey & Bandura, 1999). Self-efficacy is built through a child's success or lack of success as they interact with the world (Bussey & Bandura, 1999). Bussey and Bandura (1999) stated that a child's self-efficacy was influenced by environmental factors as well as their own personal belief system and ultimately influenced their motivation and behavioral choices. When the student found a good fit between themselves and their environment, this could have resulted in a higher level of self-efficacy (Könings, Seidel, Brand-Gruwel, & van Merriënboer, 2014.) This motivation and approach to learning could in turn influence a

child's growth in learning. The manner in which Social Cognitive Theory (Bussey & Bandura, 1999) was interpreted in this study with the influence of Gender Schema Theory (Bem, 1983) and Stereotype Threat Theory (Steele & Aronson, 1995) is depicted in Figure 1 below.



*Figure 1.* Influence on Student Growth Through the Lens of Social Cognitive Theory.

## Conceptual Framework

The conceptual framework examined the problem of male achievement and the solution of the need for male teachers. The research investigated the perceptions of principals and teachers about the relationship they saw between male teachers and the academic growth of students in schools. The perceptions were analyzed additionally to determine relationships between male teachers as classroom managers, role models, and relationships with students.

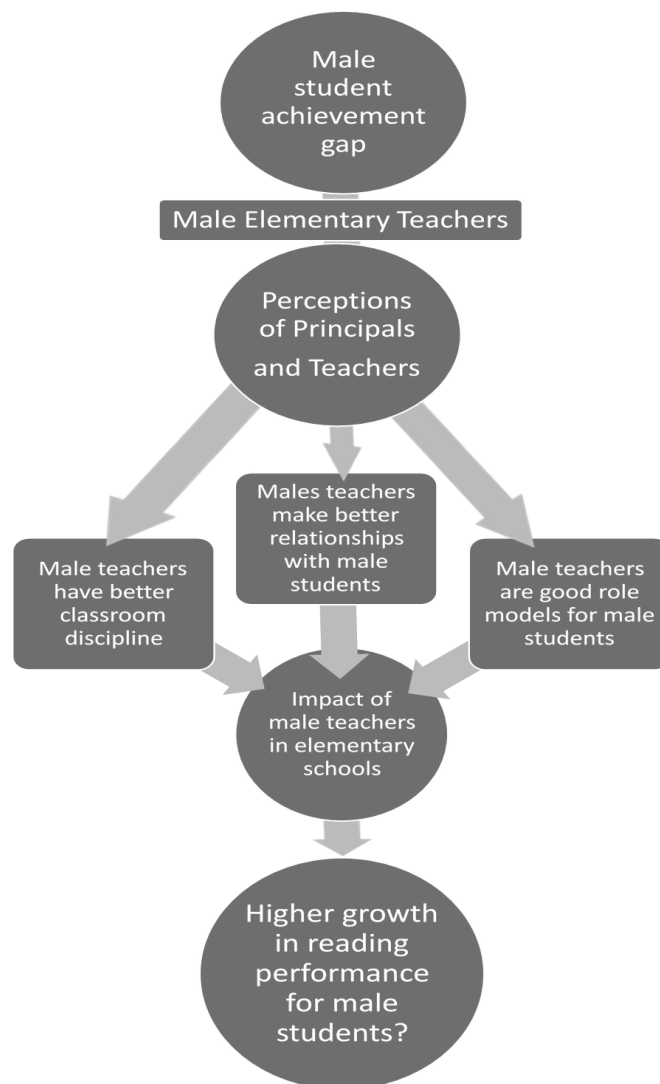


Figure 2. The Influence of Hiring Male Teachers.

## Research Questions and Hypotheses

To measure the perceptions of principals and teachers, the need for research questions for each group was justified. The questions were used to measure the perception of the relationship between the presence of a male teacher and student learning growth of the male students in that school. The overall research question was, “Is there a relationship between elementary school administrators’ and teachers’ perceptions of the influence of male teachers and a school’s male students’ achievement growth in ELA?” Each of the below sub questions was utilized to measure this relationship.

RQ 1: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students’ ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students’ ELA growth percentile scores to a statistically significant degree.

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students’ ELA growth percentile scores to a statistically significant degree.

RQ 2: Is there a correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students’ ELA growth percentile scores?



Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores to a statistically significant degree.

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores to a statistically significant degree.

RQ 3: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores to a statistically significant degree.

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores to a statistically significant degree.

RQ 4: Is there a correlation between teacher and administrator perceptions of the influence of male teachers on their students' achievement and learning and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers on their student's achievement and learning and the male students' ELA growth percentile scores?

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers on their student's achievement and learning and the male students' ELA growth percentile scores?

The most effective manner to evaluate the significance of the research questions was decided to be through a quantitative research design. A correlational study utilizing a combination of survey data collections of principal and teacher perceptions combined with Georgia Milestones End of Grade Assessment SGP averages for study schools was one example.

#### Limitations and Delimitations

The subject of teacher assignment, gender, and student growth measures has been embedded with bias, both for the researcher and the participants. Thus, the use of a quantitative methodology was used to limit the impact of inherent bias. The researcher did not interpret what the participants meant by their answers to survey questions. In addition, the gender stereotypes and bias that were held by the participants may have impacted the results of the study.

The number of male students entering the field of education may present a possible limitation. The number of male teachers enrolling in teacher preparation programs has decreased, thus limiting the number of potential male candidates for hire in elementary schools. The district in which the research was being conducted does not have an official male teacher recruitment initiative, which may create even lower numbers of male teachers.

The research was conducted in one school system in a metropolitan area of Georgia. Due to the demographic and geographic populations that the participants represent, the generalizability of the results may be limited to like populations.

### Significance of the Study

With the goal of schools nationally to improve student learning, any achievement gap becomes a focus for school improvement efforts. All schools strived to provide quality education for their students; most attempted to create students that will later be effective citizens in their communities. Each year, schools in Georgia worked through a strategic planning process to improve the student achievement and school climate results. This research became significant to state, district, and school leaders because the current interventions had yielded mixed results, and there continues to be achievement gaps between all students and many of the subgroups: special education, Hispanic, Black, economically disadvantaged, and male. The gap was considerably higher for minority male students. This study focused on the student achievement gap between female and male students. The research that connected higher learning results to students having the same gender teacher drove the leader to increase the number of male teachers.

Schools currently work to provide students with the best possible environment to demonstrate high growth in learning outcomes. Teacher perceptions and expectations were a key predictor in a student's immediate outcome and future educational progression. Recruiting and retaining teachers that create high impact for students became a priority. The belief that male teachers have a higher impact on a male student's educational environment due to likeness was found to be supported in research (Martin, Marsh, Cheng, & Ginns, 2010).

Although there was a national and international push to hire more male teachers, related to the conflicting outcomes of gender like teaching pairs, the drive for this solution to the achievement gap was unclear. It was possible that gender stereotypes of femininity that surrounded the elementary teaching profession were cyclical. The greater proportion of female teachers present in elementary school settings reinforced the idea that teaching younger children is a female career. Thus, adding males to the profession may break the perception and create a less feminine stereotype.

Initiatives were directed by governments and school districts, but it was principals that were in most cases directly responsible for the hiring decisions in schools. In the age of school-based decision making and distributed leadership, principals, assistant principals, and teachers worked collaboratively to make hiring decisions to fill elementary teaching positions. For that reason, the researcher attempted to examine the perceptions of elementary school leaders and teachers related to the impact male teachers have on the growth in learning outcomes, thereby uncovering if they perceived that there is a relationship to student achievement and how it directly or indirectly influences the general school environment.

A large focus of the most recent data examined the effectiveness of same-gender instruction at the high school and post-secondary level. The percentage of male instructional staff is much higher at these levels. This study focused on the relationship of same-gender instructional staff to student growth outcomes at the elementary school level.

A majority of the research that was completed examining the relationship between teacher gender and student gender was conducted on student gender to teacher gender

matches, but did not examine male teachers' relationship to students not in the teacher's class (Burusic et al., 2012; Odunaike, Ijaduola, & Amoda, 2013). To the knowledge of the researcher, there has not been a study done to examine the impact of the number of male teachers in a whole school and a whole school system on the elementary schools. The focus on the whole school allowed the researcher to examine the relationship of male teachers with students whom they directly teach and students that teachers may interact with, but do not directly teach. In past research, student achievement was examined with the same gender of student to the student's teacher methodology as the possible impact on achievement. The researcher, by examining student growth by the school, was able to examine the relationship between principal and teacher perceptions and student growth for an entire school. In order to measure the relationships of student achievement growth and the number of male teachers in a school, the researcher collected survey data from administrators and teachers from a school district in Georgia.

#### Potential Implications of Study

The United States has not been unique in the achievement gap between male and female students. A call to improve the academic outcomes for male students through the increase of male teachers, especially at the elementary level, has been wide-spread beginning as early as 2000. As the results of gender-like teacher matches for increasing male student achievement were varied, this study added new elements to the conversation for consideration. If the study results determined that there was a statistically significant relationship between the perceptions of administrators and teachers between male teachers and student growth achievement for schools, the justification for the increase of male teachers would be supported. For school systems that had not made attempts to add

male teachers, this could create new initiatives and efforts in human resources departments and schools to add more male teachers. In addition, school governments may explore new efforts on a larger scale to recruit and retain male instructional staff if needed.

Conversely, if there was not a relationship between the perceptions of administrators and teachers' perceptions of the relationship between male teachers and student achievement growth for schools, then the efforts of districts to hire male elementary teachers may be unnecessary. The results of this study also led to the need for additional research. If administrators and teachers perceived a relationship and there was not a relationship, the question of why they had that perception would need to be examined. This study was limited to the perceptions of the adults in the school; further study of the perceptions of the students examined by school may lend more understanding to the possible impact of male teachers. Elementary schools were used in this study. Before large-scale efforts were implemented to change recruitment and retention strategies, data from other school levels (middle schools and high schools) may need to be assessed.

#### Possible Contributions of the Study

School systems that have not made attempts to add male teachers may find the results of this study demonstrated the need for new initiatives and efforts in Human Resources departments and schools to add more male teachers. In addition, school governments may explore new efforts on a larger scale to recruit and retain male instructional staff. These efforts could create the need for additional financial resources and a potential need for the creation of new policy.

Additionally, if there was not a relationship between the perceptions of administrators and teacher's perceptions of the relationship between male teachers and student achievement growth for schools, then the efforts of districts to hire male elementary teachers may be deemed unnecessary. Influence of current study findings on scholarly research and new knowledge generated that could advance literature on gender stereotypes in education as a possible influence on student achievement.

The results of this study may also have led to the need for additional research. If administrators and teachers perceived a relationship and there was not a relationship, the question of why they had that perception would need to be examined. This study was limited to the perceptions of the adults in the school, and further study of the perceptions of the students examined by school may lend more understanding to the possible impact of male teachers. Elementary schools were used in this study. Before large-scale efforts were implemented to change recruitment and retention strategies, data from other school levels (middle schools and high schools) may need to be assessed.

#### Definition of Terms

*Bias*: personal and sometimes unreasoned judgment (Merriam-Webster, 2018).

*Classroom Management*: the wide variety of skills and techniques that teachers use to keep students organized, orderly, focused, attentive, on task, and academically productive during a class (The Glossary of Education Reform, 2018).

*Every Student Succeeds Act*: reauthorizes the 50-year-old Elementary and Secondary.

*Education Act (ESEA)*: the nation's national education law and longstanding commitment to equal opportunity for all students (U.S. Department of Education, 2018).

*Gender*: the behavioral, cultural, or psychological traits typically associated with one sex (Merriam-Webster, 2018).

*Gender Roles*: the pattern of behavior, personality traits and attitudes defining masculinity or femininity in a certain culture. Determined by upbringing that may or may not conform to a person's gender identity (Psychology Dictionary, 2018).

*Georgia Milestones End of Grade Assessment*: the assessment that was administered to students in Grades 3 through 8 in ELA and mathematics in the state of Georgia public schools (Georgia Department of Education, 2018).

*Role Model*: a person whose behavior in a particular role is imitated by others (Merriam-Webster, 2018)

*Stereotypes*: a standardized mental picture that is held in common by members of a group and that represents an oversimplified opinion, prejudiced attitude, or uncritical judgment (Merriam-Webster, 2018).

*Student Growth Measures*: the percentile ranking of the amount of growth a student has made as compared to his/her like performance cohort members (Georgia Department of Education, 2018).

### Summary

The achievement gap between male and female students was reviewed in several studies (Burusic et al., 2012; Voyer & Voyer 2014). Similarly, the call for male teachers as the solution for this gender gap in academic performance has been documented (Barile et al., 2012; Opdenakker, Maulana, & Brok, 2012). The perceptions that principals and teachers held of the relationship that male teachers had with the academic growth of students was unclear. Literature revealed that male teachers may be seen as a solution



due to the influence they may have on school climate. School leaders indicated that male teachers can directly or indirectly influence school climate by creating better managed classrooms (Hjalmarsson & Löfdahl, 2014), serving as role models (McGrath & Sinclair, 2013; Ponte, 2012), creating positive relationships (Spilt et al., 2012), and improving academic achievement (Park, 2013; Wolter et al., 2015). In Chapter II, the literature related to these constructs was reviewed through the lens of teacher gender and gender matching of teachers to students. When possible, studies that included the perceptions of principals and teachers were included.

## CHAPTER II

### REVIEW OF LITERATURE

The achievement gap between male students and female students is well documented (Voyer & Voyer 2014). Teacher gender role alignment, quality, and classroom climate influence student learning outcomes both positively and negatively (Park, 2013, Wolter et al., 2015). The stereotypes that teachers held of students impacted those students' performances in their classrooms (Wolter et al., 2015). Students who see types of learning not fitting with their self-image were found to have lacked engagement in those types of activities, thus limiting their opportunities for growth in those areas (Chick & Corle, 2012). This limiting of learning opportunities based on gender directly connected gender bias, stereotypes, and student learning. Students who have been denied opportunities to participate in learning from lack of encouragement from their teacher due to gender influences were found to be at a distinct disadvantage. There are several other factors that researchers (Legewie & DiPrete, 2012, Owens, 2016; Riley, 2014) argued mark student achievement such as teacher gender, relationships, and school climate.

When a student is developing who they are as a learner, a majority of his or her daily learning environment is created by the teacher. In an effort to improve academic performance for male students, principals have sought to add male teachers. Research (Brownhill, 2014; McGrath & Sinclair, 2013) indicates that male teaching candidates were sought because principals perceived them as role models. Also, principals saw male teachers as a way to supplement the male experience for students who do not experience

male figures in their homes, in addition to improving school climate (Brownhill, 2014; McGrath & Sinclair, 2013). The elements revealed in research as affecting school climate were that principals and teachers may view male teachers as positive role models for male students, and as better at making impactful relationships with male students. In order to gain a greater understanding of previous research related to teacher gender, and specifically the role of the male teacher, the constructs of classroom manager, role models, and student relationships were investigated through an online survey. In addition, a review of previous research connecting teacher gender and academic performance was reviewed. An understanding of each of the constructs informed the findings of the perceptions of principals and teachers of the relationship between male teachers and the student achievement growth in a school.

#### Classroom Management

Classroom management was found to be an essential element of a positive classroom climate (Martin et al., 2016; Rimm-Kaufman et al., 2014). A system of classroom management is an intricate construct with multiple components. Classrooms that were highly organized were found to have tended to support higher levels of student engagement and positive behavior (Rimm-Kaufman et al., 2014).

Schools leaders may be motivated to hire more male teachers as they see the impact of a well-managed classroom (Hjalmarsson & Löfdahl, 2014). Male teachers have been found to have a stricter discipline routine and minimized disorderly behaviors with greater success than their female counterparts (Shaukat & Iqbal, 2012). Male teachers have utilized more direct discipline strategies with students than female teachers (de Jong et al., 2014). In addition, Shaukat and Iqbal (2012) found that elementary

teachers had higher rates of effective classroom management strategies than teachers at higher grade levels. Male teachers may not have demonstrated higher levels of engagement and instructional strategies; however, they demonstrated higher levels of proficiency in classroom discipline than their female peers (Shaukat & Iqbal, 2012).

Research on the context of the male teacher as a disciplinarian or classroom manager was at times couched in the context of males as role models. Hjalmarsson and Löfdahl (2014) acknowledged the conversation surrounding the male teacher's role as a disciplinarian. The researchers (Hjalmarsson & Löfdahl, 2014), through a qualitative study, examined the views male elementary teachers had of their roles as teachers. Participants indicated that they had been put in difficult classroom settings based on the fact that they were men and should be able to control the situation (Hjalmarsson & Löfdahl, 2014). In addition, participants in the study indicated that they felt the burden of the expectation of controlling their classrooms from their colleagues and supervisors. Hjalmarsson and Löfdahl (2014) concluded that male teachers were expected to manage students at a higher rate of success than their female counterparts and that this expectation and action could contribute to the reinforcement of gender order. Female teachers contributed to the perception of gender order based on their perceptions that additional male teachers were needed for specific male needs in schools (Hjalmarsson & Löfdahl, 2014).

Sharukat and Iqbal (2012) examined classroom management through the filter of teacher self-efficacy beliefs. The study was quantitative research where a convenient sample of 198 teachers participated in the Teacher Self-Efficacy Scale survey that was developed in 2001 by Moran and Hoy. The researchers (Sharukat & Iqbal, 2012) used a

*t*-test to examine the significance between male and female teachers and then, using a one-way Analysis of Variance (ANOVA), further evaluated responses by age-related to self-efficacy. Sharukat and Iqbal (2012) found no effect of gender on the measure of student engagement or instructional strategy; however, there was significance in males demonstrating better classroom management than females. The researchers (Sharukat & Iqbal, 2012) indicated that the findings may stem from males being stricter in classroom settings than females.

### Role Models

School leaders may seek male teachers to serve the purpose of providing students, both male and female, with positive male role models (McGrath & Sinclair, 2013; Ponte, 2012). McGrath and Sinclair (2013) indicated that adding male teachers to schools was universally seen as an educational solution. Paredes's (2014) study of gender matching students to teachers found that high schools in Chile with more female teachers had a positive effect on female students' graduation rate. There was a call to hire more male teachers as they were seen as essential role models for male students (Brownhill, 2013; McGrath & Sinclair, 2013).

All ages of children of either gender were more likely to identify a male famous figure that they identify as a role model, rather than a non-famous male or female famous or non-famous (Estrada et al., 2015). Estrada et al. (2015) also discussed that when a child chose a familiar role model, males were chosen more often by both male and female children. Teachers were chosen as role models and both male and female children indicated a preference for male teachers as role models (Estrada et al., 2015). Paredes (2014) discussed findings that indicated that males performed lower when matched with a

female teacher, although female students showed no effect. If the presence of males as positive role model impacted students of both genders, there was a definite disadvantage to students in the elementary grades where male teachers are less represented. Only 11% of elementary teachers were male, and research showed that number decreasing (Ingersoll et al., 2014). Minority students may have also been disadvantaged if likeness was a key to student learning. Black male teachers represented only one percent of the 11% of the total number of male teachers (U.S. Bureau of Labor Statistics, 2017).

It is also unclear what characteristics or character traits the male teacher should model while serving as a role model. Males need to decide if they model traditionally masculine traits, or if they model what needs to be taught to children (Mitrano, 2014). However, if teachers, principals, and students viewed teachers as role models and had a higher alignment with male role models, one could infer that the possibility for a greater impact on learning outcomes exists when a student has a gender-matched teacher (Estrada et al., 2015; Paredes, 2014).

Several studies were reviewed to gain an understanding of the impact of male teachers as role models in education (Brownhill, 2014; Estrada et al., 2015; McGrath & Sinclair, 2013; Paredes, 2014). Paredes (2012) was the first of the studies reviewed. In this study, Paredes (2012) investigated the relationship between teacher gender, teacher bias, and student academic outcomes.

The research was conducted in Chile. The utilized data were captured from the System for Measuring the Quality of Education (SIMCE) test data from 2009, which was implemented in Chile in 1998 (Paredes, 2012). In addition to student data, the SIMCE 2009 collected teacher data from the four main academic subjects: math,

language, natural science, and social studies. Paredes (2012) utilized regression models to test relationships. There was found to be a high level of positive effect of gender matching on achievement for girls and no effect for boys. However, Paredes's (2012) results varied when a substitution effect was considered. Students matched to same-gender teachers where their parents' educational level was low had positive effects. Conversely, students matched with same-gender teachers when their parent's had high educational levels demonstrated no effect (Paredes, 2012).

To explore the perception of the need for more male primary teachers as a solution for male achievement gaps, McGrath and Sinclair (2013) conducted a mixed methods study on the perceptions of students and parents for the need for male teachers. In the McGrath and Sinclair study, students and parents from Sydney, Australia were surveyed and then selected for participation in semi-structured focus groups. McGrath and Sinclair's (2013) research revealed five major themes for the perceived need for more male primary teachers: for role models, father figures, they were relatable, to assist with sex education instruction, and for female students to gain experience interacting with men. The researchers (McGrath & Sinclair, 2013) indicated that all the findings related to a need expressed by students and parents were social in nature.

In the Brownhill (2014) study, the focus of the research was based on the perceptions and beliefs of the male teachers of students from ages up to eight years. The researcher (Brownhill, 2014) conducted a mixed methods study to investigate the role of males as role models for children. The initial questionnaire requested that participants ( $N = 174$ ) rank potential characteristics for male role models. The researcher (Brownhill, 2014) collected the findings, not only based on the top five qualities indicated, but also

the order in which they were ranked. In the second stage of the research, individual interviews were conducted to seek clarification of the quantitative results. Brownhill (2014) concluded that characteristics that were identified as essential for male role models were inconsistent, and the research indicated there was a general lack of clarity as to what male teachers should model for children.

The impact of role model versus the effect of teacher bias was examined in a study with students in Chile (Paredes, 2012). Due to the gender gap in national achievement assessment scores of the SIMCE test in Chile, Parades (2012) explored the concept of gender matching of teacher and student to potentially improve academic outcomes for students. The data were comprised of the SIMCE scores from 239,745 eighth grade students in Chile. Parades (2012) explored the impact of a role model effect in contrast to potential gender bias of the teacher and the student achievement outcomes. It was found that a female teacher and female student pairing had a positive effect. However, there was not a significant effect for the male teacher and male student pairing (Paredes, 2012). The data also indicated that students who were high achievers were assigned to female teachers on a higher frequency. Parades (2012) indicated that both male and female teachers lowered their expected outcomes for their students as the number of male students increased in the classroom. Male teachers had greater expectations for male students in single gender settings, indicating gender bias when teachers were sorted for gender-alike matches (Parades, 2012). Overall, Parades (2012) found that female students were significantly affected by having a female teacher; however, there was not a similar effect for boys.



## Relationships

The connection between the student and teacher in the learning dynamic is a key topic of research in the quest for improving student learning outcomes for individuals and for schools (Barile et al., 2012; Cohen & Higgins-D'Alessandro, 2013; Opdenakker et al., 2012). Research is prevalent which connects a positive impact on student academic outcomes due to the student-teacher relationship (Cooper & Minness, 2014; Opdenakker et al., 2012; McCormick & O'Connor, 2014; Split et al., 2012; Split, Hughes, Wu, & Kwok, 2012;). The student-teacher relationship was found to be critical, even as relationship levels tended to decline as the child progressed through the elementary grades (McCormick & O'Connor, 2014; Split et al., 2012). Teacher-student relationships go beyond just role models (Martin et al., 2010) In addition, researchers found a relationship between the academic performance of minority students from lower-income schools and teacher relationships (McCormick, O'Connor, Cappella, & McClowry, 2013). McCormick et al.(2013) suggested that teacher-student relationships should be part of the conversation when considering school improvement interventions.

Cherng and Halpin (2016) examined the high school student's perceptions of their teachers to test relationships with racial-like matching of students to teachers. Students rated their teachers in seven areas: Challenge (Motivation to high standards), Classroom management (Manage behavior in the classroom), Care (Supportive relationships), Captivate (Engagement), Clarify (Use of multiple strategies), and Consolidate (Connections between concepts taught; Cherng & Halpin, 2016). Cherng and Halpin (2016) conducted preliminary factor analysis for each of the scales. The main independent variable used in each of the procedures was teacher gender: Latino, Black,

or White. Cherng and Halpin (2016) derived that students rated their Latino and Black teachers higher than the students rated White teachers. Minority students specifically rated minority teachers higher than White teachers. Cherng and Halpin (2016) concluded that minority teachers may be more aware of other cultures due to their own personal experiences, thus they created a better classroom environment.

When the quality of a teacher-student relationship was studied with a focus on student gender, teachers reported that boys have poorer relationships than girls (Split et al., 2012). However, due to the considerable imbalance of the female to male teachers in elementary grades, the connection between the poorer relationships and the gender of the teacher was unclear (Split et al., 2012). Several studies focused on gender as a student-teacher relationship variable (Split et al., 2012; Koomen, Verschueren, van Schooten, Jak, & Pianta, 2011). Review of these studies is critical to understanding the impact of teacher gender and student gender on the teacher-student relationship.

The quantitative study by Spilt et al. (2012) used a multilevel regression that examined gender matching and the quality of the teacher-student relationships. The researchers set out to discover the measurement invariance from a previous study (Koomen et al., 2011). The hypothesis tested was that poorer relationships were predicted for boys and positive results of gender match with teachers. The study was conducted with 649 primary school teachers in the Netherlands, and 182 of those teachers were men. Teachers reported on a total of 1,493 students that spanned Grades 1 to 6 equally. The teacher participants completed an adapted version of the Student-Teacher Relationship Scale (Koomen et al., 2011).

The researchers (Spilt et al., 2012) utilized multilevel structural equation modeling and investigated the invariance of teacher gender and student gender. In addition, maximum likelihood estimation in Mplus, a statistical variable modeling program, was utilized to assess non-normality, and Multigroup factor analysis was used to assess measurement invariance across teacher gender (Spilt et al., 2012).

Spilt et al. (2012) provided results that indicated girls were rated higher for closeness to teachers, and female teachers rated they felt closeness to girls, but not boys. Male teachers did not rate boys or girls higher in closeness. Both female and male teachers reported fewer classroom interpersonal conflicts between the teacher and female students. There was an indication of a match between female teachers and their like-gendered students; however, there were not such findings for male students and male teachers (Spilt et al., 2012).

While Spilt et al. (2012) investigated the impact of gender and teacher-student relationships, McCormick et al. (2013) examined the connection between relationships and academic achievement. The quantitative study of relationships based on the characteristics of elevated closeness and reduction of conflict and the relationships to children's level of academic achievement was examined by McCormick et al. (2013). The researchers (McCormick et al., 2013) conducted a propensity score analysis study to examine causal effects in an ethical manner; they did not use a control group. A multilevel propensity score matching method was utilized to estimate the causal effects of positive quality teacher relationships in kindergarten students on math and reading scores at the commencement of first grade.

Researchers (McCormick et al., 2013) collected data from 21 elementary schools representing three urban districts. The student demographic representation was identified as Black and Hispanic. There were 324 kindergarten students and 60 teachers, with 96% of the 60 teachers being female, as participants in the study. A majority of the student participants participated in the free or reduced lunch program. McCormick et al. (2013) had teachers complete a Student-Teacher Relationship Scale at the start and end of the kindergarten year. To examine achievement scores for reading and mathematics, subtests of the Woodcock-Johnson III Tests of Achievement, Form B were examined. Demographics, behavior, attention, and child academic competence were considered pre-treatment covariates.

Researchers (McCormick et al., 2013) conducted a multilevel regression for mathematics and reading achievement. The two-level hierarchical linear models were inserted in STATA12 with XT MIXED, in order to allow for the inclusion of fixed and random effects (McCormick et al., 2013). Results included a high positive impact of quality teacher relationships on kindergarten students' math achievement at the beginning of first grade. However, there were no effects found of quality teacher-student relationships on reading. McCormick et al. (2013) concluded that implications of the study on practice needed to be a higher level of focus on teacher-student relationships in mathematics instruction of primary aged high-risk students in urban school settings.

McCormick et al. (2013) found teacher-student relationships had an impact in mathematics. The researchers (McCormick et al., 2013) tested the connection of relationships and student achievement. McCormick and O'Connor (2014), through an additional quantitative study, continued to examine the impact of teacher-student

relationships; however, they expanded their lens to include student gender as well. In the study, researchers (McCormick & O'Connor, 2014) tested two research questions, the first testing high levels of closeness and higher levels of achievement in reading and mathematics and the impact of changes in closeness linked to changes in achievement. The second research question tested the relationships of teacher-child closeness and conflict and student achievement by gender (McCormick & O'Connor, 2014).

McCormick and O'Connor (2014) used data from the first two phases of a previous study, Study of Early Child Care and Youth Development, completed by the National Institute of Health Child and Human Development. The study began in 1991 to investigate childcare arrangements and student outcomes. A conditional sampling plan was used selecting participants from 10 cities in the United States. A Student Teacher Relationship Scale (STRS, Pianta, 1992) was used to capture perceptions of teacher quality. The researchers (McCormick & O'Connor, 2014) used hierarchical linear modeling to investigate the main research questions. McCormick and O'Connor (2014) found that there were relationships in mathematics related to teacher closeness; however, there were no effects in reading. However, the study researchers found that when closeness increases that reading achievement can increase as well. Conversely, high levels of conflict between teacher and students led to a lower performance in reading. Overall, McCormick and O'Connor (2014) found that boys tended to have less close teacher-student relationships than girls.

#### Academic Achievement

In addition to impacting school climate, if districts and schools sought male teacher candidates as an answer to the male student achievement gap the question was

revealed: What was the research on male teachers' impact on student achievement? Historically, there have been findings that females learn best from female teachers and males learn best from male teachers (Dee, 2006), as well as a belief that the male achievement gap can in part be blamed on the lack of representation of male teachers (Burusic et al., 2012). The connection between gender match of like gender teachers and student achievement had inconsistent results that could in part be related to the inconsistent measures used to evaluate outcomes (Burusic et al., 2012).

Burusic et al. (2012) attempted to evaluate student-teacher gender match quantitatively through the use of a large sample of participants (48,232 students and 46,196 students). The data collected were derived from subsections of the Croatian National Exam for Primary Schools, measuring achievement in Croatian Language, English Language, Mathematics, and Nature in Society (Burusic et al., 2012). Burusic et al. (2012) used multiple combinations of two-way ANOVA to examine gender matching and student achievement. The researchers (Burusic et al., 2012) found that in fourth grade, male and female students performed higher on standardized tests, although girls received higher marks than boys did. It was found that there were similar results in eighth grade with female students receiving higher marks (Burusic et al., 2012). However, there were mixed results in the standardized test results, with females scoring higher in languages, chemistry and biology and males scoring higher in physics and geography. There was not any difference noted in the assessments on history (Burusic et al., 2012). Overall the researchers (Burusic et al., 2012) found that student achievement on standardized tests was independent of the teacher's gender. However, Burusic et al. (2012) found school achievement was gender dependent and favorable to female

students. The researchers concluded that their data supported the concept that females were more successful in teaching than their male counterparts. Differences in achievement by gender was possibly attributed to stereotypes and social expectations (Burusic et al., 2012).

The analysis of teacher gender and secondary students was explored through a study conducted by Odunaike et al. (2013), in eight secondary schools in Nigeria. Both male and female teachers (20 male and 20 female) participated in a 25-question survey: Teachers 'Gender and Secondary School Students' Academic Performance Questionnaire. Odunaike et al.(2013) used a descriptive research design that included interviews. The researchers found that female teachers were more caring and concluded that this leads to better relationships with students and better academic performance (Odunaike et al., 2013). The researchers (Odunaike et al., 2013) concluded that there was a relationship between student achievement and teacher gender. In addition, the data indicated that female teachers were more invested than male teachers, based on male teachers seeking other employment opportunities. Odunaike et al.(2013) found, through interviews of the teacher participants, that both male and female teachers viewed teaching as a profession acceptable for females due to the structure of the work day, which could be more supportive of family time.

#### Student Achievement in Georgia

As outlined on the Georgia Department of Education's Assessment website (2019), in the state of Georgia students enrolled in public education are evaluated through the Georgia Milestones Assessment System. In Grades 3 and 4, students were assessed in ELA and mathematics. In fifth grade, students were assessed in ELA, mathematics, social

studies and science. The assessments were designed to measure students' mastery of the Georgia Standards of Excellence. These assessments were comprised of a combination of open-ended items in ELA and Mathematics. Also included in the assessment were an extended writing component, norm-referenced items, criterion referenced items, and technology-enabled items. The assessment was intended to be administered online. Student performance was reported based on four achievement levels; level I was the lowest and level IV represented the highest and considered above expected performance. The expected level of performance was level III.

The Georgia Department of Education website for assessment reported that in addition to a proficiency level score in ELA, students received a score specific to reading achievement, a Lexile score. Lexile scores were a combination of text complexity and a student's reading ability. Lexile was a standard score developed by MetaMetrics and indicated a student Lexile score was where a student can read achieving a 75% comprehension rate (Georgia Department of Education, 2019). Each student received a Lexile score in the area of reading. The student's score was then rated in relation to expected performance on the student's grade level as meeting or above grade level or below grade level. The Georgia Department of Education reports that student Lexile scores range from 200 or beginning reader to 1700 or advanced reader. Lexile performance target cut scores for the Georgia Milestones Assessment (2018) are as follows: Third grade 670 and fifth grade 920.

The Georgia Department of Education (2019) stated that in addition to performance or mastery scores for student performance, they calculated a SGP. SGPs were statistical, regression-based scores that were used to report the growth of students



on the Georgia Milestones Assessments (Georgia Department of Education, 2019). The intent of the measure was to calculate a student's progress over time (Georgia Department of Education, 2011). A school's SGP was measured as the median score for students in that school.

The constructs discussed of the potential perceptions of administrators and teachers of the relationship between male teachers in a school and the relationship to student growth in achievement was examined through the lens of Social Cognitive Theory. This overarching umbrella of Social Cognitive Theory (Bussey & Bandura, 1999), with influences from Gender Schema Theory (Bem, 1983), and Stereotype Threat Theory (Figure 2), was used to view how male elementary school teachers have influenced student achievement growth. Bussey and Bandura's (1999) Social Cognitive Theory developed a triad of reciprocal interaction of factors that influenced the way that the student saw themselves and the greater world. The triad included environmental factors, personal factors, and behavioral factors that, in combination and through reciprocal interaction, created a child's self-efficacy (Bussey & Bandura, 1999). As self-efficacy was influential in a student's motivation and engagement, development of negative gender attitudes towards learning could ultimately impact a student's learning outcomes and or achievement.

Students may view teaching as a female profession, this could be changed through the influence of role models (Bussey & Bandura, 1999). By serving as role models or counterexamples, more male teachers can influence a student's gender schema that teaching and potentially learning was a female activity. In addition, male role models can influence the Stereotype Threat that males faced in school. Male teachers could serve as

counterexamples to the stereotype that males were not as good in reading, or that males were not good students (Sokal, Thiem, Crampton, & Katz, 2009).

### Summary

In Chapter II, the literature surrounding the need to increase male teachers in the elementary school was reviewed. There was a consistent finding that elementary education continues to be a female dominated field. Most of the principals and teachers in elementary education were female. Many studies gave this feminine dominance as a potential reason that males do not enter the field of education in general and more specifically elementary education, as well as a potential reason for lower male student performance. Literature and research surrounding the need for male teachers showed that the main themes were classroom management, role models, relationships, and academic achievement. A review of general findings, as well as an in-depth analysis of studies that were relevant to the proposed research, was conducted. The in-depth reviews revealed the purpose of the research, the theoretical and conceptual frameworks, the data results, the methods utilized, the findings, and the implications.

Male achievement and the achievement gap between male and female students were a basis for many of the studies reviewed. The achievement gap was noted in studies in the United States as well as international studies and was consistent across all grade levels. Many of the studies reviewed included investigations of potential reasons or solutions for this male achievement gap.

In studying the literature surrounding the need for male teachers to improve learning outcomes for male students, an inconsistency of findings was revealed. Not one of the constructs reviewed revealed consistent findings of impact on students' academic

achievement when examined through the lens of gender for male students. Many of the studies had limitations of location, sample size, and the number of factors that were tested. Gender impact was measured through the lens of the student or by direct like-teacher matches.

The overall research was contradictory regarding the connections of teacher gender to student achievement outcomes. An increase in the male teacher population was consistently perceived as a potential solution. Increasing male teachers in elementary education continues to be a common goal today. In some cases, this task was completed through public campaigns, and, other times, it was simply an underlying recruiting and hiring practice.

Research was limited to a few studies that measured the perception of teachers by students; these studies did not measure the overall school effect of student academic growth. The perceptions of principals and teachers of the relationship of male teachers to the academic growth of males and females in a school have not been tested. The effect of a larger number of male teachers in a particular school, and the effect of that factor to influence principal and teacher perceptions of the influence on student achievement were not tested.

The literature showed a documented need for additional research into the continued intentional recruiting actions being made to increase the number of male teachers as an initiative to improve performance in male students. The literature research has not answered the questions of how student growth is affected by the perceptions of principals and teachers of the impact of male teachers on growth. The findings show there continues to be a need to explore the relationships between the components of

school climate and the perceptions that principals and teachers have about the impact of male teachers and need for additional research into continued efforts to increase the number of male teachers as an effort to improve performance in male students.

## CHAPTER III

### METHODOLOGY

#### Introduction

Student achievement has consistently been a cornerstone for the manner in which schools were measured for success. A main goal for school leaders has been to improve the success of all students (VanGeel, Keuning, Visscher, & Fox, 2016). In multiple studies there was a documented performance gap between male and female students (Spilt et al., 2012; Voyer & Voyer, 2014). In both studies male students were underperforming compared to their female peers (Spilt et al., 2012; Voyer & Voyer, 2014). This achievement gap continues to reflect a national and international phenomenon (Baye & Monseur, 2016; Heyder & Kessels, 2013).

The achievement gap between male and female students was found across multiple subjects; however, the gap was observed consistently in the area of reading (Voyer & Voyer, 2014; Owens, 2016). The NAEP math scores showed that males had a one percent advantage in math but performed six percent lower than females in fourth grade and 10% lower than females in eighth grade in reading. In a study of Croatian elementary school students, Burusic et al.(2012) found that females outperformed male students in several areas, including reading and languages.

The hiring of male teachers was a common intervention to address the achievement gap. Researchers (Burusic et al., 2012; Tufan, 2018; Zhang, 2017) listed hiring more male teachers or balancing the gender of faculty and staff as a

recommendation on a consistent basis. However, the specific rationale for the motivation of educational organizations to hire male teachers in the elementary grades was inconsistent. Researchers (Burusic et al., 2012; Mallozzi & Galman, 2014; Odunaike et al., 2013) came to varying conclusions on the direct positive impact that male elementary teachers had on student achievement. In addition, with states, such as Georgia, adding student growth measures to their data reporting, there was limited research examining the perception of teachers and leaders of the relationship between male teachers and student achievement growth in schools.

In addition to achievement, research indicated that there were three additional main incentives for hiring male teachers in elementary grades: male teachers serve as classroom disciplinarians, build better relationships with male students, and serve as role models. School principals and teachers, both male and female, indicated perceptions that male teachers were better at classroom discipline than their female counterparts (de Jong et al., 2014; Shaukat & Iqbal, 2012). Teachers indicated that male teachers had less conflict and more positive relationships with male and female students (Cooper & Miness, 2014; McCormick & O'Connor, 2014; Opdenakker et al., 2012; Split et al., 2012; Split et al., 2012). In addition, researchers indicated that male teachers have been historically sought to serve as role models for both male and female students (McGrath & Sinclair, 2013; Ponte, 2012).

In order to evaluate the relationship of the factors on student achievement growth, relationships, the role of male teachers as disciplinarians, and the perception of male teachers as role models, the following overarching research questions were examined: Is there a relationship between elementary school administrators' and teachers' perceptions

of the influence of male teachers and a school's male students' achievement growth in ELA? In this chapter, the researcher used methodology that guided this research to evaluate the defined research questions. The researcher described the purpose of the study, the research questions and hypotheses, research design, population, and the sampling of participants for the study. In addition, the researcher presented the instrumentation, pilot study, data collection, and data analysis processes.

### Research Questions and Hypothesis

The results of the relationship between students and teachers of the same gender and student achievement varied (Burusic et al., 2012; Voyer & Voyer, ). Teachers served as role models to the students they taught (McGrath & Sinclair, 2013; Ponte, 2012). Specifically, research has positively correlated positive student relationships to the student's teacher to higher academic achievement (Cooper & Mines, 2014; McCormick & O'Connor, 2014; Opdenakker et al., 2012; Split et al., 2012; Split et al., 2012).

The questions were used to measure the perception of the relationship between the presence of a male teacher and student learning growth of the male students in that school. The following research questions were constructed to answer the overarching research question.

RQ 1: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students' ELA growth percentile scores to a statistically significant degree.

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students' ELA growth percentile scores to a statistically significant degree.

RQ 2: Is there a correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores to a statistically significant degree.

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores to a statistically significant degree.

RQ 3: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores to a statistically significant degree.

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores to a statistically significant degree.



RQ 4: Is there a correlation between teacher and administrator perceptions of the influence of male teachers on their student's achievement and learning and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers on their student's achievement and learning and the male students' ELA growth percentile scores?

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers on their student's achievement and learning and the male students' ELA growth percentile scores?

#### Role of the Researcher

The researcher for this study has been a part of the educational community for over 24 years. She has served as a teacher, assistant principal, principal at the elementary and middle grades level, and as an assistant superintendent. During her career, the call for hiring male teachers has continued to be omnipresent. She worked to increase the number of quality male teachers in the schools that she led based on the belief that the action would positively impact students. Her interest in the impact of male teachers continued when her son began to show interest in elementary education in college. As her research continued, she found there was not an instrument to measure the perceptions of the influence of male teachers. Although Wood (2012) developed a qualitative instrument, it lacked the number of items and types of questions to fully explore the four areas of influence: role model, classroom management, relationships, and achievement. The researcher, with permission from Wood (2012), adapted the survey to potentially use

for research. As the survey was adapted from a qualitative questionnaire, validity and reliability needed to be established through a pilot study.

### Research Design

This study utilized a correlational research design. This design was used because research designs that employ quantitative research methods utilize measures that are objective and employ numerical data collection and the use of statistical analysis (Creswell, 2009). Correlational design was used in the study in order to examine the influence the perceptions that administrators and teachers have of the influence of male teachers on male students' Georgia Milestones SGP in ELA scores by school.

Quantitative design facilitated correlational analysis of administrator and teacher perceptions collected through survey data and SGP scores of male students on Georgia Milestones End of Grade assessment in ELA. Quantitative research design allowed the researcher to estimate the number of administrators and teachers required to achieve a given level of statistical power and effect size that was set prior to survey administration for statistically significant results.

The correlational research design assessed the direction and magnitude of the relationship between the independent variables and the dependent variable. The independent variables were perceptions of administrators and teachers' (in terms of classroom management, relationship, role models and student achievement) as measured by survey scores on the relation between male teachers and male student SGP scores in ELA as measured by survey scores, and demographic variables (age, gender, ethnicity, number of years teaching experience). The dependent variable was male SGP scores on the Georgia Milestones End of Grade assessment in ELA.

The three types of correlation that were possible between variables were positive correlation, negative correlation, or no correlation. Positive correlation occurred when there was a linear increase in scores for both variables. For example, the growth percentile scores of male students in Georgia End of Grade ELA growth percentile scores increased with increase in perceptions of male elementary school administrators of the influence by male teachers as role models on male student's reading growth percentile scores. Negative correlation occurred when increase in scores of one variable resulted in decrease in scores of the other variable. This correlation was evidenced when End of Grade assessment reading scores for male students decreased with increase in perceptions of male elementary school administrators on the relationship between male teachers and male student's growth percentage scores.

No correlation occurred when there was no linear relationship between two variables. Correlation was measured through Pearson correlation coefficient when scores of both variables followed a normal distribution. The correlation coefficient measured +1 and -1. A strong positive correlation was indicated by a correlation coefficient closer to +1. A strong negative correlation was indicated by a correlation coefficient closer to -1. A correlation coefficient value that was close to zero indicated weak or no relationship between two variables (Creswell, 2013).

A survey adapted from Wood (2012) was utilized to collect administrators' and teachers' perception data. The adaptation and survey creation process was described in the following instrumentation section. Wood's (2012) survey, "Teacher Perceptions of Gender-based Differences Among Elementary School Teachers," was previously used in a qualitative study. Validity and reliability of the adapted survey was completed through

the use of a pilot study. Procedures and processes to determine validity and reliability of survey items were described in the section for Pilot study and Instrumentation section of this chapter.

### Pilot Study

#### Purpose

The primary purpose of this pilot study was to evaluate the validity and reliability of the (Wood, 2012) scale, as psychometric properties of the scale items have not been previously tested. In order to evaluate validity and reliability, the researcher conducted Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) of the variables to determine the interrelationships among variables. Middle and high school teachers at the selected schools in the participating school district were asked to complete the survey.

#### Participants

Participants were purposely sampled from five middle schools and five high schools from the selected school district. All administrators and teachers from selected middle and high schools were emailed a survey link that contained an informed consent form and the survey. Respondents needed to provide informed consent before taking the survey. The intra-class correlation coefficient was used to evaluate reliability between survey respondents from middle and high schools. The desired sample size was at least 300 cases; however, the analysis was conducted with 100 or more teacher responses and 30 or more administrator responses.

## Instrumentation

School administrators and teachers were asked to complete a self-reporting survey instrument electronically. The survey was titled “Perceptions of Teacher Gender Influence” (Appendix A). The survey was a Likert scale survey adapted from the “Teacher Perceptions of Gender-based Differences Among Elementary School Teachers” survey created by Wood (2012). Additional questions were added to the survey to directly measure the constructs found in a review of literature related to the influence of male teachers. The qualitative sections from the original survey were removed as they were not needed in the current study.

The adapted survey that was used for this study continued to utilize a five-point Likert scale. Administrators and teachers from selected middle and high schools chose from the following options: (5) *Strongly Agree*, (4) *Agree*, (3) *Neither Agree or Disagree*, (2) *Disagree*, (1) *Strongly Disagree*. The participants were asked to respond to 33 items. The first six items collected demographic data on the respondent’s position, gender, ethnicity, number of years of teaching, the school in which they work, and how many male teachers work in the school. The remaining 27 items measured administrator and teacher perceptions of the influence of male teacher’s four constructs (role model, relationship, classroom management, and achievement). In order to provide unbiased results, survey data were collected on perceptions of administrators and teachers by gender on male teacher’s having classroom management skills, having relationships with students, being role models, and influencing student achievement.

A five-point scale was selected to allow participants a mid-range selection to avoid the interpretation of a relationship if one does not actually exist (Lietz, 2010).

Question order was adjusted to cluster items measuring each construct together in order to improve the validity of participants responses (Lietz, 2010). The response items, the measured constructs, and the source can be found in Appendix B. Permission to use the survey for this study was granted by Wood through an email exchange (Appendix K).

The influence of Bussey and Bandura's Social Cognitive Theory provided guidance for the a priori coding categories for performing content analysis of the Perceptions of Teacher Gender Influence (PTGI). All original scale items were organized into clusters outlined below that support Social Cognitive Theory's reciprocal triad of three factors: environmental, behavioral, and personal. Each of these influences was factored based on an administrator's or teacher's perception of male teachers in the three areas. For example, the environmental influence included classroom management and lack of male teachers to serve as role models at school. The behavioral influence included positive relationships with students. The personal factors included gender, race and ethnicity.

All predictor variables were considered independent variables. Participant position, gender, and years of experience were collected to examine the influence of each of the factors. All 29 items were clustered into four categories, and the remaining items were demographic questions. Table 1 below indicates the item used to measure teacher and administrator perceptions of male and female teachers in the areas of classroom discipline, role models, student achievement, and relationships.

Table 1

*Item Justification Analysis for “Perceptions of Teacher Gender Influence”*

Item #	Item	Measured Construct	Research	Research Question
1	Gender	Female	Frary, 2012; Johnson & Morgan, 2016; Wood, 2012	2
		Male	Frary, 2012; Johnson & Morgan, 2016; Wood, 2012	
	Position	Administrator	Johnson & Morgan, 2016	
		Teacher		
	Demographics	Race	Fray, 2012; Johnson & Morgan, 2016	
		Experience	Frary, 2012	
	Years teaching		Wood, 2012	
	Your school has enough male teachers		McGrath & Sinclair, 2013 Wood, 2012	
2/3	Female/male teachers make better role models for female students	Role Model	Estrada et al., 2015	2
4/5	Female/male teachers make better role models for male students	Role Model	Estrada et al., 2015	2
6/7	The female/male teachers I have worked with effectively serve their students as role models	Role Model	Estrada et al., 2015 Wood, 2012	2
8/9	The female/male teachers I have worked with have students that emulate the teacher's actions	Role Model	McGrath & Sinclair, 2013	2

10/11	The female/male teachers I have worked with use effective classroom management strategies	Classroom Management	Sharukat & Iqbal, 2012 Hjalmarsson & Löfdahl, 2014	3
12/13	The female/male teachers that I have worked with have organized structures and procedures in their classrooms	Classroom Management	Rimm-Kaufman et al., 2014 Wood, 2012	3
14/15	The female/male teachers that I have worked with explain and implement classroom routines and strategies to promote positive behavior	Classroom Management	Sharukat & Iqbal, 2012 Hjalmarsson & Löfdahl, 2014	3
16/17	The female/male teachers I have worked with are nurturing and sensitive to their students	Relationship	McCormick & O'Connor, 2014 Wood, 2012	2
18/19	The female/male teachers I have worked with are patient with their students	Relationship	McCormick & O'Connor, 2014 Wood, 2012	2



20/21	The female/male teachers I have worked with have less conflict with male students	Relationship	McCormick & O'Connor, 2014 Split et al., 2012	2
22/23	The female/male teachers that I have worked with are seen as caring to their students	Relationship	Odunaike et al., 2013	2
24/25	The female/male teachers that I have worked with produce positive student academic outcomes in reading	Achievement	Burusic et al., 2012	4
26/27	The female/male teachers that I have worked with produce high growth in reading on the Georgia Milestones	Achievement	Burusic et al., 2012	4
28/29	Students learn reading best from male/female teachers	Achievement	Parades, 2012	4

#### Data Collection

After permission was granted through granted by the Institutional Review Boards of both the school system and Columbus State University, the school principals were contacted. The researcher sent an email of introduction to each school principal

explaining the purpose of the pilot study, the process of data collection, and incentives. Incentives were a per school site drawing for a \$10.00 Starbucks gift card. The researcher then followed up the email by contacting the principals in person or on the phone to answer any questions or provide needed clarification. The email explained the mode and process of survey administration and that the school would not be named in the study results, and names were coded before data analysis began. The researcher explained that teachers and administrators may print their completion page of the survey and turn it in to the selected front office personnel. Teachers and administrators in the participating middle and high schools within the school district were then emailed a Qualtrics survey link explaining the purpose of the pilot study, which was to validate the instrument for use in the main study. The first screen of the Qualtrics survey explained the study and provided the informed consent form, through which participants could take the survey or refuse to answer the survey questions. Details of incentive to complete the survey were also provided. Teachers were able to complete the survey in approximately 15 minutes. A survey completion page appeared after responding to the last questions, which the teachers could print and use to enter the random drawing for a gift card as an incentive to complete the survey.

#### Data Analysis

The purpose of conducting the pilot study was to determine the reliability and validity of the survey instrument adapted from the Wood (2012) instrument. In order to accomplish this, both EFA and CFA were utilized. When the pilot survey data were complete, the data set was transferred from Qualtrics to Statistical Package for the Social

Sciences (SPSS) to conduct the statistical analysis of an EFA. The CFA of the data set was conducted in Linear Structural Relations (LISREL).

Exploratory factor analysis. Through the data analysis process of the EFA, relationships were identified and clustered according to common characteristics. The purpose of EFA was to understand the latent structure of the survey items representing the constructs of relationships, role models, classroom management, and student achievement. Based on the survey responses of administrators and teachers by their gender. EFA was used in the study to test the construct validity of the survey items and their alignment to the four constructs. EFA can validate both discriminant and convergent validity. Divergent, or discriminant, validity is the extent to which constructs or items are distinct from each other. Convergent validity is the extent to which constructs or items are similar to each other. Items that are supposed to measure a particular construct should have high inter-item correlations between them (representing convergent validity) and low correlations with items measuring some other distinct construct (representing discriminant validity; Campbell & Fiske, 1959). For the purpose of this study, the survey items measuring the four constructs (role models, relationships, classroom management, and achievement) should be distinct from each other, demonstrating discriminant validity, but the survey items measuring each construct should be similar to each other, demonstrating convergent validity. The EFA was conducted in five stages: *assumptions of normality, extraction of factors, criteria for extraction, rotational methods, and interpretation and labeling.*

*Assumptions of normality.* Descriptive statistics were determined, and the mean and standard deviation were examined for these items. Skewness and kurtosis were

examined for normal distribution, and histograms were reviewed for normality as well. Initially, all 27 PTGI items were examined and analyzed. Kaiser-Meyer-Olkin (KMO) and Bartlett's test of Sphericity was used as the criterion to evaluate the correlation between the construct or factors (role models, relationships, classroom management, and achievement), and sampling adequacy.

*Extraction of factors.* Maximum likelihood was used as the factor extraction method because "it allows for the computation of a wide range of indexes on model goodness of fit, permits statistical significance testing of factor loadings, calculates correlations among factors and confidence intervals" (Fabrigar, Wegener, MacCallum, & Strahan, 1999, p. 277). Principal component analysis is used as the factor extraction method when multivariate normality is severely violated (Fabrigar et al., 1999). Tests of total variance were run to examine the initial eigenvalues (variance in the survey item explained by each factor) as well as the sums of squared loadings (correlation of each item to the underlying factor). A factor matrix was run to evaluate the factor loadings. Factor is derived from EFA and represents the clustering of survey items together to represent a factor based on the inter-item correlations. Kaiser's rule was used to extract factors that have eigenvalues greater than one.

*Criteria for extraction.* Cumulative percentage of variance was run. A Scree plot graphically shows eigenvalues (on y-axis) plotted against number of factors (x-axis) in the form of a downward sloping curve. The point on the curve where the slope levels off indicates the number of factors to be retained for further analysis. Communalities were examined and interpreted, expressing the degree to which the factors explained the variance of the variables. The items for each construct (role model, classroom

management, relationships, and achievement) were examined for their variability in common with other items that were theoretically aligned to each factor. The initial set of communalities (proportion of each items' variance that is explained by the derived factors from EFA) and the extracted set were examined. An anti-image correlation matrix was created allowing the researcher to interpret the strength of correlation of the other items in the matrix. Items with a score of  $> .70$  were included in the factor analysis and indicated that the correlation matrix was factorable. Communalities were assessed, and values of above  $.30$  confirmed that the item shared some common variance with other items. These tests determined the number of items that were included in the factor analysis.

*Rotational methods.* Promax rotation was used as factors were correlated, and as it assumes non-zero correlations within the factors. A value of  $> .25$  was desired and Promax rotation of the factor loading matrix was run to determine which rotation was used in a final solution. The rotation that provided the factor structure with best fit was utilized. Factors with weak loadings of  $< .25$ , were reviewed to understand the relationship of each survey item to the underlying factor.

*Interpretation and labeling.* The factor matrix was used to interpret the way in which the survey items were aligned to the derived factors based on the administrator and teacher responses. The items were analyzed for correlation to similar factors. Cronbach alpha was used to evaluate the internal consistency of survey items (Tavakol & Dennick, 2011). When multiple scale items were used to measure a single factor, Cronbach's alpha determined the extent to which a set of items that are supposed to measure a particular construct aligned within the construct based on inter-item correlations (Tavakol

& Dennick, 2011). Cronbach's alpha was measured on a scale from 0 to 1. The closer the alpha value is to 1, the higher is the internal consistency of the items (Tavakol & Dennick, 2011). Values above .70 were considered to have good internal consistency (Tavokal & Dennick, 2011). Additional items were reviewed for elimination based on the Cronbach's alpha. Composite scores were formed for each of the four factors using the mean for the items which had their primary loadings on each factor. A factor matrix was used to evaluate which of the 29 survey items aligned to which extracted factor based on the factor loadings. This matrix included a correlation of each item with each factor.

The relevant factors were named based on the common attributes of items aligning within a particular factor. The name reflected the description of the primary construct so as to provide precision in the data analysis. All 29 items were evaluated based on communalities, inter-item correlation, factor loading, and Cronbach's alpha analysis to determine item validity and reliability.

Confirmatory factor analysis. CFA was completed after the results from the EFA had been established. The purpose of conducting a CFA was to validate the model derived by the EFA. CFA was used to apply theoretical constraints on the derived EFA model. CFA enabled the researcher to take the factors, as determined by the EFA, and test the model of the relationships between the observed variables and the latent constructs. The CFA data analysis was conducted using the LISEREL statistical program. CFA enabled the researcher to take the derived alignment from EFA, and test the model that depicts relationships between the observed items and the latent constructs (Suhr, 2006). The goal of the CFA was to discover the extent to which the theoretical

model fitted to the sample data set (Schumaker & Lomax, 2010). The use of CFA was a five-step process in which the researcher identified model specifications, identified the model, estimated the model, tested the model, and made modifications to the model (McDonald & Ringo Ho, 2002; Schumaker & Lomax, 2010). The data analysis was discussed through the mentioned five step process. Through these steps the model discovered through the EFA was able to be validated or modified to be used in main study.

*Model specifications.* The hypothesized model had four constructs (role models, classroom management, relationships, and achievement) and items measuring each construct. A theoretical model of the impact of teacher gender on male student achievement growth was developed through a combination of several theories. The main theory that drove the model was Social Cognitive Theory of Gender Development (Bussey & Bandura, 1999). The lens of the three reciprocal factors the three reciprocal factors that guide gender development was used to examine the perceptions of teachers and administrators of the relationship of male teachers to student achievement growth, thus impacting student learning outcomes through the four constructs (role models, relationships, classroom management and achievement).

*Model identification.* In this step, the model parameters are estimated through the data in the sample covariance matrix. The model can be under-identified, identified, or over-identified based on the sample covariance matrix (Schumaker & Lomax, 2010). Schumaker and Lomax (2010) defined the identifications as under-identified if one or more of the parameters were not uniquely determined due to lack of information in the covariance matrix. The model was just identified when all of the parameters were

uniquely determined, and there was just enough information in the covariance. The model was over-identified when there was more than one way of estimating the parameters due to information in the covariance matrix. The degrees of freedom were calculated, and the model was identified if the number of degrees of freedom had a positive value.

At the stage of model identification, preliminary descriptive statistical analysis was performed on the collected data. Missing data were identified and rectified using a list-wise deletion method if possible while maintaining a large enough sample size. The survey data were tested for normality by using two measures: skewness and kurtosis. The measure of skewness needed to be in the range of +1 or – 1 to be normal. Kurtosis needed to measure in the range of +3 or – 3 to be determined as a normal distribution (Tabachnick & Fidell, 2007).

*Model estimation.* Maximum likelihood was used as the model estimation procedure. The model estimation needed to be consistent with previously determined model constructs and be as close as possible to the empirical, or survey, data. The model-implied covariance matrix was compared to the empirical covariance matrix and the difference was determined. This difference was displayed in a matrix of residuals. Outliers were identified and considered for adjustments to the model. The model was assessed for fit, once it was identified.

*Model testing.* There were several statistical tests to determine the level of fit for the hypothesized model. Fit is the ability of the hypothesized model to be aligned with the observed survey data. The chi square test assesses the difference between the theoretical (expected) and empirical (observed) covariance matrices. If the level of the



chi square test is close to 0, this result indicated that there was little difference between the expected and observed covariance matrices, thereby indicating good model fit. Comparative Fit Index (CFI) was used to determine model fit as well. The CFI has a range of 0 to 1, where a value closer to 1 indicates a high model fit for the observed survey data (Suhr, 2006). Root Mean Square Error of Approximation (RMSEA) is used to measure the bias in the model specification. RMSEA values usually range from 0 to 1, with values less than .06 indicating good model specification (Suhr, 2006). Parameter estimates were examined when the test for model fit were within acceptable range. Standardized path coefficients are calculated by CFA, and these coefficients are similar to the standardized beta coefficients in a regression model. Each path in the CFA model represented one regression equation.

*Model modifications.* Modifications to the theoretical model were made based on the fit indices and re-specification of the paths between the items and constructs. The statistical significance of each of the parameters was examined. Factor loadings and error variances were evaluated. The correlation coefficient of each factor item was evaluated. Correlation coefficients of less than .40 were removed. After factors with lower correlations were removed, the model was run again and reevaluated for fit with the modifications made to the model.

## Findings

The purpose of conducting the pilot study was to establish the validity (convergent and discriminant) and reliability (internal consistency) of PTGI survey items by conducting EFA and CFA. Pilot survey data were split into 146 cases for the EFA and

149 cases for the CFA. Survey data were transferred from Qualtrics to SPSS to conduct EFA while CFA was conducted in LISREL.

Exploratory factor analysis. EFA was conducted to evaluate the relationships between survey items and the constructs/factors which helped to cluster the items within the constructs that had common characteristics within a particular factor. The purpose of EFA was to understand the factor latent structure of survey items based on the participants' responses. EFA was a useful process to test the construct validity of the PTGI. EFA is used to determine if two or more measures indicate a strong relationship with a single construct (Campbell & Fiske, 1959). For the purpose of this study, the four constructs (role models, relationships, classroom management, and achievement) would be distinct from each other, demonstrating discriminant validity, but the survey items measuring each construct would be similar to each other demonstrating convergent validity.

Both EFA and CFA were multivariate statistical procedures. The common purpose of both EFA and CFA is to establish construct validity of the instrument by demonstrating convergent and discriminant validity. The purpose for conducting EFA was to explain the underlying constructs that were being represented by the survey questions. Constructs cannot be directly observed or measured and should have items, variables, or questions that are legitimate indicators of the construct (e.g., leadership, self-esteem, mindset). Variables can be directly observed or measured (e.g., gender, ethnicity, test scores). The main purpose of EFA was to reduce the data items to a smaller number of factors or constructs in which the survey data items were measuring those factors. The principal difference between EFA and CFA is that the former is used to

understand the underlying factor structure of a data set without imposing theoretical constraints on the data, while the latter evaluates how well the theoretical model fits with the survey data. The EFA was conducted first to understand the factor structure of the PTGI items. Then, CFA was conducted using the four theoretical factors to evaluate how well the model fits with the data.

Survey data collected from female and male administrators and teachers in the Qualtrics platform were exported to SPSS. Once the file had been exported to SPSS, the data were divided into two parts. The data set for EFA contained two cases that were preview cases for the pilot survey and were deleted from the set before any analysis was conducted.

Bussey and Bandura's (1999) Social Cognitive Theory's three triads on influence work simultaneously to create the manner in which a child views and interacts with the world around them. This triad of influence impacts a student's self-efficacy (Bussey & Bandura, 1999). Self-efficacy was reported to be built through a child's successes or lack of success as they interacted with the world (Bussey & Bandura, 1999). Bussey and Bandura (1999) stated that a child's self-efficacy was influenced by environmental factors as well as their own personal belief system and ultimately influenced their motivation and behavioral choices. When the student found a good fit between themselves and their environment, this could result in a higher level of self-efficacy (Konings et al., 2014.) This motivation and approach to learning could in turn influence a child's growth in learning. Social Cognitive Theory (Bussey & Bandura, 1999) was interpreted in this study with the influence of Gender Schema Theory (Bem, 1983) and Stereotype Threat Theory (Steele & Aronson, 1995). The influence of male teachers on

students of either gender through Social Cognitive Theory was shown to occur through four constructs: Role models, classroom management, relationships, and achievement. The EFA attempted to explore the alignment of survey items to these four factors.

The EFA tested validity in two ways: convergent validity and discriminant validity. Convergent validity is the extent to which items representing a construct have high inter-item correlations. EFA results showed that eight survey items measuring the classroom management construct had high inter-item correlation, demonstrating convergent validity. Similarly, four items measuring student achievement, two items measuring student learning, four items measuring role models, and six items measuring the relationships construct demonstrated discriminant validity because the items measuring these constructs had low inter-item correlations. Hence, convergent validity is the extent to which items representing a construct have high inter-item correlation and are similar to each other. Discriminant validity is the extent to which survey items not representing the same construct had low inter-item correlations. Discriminant validity demonstrates the extent to which items not representing a construct are distinct from each other. It was important that survey items that are designed to measure a certain construct aligned under that construct by having high inter-item correlations. Conversely, all items that are not valid indicators of a construct should not align under that construct by having low inter-item correlations (Scherpenzeel & Saris,1997).

For the pilot study, the EFA data set was completed by 146 educators working in middle and high schools in the selected district. There were 137 (94%) teachers and 7 (5%) administrators (school principals). The remaining 2% consisted of respondents who

did not indicate their positions. There were 47 male respondents (32%) and 96 female respondents (66%). Three respondents preferred to not answer the question of gender.

There were 59 White (40.4 %), 58 Black (38.7 %), 9 Asian (6.2%), 3 Hispanic (2.1%), 7 Multi-Racial (4.8%), and 8 (5.5 %) respondents who indicated other race. Data on teaching experience indicated that there were 91 (62%) respondents who had 11 or more years of teaching experience. The second highest representation was teachers with 0 to 3 years of teaching experience, which represented 25 (17.1 %) of the respondents. Teachers with 4 to 7 years of experience represented 14 (9.6 %) of the respondents. Teachers with 8 to 11 years of experience represented 15 (10.3%) respondents in the survey.

Tabachnick and Fidell (2007) indicated that there were several assumptions that needed to be met in order to conduct EFA. First, all variables or items should be measured on a continuous scale. Second, there should be at least five observations per item with a correlation of at least .30 required between the items. Third, the sample should be homogenous, meaning that participants' characteristics should not have large variation. The last assumption was that there should be no significant outliers present. All the assumptions were tested and met.

Descriptive statistics were determined, and the mean and standard deviation were examined. The values for skewness and kurtosis between -2.0 and +2.0 was considered acceptable to have a normal distribution (George & Mallery, 2010). Some researchers also indicated that skewness values between -1.0 and +1.0 also indicate normal distribution (Tabachnick & Fidell, 2007). Skewness indicates the asymmetry in the distribution of scores and influences normality more than kurtosis. All the items had

skewness values between -1.0 and +1.0. Kurtosis represents the peaks in a distribution. Kurtosis values for all items except two were in the range of -2.0 and + 2.0. Standard deviation of most survey items was less than 1.0. Examination of standard deviations and skewness indicated that there was homogeneity in survey responses for each item. Q-Q plots and histograms were used to assess normality in the score distribution of all items. There were no significant outliers in the data set which was confirmed by low standard deviation values for each item. The descriptive statistic of each item's responses was presented in Table 2.

Table 2

*Descriptive Statistics of Perception of Teacher Gender Influence*

Item	<i>M</i>	<i>SD</i>	<i>N</i>	Skewness	Kurtosis
Female teachers make better role models for female students	3.1655	0.86614	145	-0.068	0.362
Male teachers make better role models for female students	2.8069	0.75734	145	0.241	1.620
Female teachers make better role models for male students	2.6897	0.67203	145	-0.235	0.895
Male teachers make better role models for male students	3.6483	0.93935	145	-0.311	-0.302
The female teachers I have worked with effectively serve their students as role models	3.9862	0.72635	145	-0.420	0.127
The male teachers I have worked with effectively serve their students as role models	3.9586	0.71566	145	-0.400	0.188
The female teachers I have worked with have students that emulate the teacher's actions	3.5862	0.69308	145	-0.124	-0.146
The male teachers I have worked with have students that emulate the teacher's actions	3.5517	0.73533	145	-0.022	-0.264

Item	<i>M</i>	<i>SD</i>	<i>N</i>	Skewness	Kurtosis
The female teachers I have worked with use effective classroom management strategies	3.9310	0.71351	145	-0.480	0.430
The male teachers I have worked with use effective classroom management strategies	3.9310	0.68369	145	-0.177	-0.152
The female teachers that I have worked with have organized structures and procedures in their classrooms	4.0897	0.66580	145	-0.245	-0.205
The male teachers that I have worked with have organized structures and procedures in their classrooms	3.8759	0.76270	145	-0.643	1.004
The female teachers that I have worked with establish clear expectations for classroom behavior	4.0483	0.64905	145	-0.201	-0.059
The male teachers that I have worked with establish clear expectations for classroom behavior	4.0069	0.74997	145	-0.312	-0.375
The female teachers that I have worked with explain and implement classroom routines and strategies to promote positive behavior	4.0621	0.63706	145	-0.052	-0.509
The male teachers that I have worked with explain and implement classroom routines and strategies to promote positive behavior	3.9103	0.77206	145	-0.670	0.994
The female teachers I have worked with are nurturing and sensitive to their students	3.9310	0.72318	145	-0.119	-0.520
The male teachers I have worked with are nurturing and sensitive to their students	3.6759	0.74426	145	-0.008	-0.363
The female teachers I have worked with are patient with their students	3.8759	0.76270	145	-0.643	1.517

Item	<i>M</i>	<i>SD</i>	<i>N</i>	Skewness	Kurtosis
The male teachers I have worked with are patient with their students	3.8690	0.66932	145	-0.125	-0.123
The female teachers I have worked with have less conflict with male students	2.9931	0.87794	145	0.326	0.200
The male teachers I have worked with have less conflict with male students	3.3655	0.76207	145	0.226	0.298
The female teachers that I have worked with are seen as caring to their students	3.7862	0.74709	145	-0.440	0.711
The male teachers that I have worked with are seen as caring to their students	3.6690	0.71739	145	0.131	-0.423
The female teachers that I have worked with produce positive student academic outcomes in reading	3.6897	0.67203	145	0.322	-0.603
The male teachers that I have worked with produce positive student academic outcomes in reading	3.4483	0.69653	145	0.500	-0.052
The female teachers that I have worked with produce high growth in reading on the Georgia Milestones	3.6000	0.76739	145	0.452	-0.614
The male teachers that I have worked with produce high growth in reading on the Georgia Milestones	3.4138	0.69308	145	0.885	0.244
Students learn reading best from female teachers	3.0207	0.60632	145	-0.199	4.296
Students learn reading best from male teachers	2.9241	0.56621	145	-1.180	5.401

Initially, all 31 survey items were examined and analyzed. KMO is a measure of the extent to which the data were appropriate for Factor Analysis. The test measured sampling adequacy for each item in the exploratory factor analysis model and for the



whole model. KMO values ranged between 0 and 1. The following general ranges were applied when interpreting KMO statistic (Cerny & Kaiser, 1977).

- KMO values between .80 and 1 indicate the sampling is adequate.
- KMO values less than .60 indicate the sampling is not adequate.
- KMO values close to 0 indicate several partial correlations that are problematic for factor analysis.

The KMO measure of sample adequacy indicated a value of .80 demonstrating that the sample was adequate for the EFA.

Bartlett's Test of Sphericity tests the null hypothesis that the correlation matrix was an identity matrix. In an identity matrix, all diagonal elements are one and all off diagonal elements were 0. A statistically significant test (significance value less than .05) will indicate that the correlation matrix derived from the data were suitable for conducting EFA (Cerny & Kaiser, 1977). Bartlett's test of sphericity was run with a significance level of .000 indicating that a factor analysis was useful with the data.

*Rotational methods.* Promax rotation was used as factors were correlated and assumed non-zero correlations within the factors. A value of greater than .25 was desirable. Factors with loading of less than .25 were removed. All the factor loadings or correlations were reviewed to understand the relationship of each survey item to the underlying factor.

*Communalities.* Represents the common variance that was shared between the factors with the given items in the EFA model. Communalities are proportions of each item's variance that are explained by the derived factors. Communalities are similar to multiple  $R^2$  in a regression model. An item may have problems to load significantly on a

factor if the communality value is less than .40 (Tabachnick & Fidell, 2007). All survey items had communality values greater than .40. The only item which had a communality value less than .40 was “Your school has enough male teachers.” This item was theoretically not related to any of the underlying constructs - role models, classroom management, relationships, and achievement. All other items had communality values greater than .40.

*Extraction of factors.* Maximum likelihood was used as the factor extraction method because the items in the data set were relatively normally distributed. Maximum likelihood was used as the estimation method because it helped to calculate goodness of fit index values of EFA model, allowed statistical significance testing of correlations, and helped to maximize the probability of obtaining a statistical model that would converge with the data in the minimum number of iterations. Principal components analysis is generally utilized with data having non-normal distributions (Caughlin, 2013). Kaiser’s rule and scree plot were used to determine the number of factors to be retained depending on the Eigen values. Kaiser’s rule states that a cut-off value of 1.0 is usually used to determine the number of factors to be retained. Tests of total variance were run to examine the initial eigenvalues as well as the sums of squared loadings. A scree plot was used to graphically determine the number of factors to be retained. The x-axis represented the number of factors and the y-axis represented eigenvalue. Number of factors retained was the point on the graph where the slope of the downward curve flattened or leveled (Tabachnick & Fidell, 2007). Close examination of the slope indicated a continued variation in slope in factors one through six. However, the slope began to stabilize after factor six. The slope of the line began to normalize after eight factors. The first eight

factors were extracted using Kaiser's rule in combination with scree plot (Table 3). These eight factors together explained approximately 72.015% of the total variance in the factor scores.

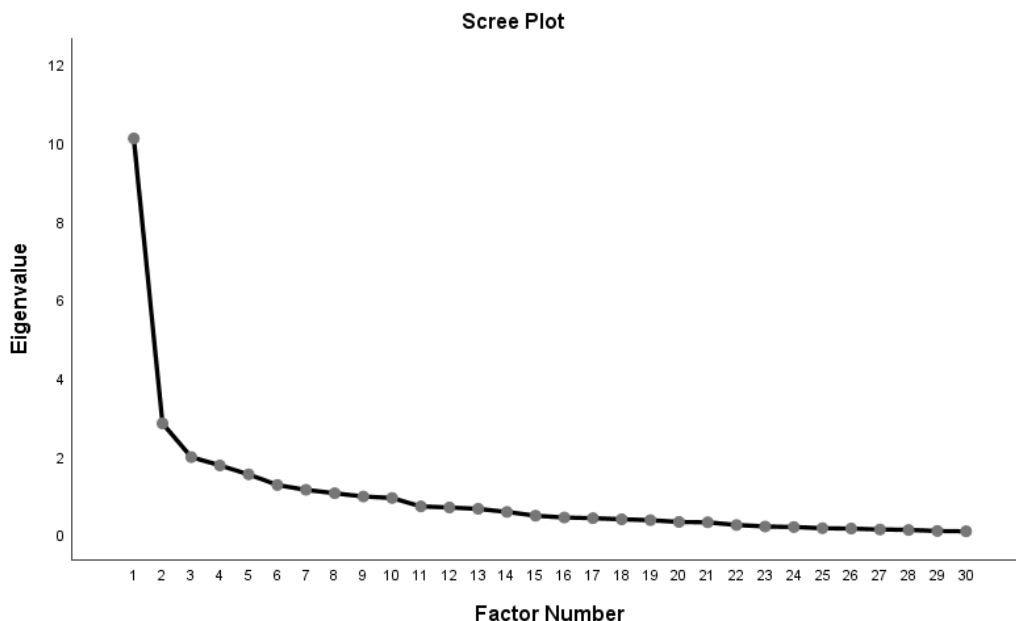
Table 3

*Total Variance Explained for Factors of Perceptions of Teacher Gender Influence*

Factor	<u>Initial Eigen values</u>			<u>Extraction Sums of Squared Loadings</u>			Rotation Sums of Squared Loadings
	Total	% of Variance	Cum %	Total	% of Variance	Cum %	
1	10.103	33.676	33.676	5.535	18.451	18.451	7.925
2	2.826	9.422	43.098	0.909	3.031	21.483	6.613
3	1.967	6.558	49.656	2.198	7.325	28.808	2.334
4	1.755	5.849	55.505	5.784	19.281	48.089	4.646
5	1.524	5.081	60.586	1.470	4.899	52.988	3.676
6	1.255	4.184	64.770	1.017	3.390	56.378	3.836
7	1.130	3.768	68.538	0.691	2.304	58.682	3.555
8	1.043	3.477	72.015	0.826	2.752	61.435	5.655
9	0.959	3.198	75.212				
10	0.922	3.075	78.287				
11	0.707	2.355	80.642				
12	0.679	2.264	82.905				
13	0.645	2.149	85.055				
14	0.566	1.887	86.942				
15	0.470	1.566	88.508				
16	0.423	1.409	89.917				

Factor	<u>Initial Eigen values</u>			<u>Extraction Sums of Squared Loadings</u>			Rotation Sums of Squared Loadings
	Total	% of Variance	Cum %	Total	% of Variance	Cum %	
17	0.406	1.354	91.270				
18	0.379	1.263	92.533				
19	0.354	1.181	93.714				
20	0.311	1.037	94.751				
21	0.301	1.003	95.753				
22	0.233	0.776	96.529				
23	0.195	0.649	97.177				
24	0.180	0.601	97.778				
25	0.149	0.498	98.276				
26	0.141	0.4070	98.747				
27	0.118	0.393	99.139				
28	0.106	0.354	99.493				
29	0.080	0.267	99.760				
30	0.072	0.240	100.00				

Cum %=Cumulative percent



*Figure 3.* Scree Plot of Perceptions of Teacher Gender Influence Factor Alignment.

A factor correlation matrix was run, which displayed the correlation between the eight extracted factors to evaluate convergent and discriminant validity. The eight factors were analyzed (Table 4) using the factor correlation matrix. Factor 3 was not highly correlated with any of the other factors, thus demonstrating high discriminant validity. Similarly, Factor 1 had low correlation with Factor 5. All the relationship items aligned under Factor 4. Factors 1, 2, 6, and 8 were highly correlated. Factor 2 was eliminated because it correlated highly with Factor 1, which indicated that the factor was redundant and similar to Factor 1. Factors 6, 7 and 8 did not consistently align with the theoretical constructs or factors derived from Kaiser's rule and scree plot and had low factor loadings. Hence, Factors 2, 6, 7, and 8 were removed. Four factors were retained.

Table 4

*Factor Correlation Matrix for Perceptions of Teacher Influence Survey*

Factor	1	2	3	4	5	6	7	8
1	1.000							
2	.571	1.000						
3	-.130	-.085	1.000					
4	.404	.371	-.086	1.000				
5	.336	.444	.013	.356	1.000			
6	.478	.293	-.036	.340	.144	1.000		
7	.334	.349	-.027	.485	.236	.356	1.000	
8	.529	.628	-.084	.461	.376	.232	.274	1.000

Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization

Factor matrix was used to see the correlation of each factor with each item (Table 5). A high correlation or factor loading (correlation of each item to underlying factor) between factor and item indicated that the item was an indicator of that factor. Only the high correlations between the factor and each item that was also theoretically meaningful were retained. Negative correlations and/or low correlations were removed from the factor matrix table for clarity and to show the group of items that aligned under a given factor. Results of item and factor alignment were then compared to theoretical alignment of each item.

Role models. This factor measured perceptions of administrators and teachers towards female or male teachers as role models. There were eight items that were

hypothesized to align under this factor. These items were "Female teachers make better role models for female students"; "Male teachers make better role models for female students"; "Female teachers make better role models for male students"; "Male teachers make better role models for male students"; "The female teachers I have worked with effectively serve their students as role models"; "The male teachers I have worked with effectively serve their students as role models"; "The female teachers I have worked with have students that emulate the teachers actions"; and "The male teachers I have worked with have students that emulate the teachers actions." The theoretical construct of Teachers as role models corresponded to Factors 3 and 4 in the factor matrix. Although two of the items, "Male teachers make better role models for female students" and "Female teachers make better role models for female students," aligned with Factor 4, there was a greater consistency through all items to align under Factor 3. The two items that varied in alignment under the construct of role model two items were "The female teachers I have worked with have students emulate the teacher's actions" and "The male teachers I have worked with have students emulate the teacher's actions." These two items used the word "emulate" that may not be used commonly with all educational professionals. Although the question was used to measure the role model construct, the word emulate can be perceived as directly copying behaviors, whereas the phrase role model has the implication of wanting to be "like" the person. Teachers as making better role models and teachers effectively serving their students as role models were perceived slightly differently. Overall, the factor matrix results indicated that two factors were present under role models: Emulate Teacher Behavior and Teacher as Role model. All eight items were combined under Factor 3 to represent one factor of role model for CFA.

Classroom management. This factor measures perceptions of administrators and teachers towards female or male teachers as classroom managers. There were 10 items that were hypothesized to align under this factor. These items were "The female teachers I have worked with use effective classroom management strategies"; "The male teachers I have worked with use effective classroom management strategies"; "The female teachers I have worked with can organize classroom space to enable students access to materials, equipment and other resources"; "The male teachers I have worked with can organize classroom space to enable students access to materials, equipment and other resources"; "The female teachers I have worked with establish clear expectations for classroom behavior"; "The male teachers I have worked with establish clear expectations for classroom behavior"; "The female teachers I have worked with explain and implement classroom routines and strategies to promote positive student behavior"; "The male teachers I have worked with explain and implement classroom routines and strategies to promote positive student behavior"; "The female teachers I have worked with are nurturing and sensitive to their students"; "The male teachers I have worked with are nurturing and sensitive to their students". The 10 items representing this theoretical construct of teachers as classroom managers consistently aligned under factor four. Hence, Factor 4 can be clearly labeled as teachers as classroom managers.

Relationships. This factor measured perceptions of administrators and teachers towards female or male teachers as being caring and sensitive to student needs and resolving conflicts. There were eight items that were hypothesized to align under this factor "The female teachers I have worked with are nurturing and sensitive to their students"; "The male teachers I have worked with are nurturing and sensitive to their



students"; "The female teachers I have worked with are patient with their students"; "The male teachers I have worked with are patient with their students"; "The female teachers I have worked with have less conflict with male students"; "The male teachers I have worked with have less conflict with male students"; "The female teachers I have worked with are seen as caring by their students"; and "The male teachers I have worked with are seen as caring by their students." The items measuring relationships construct had factor loadings in Factors 1, 2, 3, and 4. Examination of factor loadings of four items "The male teachers I have worked with are nurturing and sensitive to their students"; "The female teachers I have worked with are nurturing and sensitive to their students"; "The male teachers I have worked with are patient with their students"; "The male teachers I have worked with are seen as caring to their students" were similar for Factor 1 and Factor 4. Hence, these four items were clustered under Factor 1 because Factor 3 had items measuring role model construct. The items that represented the relationships construct had a divided alignment between two factors. There were two items measuring conflict: "The female teachers I have worked with have less conflict with male students" and "The male teachers I have worked with have less conflict with male students." The other two items, "The female teachers I have worked with are nurturing and sensitive to their students" and "The female teachers I have worked with are seen as caring to their students", were grouped under Factor 1 because they measured the sensitivity and caring aspect of the relationships construct. The eight items were combined under Factor 3 to represent one factor of relationships for CFA. This difference could be a result of an interpretation of the definition of conflict and what constitutes a conflict between a student and a teacher. Conflict does not have to be limited to disrespectful verbal

exchange but could simply be refusal to comply. These findings indicated that the construct of relationships had two different aspects: Sensitivity/Caring and Conflict.

Student achievement. This factor measured the perceptions of administrators and teachers towards female or male teachers' contributions towards student achievement. There were eight items that were hypothesized to align under this factor. These items were "The female teachers I have worked with are seen as caring by their students"; "The male teachers I have worked with are seen as caring by their students"; "The female teachers I have worked with produced positive student outcomes in reading"; "The male teachers I have worked with produced positive student outcomes in reading"; "The female teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment"; "The male teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment"; "Students learn reading best from female teachers"; and "Students learn reading best from male teachers." The items measuring perceptions of teachers influence on student achievement mostly aligned with Factor 1. The exceptions to that alignment were two items "Students learn reading best from female teachers" and "Students learn reading best from male teachers". This difference could be attributed to the possibility that student achievement was perceived as a different construct than student learning by participants. In both female and male versions, the factor loadings aligned with Factor 3 (role models). This alignment could stem from the perception that learning happens in the best manner when students consider teachers as their role models. All other items had consistent alignment with Factor 1. These findings indicate that there were two factors being measured under the construct of achievement: Academic Achievement and Learning. One reason for the

alignment of four items and two items with Factor 1 and Factor 3 respectively was that survey respondents might have perceived achievement to be related with relationships (Factor 1) and classroom management (Factor 4) as both these factors play a vital role in student achievement. The two aspects of student achievement construct (academic achievement and student learning) were modeled as separate factors in CFA.

Table 5

*Factor Matrix of Perceptions of Teacher Gender Influence Survey Items*

Item	Factors							
	1	2	3	4	5	6	7	8
Female teachers make better role models for female students			.341					
Male teachers make better role models for female students			.102					
Female teachers make better role models for male students			.281					
Male teachers make better role models for male students			.229					
The female teachers I have worked with effectively serve their students as role models				.558				
The male teachers I have worked with effectively serve their students as role models				.555				
The female teachers I have worked with have students that emulate the teacher's actions					.717			
The male teachers I have worked with have students that emulate the teacher's actions					.633			
The female teachers I have worked with use effective classroom management strategies				.607				

Item	Factors							
	1	2	3	4	5	6	7	8
The male teachers I have worked with use effective classroom management strategies				.678				
The female teachers that I have worked with have organized structures and procedures in their classrooms				.616				
The male teachers that I have worked with have organized structures and procedures in their classrooms				.583				
The female teachers that I have worked with establish clear expectations for classroom behavior				.668				
The male teachers that I have worked with establish clear expectations for classroom behavior				.744				
The female teachers that I have worked with explain and implement classroom routines and strategies to promote positive behavior				.709				
The male teachers that I have worked with explain and implement classroom routines and strategies to promote positive behavior				.613				
The female teachers I have worked with are nurturing and sensitive to their students				.598				
The male teachers I have worked with are nurturing and sensitive to their students				.426				
The female teachers I have worked with are patient with their students				.424				
The male teachers I have worked with are patient with their students				.548				
The female teachers I have worked with have less conflict with male students			.247					

Item	Factors							
	1	2	3	4	5	6	7	8
The male teachers I have worked with have less conflict with male students			.351					
The female teachers that I have worked with are seen as caring to their students				.481				
The male teachers that I have worked with are seen as caring to their students				.473				
The female teachers that I have worked with produce positive student academic outcomes in reading	.809							
The male teachers that I have worked with produce positive student academic outcomes in reading	.813							
The female teachers that I have worked with produce high growth in reading on the Georgia Milestones	.814							
The male teachers that I have worked with produce high growth in reading on the Georgia Milestones	.770							
Students learn reading best from female teachers				.965				
Students learn reading best from male teachers				.754				

Negative factor loadings are not omitted. Factor loadings in italics represents the numbers taken into consideration when assessing the alignment of items within factors.

Items 1-8 = Relationships

Items 9-16 = Classroom Management

Items 17-24 = Relationships

Items 25-30 = Student Achievement

Items 25-28 = Student Academic Achievement

Items 29-30 = Student Learning

*Interpretation and labeling.* The structure matrix was used to interpret the way in which the participants responded to the survey items. The theoretical constructs were used to evaluate factor loadings in the structure matrix. The construct of role model was

consistent in Factor 3 with the exception of effective role models, which was spread between Factor 1 and Factor 2. The concept of emulation within role model had the highest factor loading under Factor 5. Classroom management aligned mostly with Factor 1. Females using effective strategies aligned with Factor 8, and females promoting positive behavior loaded under Factor 2. The items measuring the construct of relationships were mostly under Factor 1 and Factor 2. Conflicts for male teacher and female teacher had the highest factor loading under Factor 3, with males being caring having the highest loading in Factor 7. Achievement was split into three distinct factors: Reading achievement (Factor 4), milestones growth (Factor 6), and learning (Factor 3).

#### Reliability Analysis

The internal consistency of the items representing each of the four Factors was determined using Cronbach's alpha (Tavakol, & Dennick, 2011). Cronbach's alpha determined the similarity between the items based on inter-item correlations and the extent to which those correlated items can reliably measure a factor when multiple scale items are used to measure a single factor (Tavakol & Dennick, 2011). Cronbach's alpha is measured on a scale from 0 to 1. The closer the alpha value was to 1, the closer the items were related, thus demonstrating high internal consistency (Tavakol & Dennick, 2011). Values above .70 were considered to have had good internal consistency (Tavakol & Dennick, 2011).

Cronbach's alpha was run for each of the newly established factor alignments with items identified within that factor (Table 6). Although the Cronbach's alpha was higher for some of the new factor alignment of items, in other cases it was lower than acceptable. Cronbach's alpha was .67 when all eight items measuring teachers' as role

models were analyzed. Cronbach's alpha was .59 when the four items measuring teachers as role models were analyzed. Cronbach's alpha was .86 when the two items measuring teachers as effective role models were analyzed. Cronbach's alpha was .83 for the second factor of emulating role model. Most items had corrected item-total correlation measures of .30 or higher and were included.

Classroom management was measured through eight items. The Cronbach's alpha was .926. All items had an item-total correlation measure of .60 or higher, and all items were included. The value of the overall score and the individual item scores indicated extremely strong reliability of the items to measure the theoretical construct of classroom management.

The relationships construct was measured through eight items with a Cronbach's alpha of .774. Most items had an item-total correlation measure of higher than .50 and should be included. The exceptions were two items: "The female teachers I have worked with have more conflict with male students" and "The male teachers I have worked with have more conflict with male students." These two items were seen as a separate factor of relationships and the Cronbach's alpha was .242. This value indicated that the items measuring conflict should potentially be removed from the instrument. The two conflict items were tested in the CFA model to further justify the need to remove these items from the survey.

The achievement construct was measured by six items with a Cronbach alpha of .66. Achievement was divided into two separate factors, the first being achievement with a Cronbach's alpha of .84. The second factor of achievement was that of learning with a

value of .87. Most items had an item-total correlation measure between .44 and .66 and should be included.

Table 6

*Reliability Comparison Theoretical vs. Extracted Factors with Cronbach's Alpha*

Item	Theoretical Factor	Cronbach's Alpha	Extracted Factors
Female teachers make better role models for female students	Role Model		1
Male teachers make better role models for female students	Role Model		1
Female teachers make better role models for male students	Role Model		1
Male teachers make better role models for male students	Role Model		1
The female teachers I have worked with effectively serve their students as role models	Role Model	.673	2a
The male teachers I have worked with effectively serve their students as role models	Role Model		2a
The female teachers I have worked with have students that emulate the teacher's actions	Role Model		2b
The male teachers I have worked with have students that emulate the teacher's actions	Role Model		2b
The female teachers I have worked with use effective classroom management strategies	Classroom Management		3
The male teachers I have worked with use effective classroom management strategies	Classroom Management		3



Item	Theoretical Factor	Cronbach's Alpha	Extracted Factors
The female teachers that I have worked with have organized structures and procedures in their classrooms	Classroom Management		3
The male teachers that I have worked with have organized structures and procedures in their classrooms	Classroom Management		3
The female teachers that I have worked with establish clear expectations for classroom behavior	Classroom Management		3
The male teachers that I have worked with establish clear expectations for classroom behavior	Classroom Management		3
The female teachers that I have worked with explain and implement classroom routines and strategies to promote positive behavior	Classroom Management		3
The male teachers that I have worked with explain and implement classroom routines and strategies to promote positive behavior	Classroom Management	.926	3
The female teachers I have worked with are nurturing and sensitive to their students	Relationship		4
The male teachers I have worked with are nurturing and sensitive to their students	Relationship		4
The female teachers I have worked with are patient with their students	Relationship		4
The male teachers I have worked with are patient with their students	Relationship	.774	4
The female teachers that I have worked with are seen as caring to their students	Relationship		4

Item	Theoretical Factor	Cronbach's Alpha	Extracted Factors
The male teachers that I have worked with are seen as caring to their students	Relationship		4
The female teachers I have worked with have less conflict with male students	Relationship		5
The male teachers I have worked with have less conflict with male students	Relationship		5
The female teachers that I have worked with produce positive student academic outcomes in reading	Achievement		6
The male teachers that I have worked with produce positive student academic outcomes in reading	Achievement	.659	6
The female teachers that I have worked with produce high growth in reading on the Georgia Milestones	Achievement		6
The male teachers that I have worked with produce high growth in reading on the Georgia Milestones	Achievement		6
Students learn reading best from female teachers	Achievement		7
Students learn reading best from male teachers	Achievement		7

The purpose of conducting an EFA on the survey instrument was to ensure that survey items were measuring the theoretical constructs or factors in a valid and reliable manner. There was a higher level of reliability and validity when factor alignment from the EFA and CFA was used. Eight factors were extracted, which represented 72.015% of the variance in survey item scores. Using the factor correlation matrix, divergent and convergent validity of factors was determined. Cronbach's alpha was run for the four theoretical constructs, as well as the unique set of seven extracted factors. Overall,

Cronbach's alpha values were consistently higher for the new factor alignment and values were internally consistent. The survey overall was found to be valid by examining the results from factor matrix, structure matrix, scree plot, and factor correlation. Cronbach's alpha values demonstrated reliability among the items measuring each construct. The original theoretical structure and the new factor alignment structure using the EFA results were evaluated through the process of the CFA.

#### Confirmatory Factor Analysis

CFA was completed after the EFA. The purpose of conducting a CFA was to apply theoretical constraints to the four constructs and the items representing them, and then fit the theoretical model to the empirical or survey data. The CFA data analysis was conducted using the LISREL and utilized the covariance matrix. CFA was completed using a five-step process in which the researcher examined model specification, model identification, model estimation, model testing, and model modifications to the model (McDonald & Ringo Ho, 2002; Schumaker & Lomax, 2010). The hypothesized (theoretical model) was fitted to the observed, or survey, data and model fit was evaluated using fit indices.

For the pilot study, the CFA data set was completed by 148 educators working in middle and high schools in the selected district. There were 140 (93.3%) teachers and eight (5.3%) administrators (school principals). The remaining 2% consisted of respondents who did not indicate their position. There were 33 male respondents (22%), and 114 female respondents (76%). Three respondents did not report gender.

There were 71 White (47.3 %), 66 Black (44 %), 6 Asian (4%), 3 Hispanic (2%), 2 Multi-Racial (1.3%), and 3 (2 %) who indicated other. Data on teaching experience

indicated that there were 75 (75%) respondents who had 11 or more years of teaching experience, 33 (22%) respondents who had 0 to 3 years of teaching experience, 22 (14.7%) teachers having 4 to 7 years teaching experience, and 19 (12.7%) teachers having 8 to 11 years teaching experience.

*Model specification.* Two models were evaluated through the CFA: The Theoretical Model and the Adjusted Model developed through modifications in LISREL. The hypothesized model had four constructs (role models, classroom management, relationships, and achievement) and items measuring each construct. A theoretical model of the impact of teacher gender on male student achievement growth was developed through a combination of several theories. The main theory that drove the model was the Social Cognitive Theory of Gender Development (Bussey & Bandura, 1999). The perceptions of teachers and administrators of the relationship of male teachers to student achievement growth was examined through the lens of three reciprocal factors measured in four constructs (role models, classroom management, and relationships) that guide gender development, thus impacting student learning outcomes. The measurement model showed the causal relationships between the latent constructs and the indicators or items measuring the construct. Structural model that shows the causal relationships between endogenous (independent variables) and exogenous (dependent variables) is not assessed in CFA model. The constructs of role model, classroom management, and relationships were each measured by eight items, and academic achievement was measured by six items.

*Model identification.* The next step in CFA was to identify the model before the parameters could be estimated. Both the initial theoretical model and the revised model

(after making the modifications) were just-identified, indicating that all of the model parameters were uniquely determined and there was just enough information in the sample covariance matrix derived from survey data.

*Model estimation.* Maximum likelihood was used for model estimations based on the theoretical model specifications (Table 7). Fit indices were consulted to assess the theoretical model fit to the empirical, or survey data. Chi square value was used to test the differences between model-derived covariance matrix and the empirical covariance matrix. A small chi square value indicates less discrepancy between the two covariance matrices. The CFI, AGFI, NFI, and RMSEA were used to evaluate fit of theoretical model to the empirical or survey data.

Table 7

*Confirmatory Factor Analysis Path Coefficients*

Item	Theoretical Model Coefficient	Final Revised Model Coefficient
Role 1	.0924	.191
Role 2	.0177	.0104
Role 3	-.0293	.106
Role 4	.135	.0425
Role 5	.607	.0602
Role 6	.634	.633
Role 7	.331	.313
Role 8	.359	.351
Class 1	.528	.535
Class 2	.545	.563

Class 3	.517	.523
Class 4	.561	.569
Class 5	.533	.530
Class 6	.640	.632
Class 7	.526	.538
Class 8	.563	.580
Real 1	.568	.536
Real 2	.513	.207
Real 3	.551	.549
Real 4	.553	.568
Real 5	.135	Excluded
Real 6	.0522	Excluded
Real 7	.449	.516
Real 8	.516	.534
Acad 1	.553	.557
Acad 2	.471	.526
Acad 3	.596	.583
Acad 4	.527	.490
Acad 5	.0806	.600
Acad 6	.0984	.440
<b>Model Fit Indices</b>	<b>Theoretical Model</b>	<b>Final Revised Model</b>
CFI	.654	.956
AGFI	.637	.867

NFI	.575	.942
Chi Square	3149.341	406.94
RMSEA	.127	.0529

CFI-Comparative Fit Index

AGFI-Adjusted Goodness of Fit Index

NFI-Normed Fit Index

Chi Square-Chi Square for Independence Model

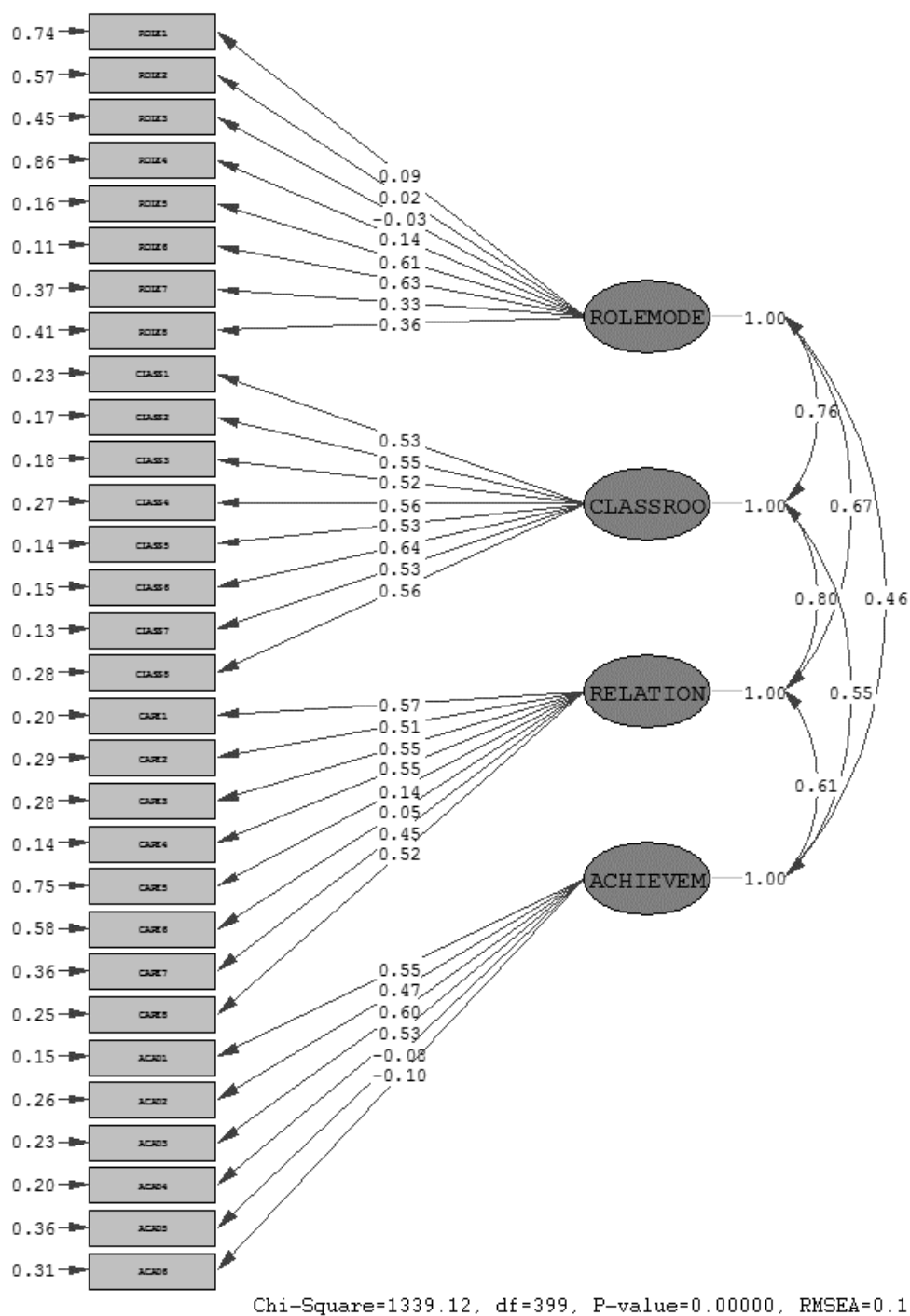
RMSEA-Root Mean Square Error of Approximation

*Model testing.* In the theoretical model, each item was aligned to the designated theoretical factor. The entire model was then tested with a path coefficient which was created using a regression equation for each item to the construct it was measuring. The visual of the theoretical CFA model is displayed. The visual of the model testing was represented in Figure 4 and Figure 5 for the theoretical model and the adjusted model, respectively. In each figure, the straight lines represented paths between the survey item and the theoretical, or modified, construct (Schreiber, Nora, Stage, Barlow, & King, 2006). Each path represented a regression equation and generated a unique path coefficient or beta weight. Variables (survey items) were represented by rectangles. The curved lines in the figure represented the correlation between the theoretical constructs in Figure 4, as well as the correlations between the variables and modified constructs in Figure 5.

Table 7 provides information of path coefficients for the initial theoretical model and the revised model along with the fit indices of both models. Path coefficients are similar to standardized regression coefficients in a linear regression model. The two items measuring conflict within relationships domain were removed because the items were creating issues with convergence of theoretical model. Moreover, the internal consistency

of these two items yielded a Cronbach's alpha of .242, thereby providing additional support to remove these items from the analysis. There were several fit indices that were used to determine the level of fit for the hypothesized model. The chi square test evaluated the difference between the expected (theoretical model) and observed (data) covariance matrices. If the chi square test was close to zero, chi square measure indicates that there was little difference between the expected and observed covariance matrices. The chi square for the theoretical model was 1339.12, which was considered very high (Bentler & Bonnett, 1980). CFI was used to determine model fit as well. In this measure, the CFI has a range of 0 to 1, with a value closer to 1 indicating a higher level of model fit to the empirical or survey data. A cut-off of greater than .90 indicates a good model fit (Hu & Bentler, 1999). The CFI for the theoretical model was .654, which was far below the cut-off values of greater than .90 to indicate an acceptable fit. The NFI was also evaluated and the theoretical model had a value of .575, which was significantly lower than the accepted value of greater than .90 (Hooper, Caughlan, & Mullen, 2008). RMSEA was used to evaluate the error during model specification. RMSEA values usually range from 0 to 1 with a smaller value indicating good model fit. A value of .06 is also considered to be good fit (Hu & Bentler, 1999). Some researchers also recommend RMSEA values less than .08 as acceptable fit (Hooper et al., 2008). The RMSEA value was .127 was too high to be considered an acceptable fit. AGFI should be higher than .90 (Hu & Bentler, 1999). Theoretical model had .637 GFI, which was less than .90. Overall, all of the fit indices indicate that hypothesized CFA model had a poor fit for the data.





CARE: Relationships (8 items)  
 ROLE = Role Model (8 items)  
 CLASS = Classroom Management (7 items)  
 ACAD = Academic Achievement (6 items)

Figure 4. Confirmatory Factor Analysis Theoretical Model.

*Model modifications.* The theoretical model did not fit the empirical data.

Modifications were made and a revised model was tested. In the revised model, two items that measured relationship conflict were removed from the instrument to be used in the final study. The statistical significance of each of the parameters of the revised CFA model was reexamined.

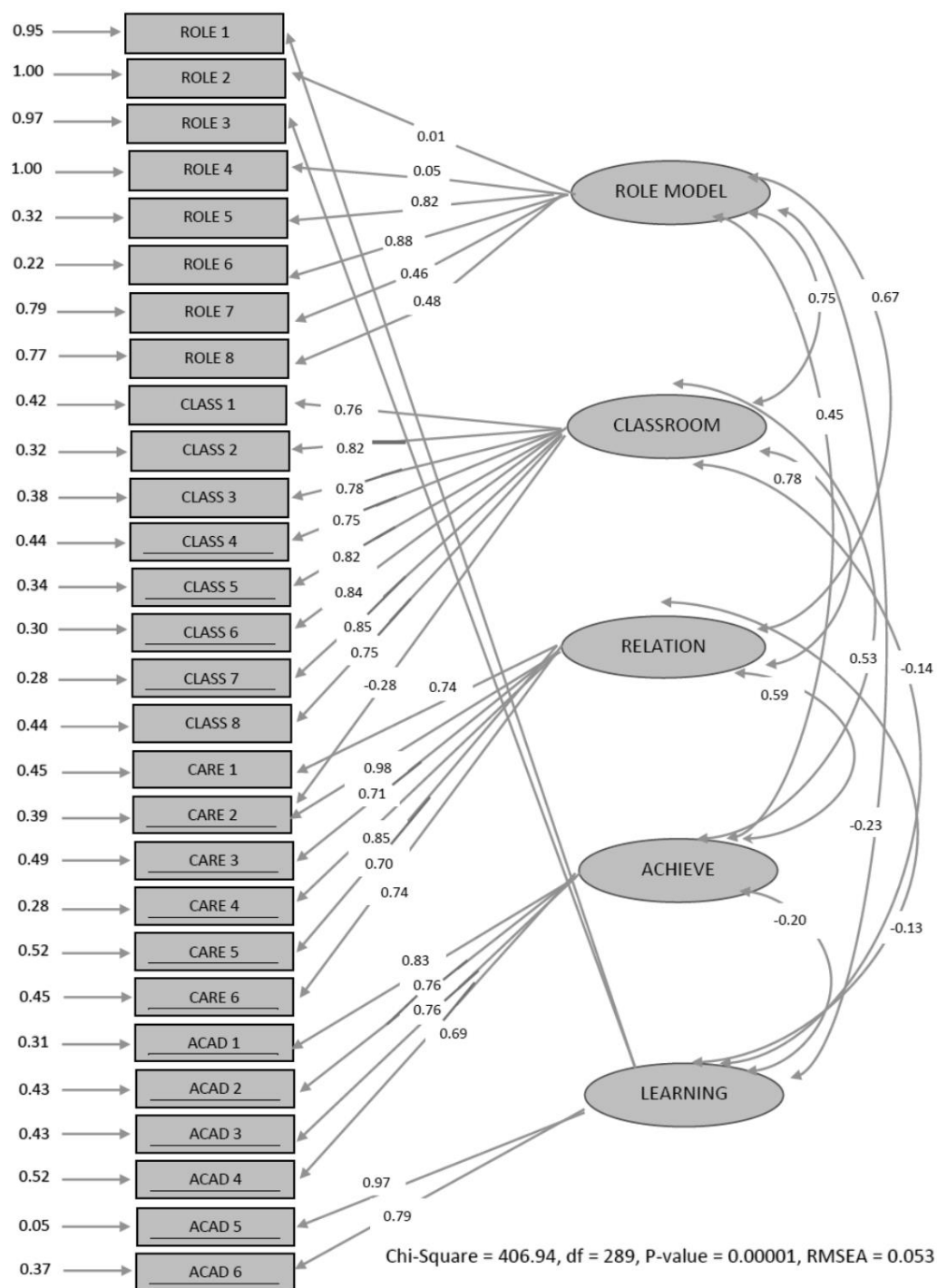
The second EFA was revised based on modifications provided by LISREL. Role model was modeled as one factor. Factor of classroom management remained the same as in the theoretical model. Relationships was modeled as one factor. Conflict construct and the corresponding two items measuring it, “The female teachers I have worked with have less conflict with male students” and “The male teachers I have worked with have less conflict with male students,” were removed as these items were having validity and reliability issues in EFA results and were also disrupting the convergence and model fit results. Achievement was divided into two factors: the first was student achievement results, and the second factor was a measure of learning. The entire model was then tested. Path coefficients were computed for each item, as shown in Table 7. The covariances between constructs was determined through the model (Figure 6). Overall, the coefficients were higher for the revised model at the item level than in the theoretical model, which was another indicator of a better fit to the data. Overall, the expected covariance and observed covariance indicated a better fit than the covariances in theoretical model.

Several statistical tests were used to determine the level of fit for the revised model. Chi square for the Adjusted Final Model was 406.94, which was much lower than the chi square value of original theoretical CFA model (1339.12). CFI for the Adjusted

Final Model was .956, which met the desired values of greater than .90, indicating a good fit. The AFGI was also evaluated and the revised model had a value of .866, which was slightly lower than the accepted value of  $> .90$  (Hooper et al., 2008). RMSEA value was .0529, which was below the recommended value of .06 indicating good fit. NFI was .942 which was above the cut-off value of .90, indicating good fit.

The revised model was a good fit to the data based on overall evaluation of fit indices. RMSEA (.053) and CFI (.956) indicated good model fit to the data. The chi square goodness of fit needs to be statistically non-significant to show good fit of the revised model to the data. The chi square maximum likelihood was statistically significant, indicating that there were differences between the theoretical and empirical covariance matrices. However, chi square reduced from 1339.12 in the theoretical model to 406.94 in the revised model, indicating better fit than theoretical model. Chi square statistic has limitations because it can be heavily influenced by sample size and should not be used as a single indicator of model fit. Chi square is always statistically significant for models having large sample sizes. It was usually statistically non-significant for models having small sample sizes, due to inadequate statistical power (Bentler & Bonnet, 1980; Hooper et al., 2008). Hence, it should not be used as a single indicator but in conjunction with other fit indices to assess model fit of the hypothesized model to the empirical survey data. AGFI index for the revised model was .867 ~ .87, which was slightly below the recommended .90 cut-off. NFI was .866 ~ .87, which was slightly below the .90 cut-off (Hu & Bentler, 1999). The revised CFA model qualifies as an acceptable fit to the survey data and was adjusted to reflect CFA results before utilizing it in the final study. The eight items measuring role model construct were modeled as one

factor, although four items clustered within Factor 3 while the other four items aligned with Factor 4 and Factor 5 in EFA. The eight items representing the relationship construct was distributed between Factor 1 and Factor 2 in EFA results. However, it was modeled as a separate factor in CFA. Two items measuring conflict were removed from the survey, resulting in 30 items remaining from the original 32. The fit indices of the revised model indicated that the model was a good fit to survey data, thereby adding support to align the eight items measuring role model as one factor and eight items measuring relationship as one factor. CFA results also supported that the four constructs were distinct from each other.



CARE: Relationships (8 items)  
 ROLE = Role Model (8 items)  
 CLASS = Classroom Management (7 items)  
 ACAD = Academic Achievement (6 items)

Figure 5: Confirmatory Factor Analysis Adjusted Model.

## Main Study

### Population

The selected participants were teachers and administrators working with students in the elementary grades in the participating school district. The rationale was that if the sample population was diverse, the findings would be more generalized as a representation of a larger population than if the sample was not diverse. A sampling frame consisted of all teachers and administrators currently working in elementary schools in the selected district.

Hence, purposive sampling technique was utilized because only elementary school administrators and teachers from only one school district were selected as the sample participants for the main study. The school district has 50 schools, of which 28 are elementary schools. Of the 28 elementary schools, 17 receive funding under Title I programs. The student population in the 28 elementary schools consists of 55% Black 27% White, 10% Hispanic, 5% Multi-Racial, 3% Asian, 0.01% Native American, and 0.01% Pacific Islander (Georgia Department of Education, 2018).

School server directory lists were used to obtain email addresses of all administrators and teachers in the 28 elementary schools for distribution of study information and survey links. The potential for duplicate listings was eliminated as teachers were assigned to a single home school, even when they served multiple schools. Follow-up emails, as well as a drawing for a gift card for all those who participated by a pre-determined date. Such measures were done to increase the completion rate (Johnson & Morgan, 2016).

## Participants

Participants included elementary administrators and teachers from the 28 elementary schools in the selected district. Of the 1,306 possible participants, 92% were female and 8% were male. Of the 1,308 participants, 59% were White, 36% were Black, 1% were Hispanic, 1% were Asian, 1% were Multi-racial, and 0.01% were Native American (Georgia Governor's Office of Student Achievement, 2018). Survey response rates were monitored because participation in the survey was voluntary.

## Instrumentation

The survey used for the main study was the modified version of the PTGI survey that was assessed for validity and reliability in the pilot study by conducting EFA, CFA, and Cronbach's alpha analyses.

## Data Collection

The school principals were contacted after permission was granted through both the school system's institutional review board and the institutional review board at Columbus State University. The researcher sent an email explaining the purpose of the main study, the process of data collection, incentives, and how the data collected through surveys will be used. The researcher then followed up the email by contacting the principals in person or on the phone to answer any questions or provide needed clarification. The mode, process, and incentive of the survey administration were explained including directions to enter the random drawing for participation after the survey administration. The researcher explained that the school would not be named in the study and would be coded before commencement of data analysis. The researcher explained that teachers and administrators could print the completion page of the survey

and turn it in to the selected front office personnel. After the consent of the principal was confirmed, the researcher sent the information letter electronically with the Qualtrics survey link to the administrators' and teachers' email addresses. The required online informed consent was built into the first page of the Qualtrics survey to comply with Columbus State University's and participating school district's Institutional Review Board's informed consent and survey administration requirements page. A reminder email was sent to participants to complete the survey one week after the initial email was sent. After two weeks, the researcher went to the school and drew a name from the completed survey printouts that had been folded and placed in provided envelopes. All participants were eligible for the incentive: The researcher awarded the randomly selected participant a \$10.00 Starbucks gift card.

PTGI survey that was revised in pilot study was used in the main study. It was administered through a Columbus State University Qualtrics account, which ensured that survey responses remain confidential and secure. Elementary school administrators and teachers had the opportunity to provide their consent to participate in the survey or refuse to respond to the survey questions through an online informed consent form, which the first page in the survey within Qualtrics system was. Administrators and teachers were able to complete the survey in approximately 15 minutes. The survey data were exported to SPSS for statistical analysis. When the survey window of collection was complete or when the data sample reached a minimum of 100 participants.

The survey collected data on the perceptions of elementary school administrators and teachers of male teachers impact on student achievement growth, relationships, classroom management, and role models. Data on perceptions of elementary school



administrators and teachers were collected through survey items that reflected factors found in research that influenced student achievement by male teachers (Table 1).

Student academic growth. SGP mean data from the 2017-2018 school year were collected by utilizing the Georgia Insights data reporting subsection within the Georgia Department of Student Achievement website. Data were recorded by school and gender, then entered as a variable into the SPSS program for statistical analysis with other variables.

Socioeconomic status. Socioeconomic was measured in two ways: The school's Title I status and the percent of students who qualified for the Free and Reduced Lunch program. These data were publicly accessible through the state of Georgia's Department of Education website, under the subsection of data reporting. The researcher collected and recorded both measures for each elementary school participating in the study.

#### Data Analysis

Composite scores were computed for each survey participant for each of the four constructs (classroom management, relationships, role models, and student achievement) by adding the response scores of all items representing that particular construct. For example, survey responses from all eight items representing the relationships construct was added to form a composite score for relationships for each participant. These scores were then used for correlation and regression analyses. A correlation analysis was conducted to evaluate the relationships between the composite score variables of relationships, role model, learning achievement, classroom management, and male students' ELA growth percentile reading scores. The Kendall's tau-b was used to

estimate magnitude and direction of the relationship between the variables. Significance levels of .05 were used in the correlation analysis.

The assumptions of normality, homoscedasticity, independence of observations, kurtosis, and skewness deemed non-linear regression to be more suitable than linear regression analysis. Non-linear regression was used because the linear regression model was not a good fit to explain the amount of variance in the dependent variable scores (SGP in reading) by the independent variables (composite scores of classroom management, relationships, role models, and student achievement). The variables were mean-centered before conducting the non-linear regression analyses by subtracting the mean from each individual score.

Regression coefficients were used to understand the change in number of units of the dependent variable score for each unit increase in the independent variable scores (Hox, Moerbeek, & van de Schoot, 2018). The regression coefficient was used to calculate the effect size of each variable, which provides a quantitative estimate of independent variables influence on the dependent variable scores.

### Summary

Chapter III defined and provided support for the research design and proposed methodology for this quantitative correlational study. The study analyzed the relationships between composite score variables of relationships, role model, learning achievement and classroom management and male students' ELA growth percentile scores.

The PTGI survey was tested for validity and reliability in pilot study. EFA and CFA demonstrated construct validity (convergent and discriminant) of the four constructs

(relationships, role model, learning achievement, and classroom management). Reliability analysis (Cronbach's alpha) indicated good internal consistency between the survey items that measured the four constructs.

## CHAPTER IV

### RESULTS

#### Introduction

In order to answer the overarching research question, is there a relationship between elementary school administrators and teachers perceptions of the influence of male teachers and a school's male students achievement growth?, the examination of the perceived influence between the perceptions of elementary school teachers and administrators and Georgia Milestones male students' ELA growth percentile score was conducted through a correlational study. Data were collected using the PTGI survey instrument and publicly available school data on male students' ELA growth percentile scores for the Georgia Milestones Assessment.

The researcher has presented data analyses for the overarching research question as well as for the four questions and their related hypotheses, which focus on the perceptions of school administrators and teachers of the influence of male teachers on male students' growth percentile through four main constructs (role model, classroom management, relationships, and student learning). Results were presented by the individual research questions. The research questions were as follows:

RQ 1: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students' ELA growth percentile scores to a statistically significant degree.

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students' ELA growth percentile scores to a statistically significant degree.

RQ 2: Is there a correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores to a statistically significant degree.

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores to a statistically significant degree.

RQ 3: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores to a statistically significant degree.

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores to a statistically significant degree.

RQ 4: Is there a correlation between teacher and administrator perceptions of the influence of male teachers on their student's achievement and learning and the male students' ELA growth percentile scores?

Null Hypothesis: There is no correlation between teacher and administrator perceptions of the influence of male teachers on their student's achievement and learning and the male students' ELA growth percentile scores?

Alternate Hypothesis: There is a correlation between teacher and administrator perceptions of the influence of male teachers on their student's achievement and learning and the male students' ELA growth percentile scores?

In this chapter, the survey response rate, a demographic profile of the sample, and the statistical analysis of each of the research questions were discussed. Results for descriptive and inferential analyses were presented through narrative discussion as well as displayed in tables to highlight results or add precision to text summarizations.

## Survey

### Survey Response Rate

Participants were elementary administrators and teachers from 21 of the 28 elementary schools in the selected district. Although district permission was granted for the study, each principal was given permission by the district to decline participation for their school, or not participate in the study. Of the 28 schools, seven principals stated that the timing of the survey, which was two weeks before the end of the school year, was

too much for their staff and declined participation. In each of the remaining 21 schools, all teachers and administrators were purposefully sampled for the study. One 135 individuals responded to the survey request. Of the 135 participants, nine were administrators and 126 were teachers. The survey was sent to 880 potential participants who worked in the 21 elementary schools in the selected district. A majority of the participants were elementary teachers. Of the 880 participants, 92% were female and 8% were male. Of the 880 online surveys that were distributed through email, 135 of the surveys were completed, with a response rate of 15.3%.

#### Demographic Data Summary

The demographic representation of the 135 teacher and administrator participants was reflective of the total administrative and teaching population of elementary schools in the selected school district. Data for both teachers and administrators were combined in Table 8 (Demographics) because there were only nine administrators out of the total 135 participants. The frequency and the percentages were derived from the demographic information collected from the survey instrument. Demographic information was summarized in Table 8.

Of the 135 teacher and administrative participants, 39.3% worked in schools that were supported through the Title I federal program, and 60.7% of the participants worked in schools that were not funded through the Title I program. Data on the participants' level of experience were also collected, showing 65.9% of the participants had 11 or more years of experience. Only 9.6 % of the participants represented teachers with less than three years of experience. There were slightly more participants that work in non-

Title I funded schools in the study than are proportionally represented in the total population of the selected district.

Table 8

*Perceptions of Teacher Gender Influence Survey Response Rate by Category*

Classification	<i>n</i>	%
<b>Participant Role</b>		
<i>Administrator</i>	9	6.7
<i>Teacher</i>	125	92.6
<b>Gender</b>		
<i>Male</i>	11	8.1
<i>Female</i>	124	91.9
<b>Race</b>		
<i>American Indian/ Native Alaskan</i>	1	.7
<i>Black</i>	36	26.7
<i>White</i>	93	68.9
<i>Hispanic</i>	2	1.5
<i>Multi-Racial</i>	3	2.2
<b>Type of School</b>		
<i>Title 1</i>	53	39.3
<i>Non-Title 1</i>	89	60.7
<b>Total Years Teaching</b>		
<i>0-3</i>	13	9.6
<i>4-7</i>	22	16.3
<i>8-11</i>	10	7.4
<i>11 or more</i>	89	65.9

Perceptions of Teacher Gender Influence. The data collected from the participants' responses to the PTGI was used to determine composite scores for the perceptions of the influence of male teachers in four areas: Role Models (RM), Classroom Management (CM), Relationships (RL) and Achievement/Learning (LE). Questions on the PTGI were based on the items representing each construct. A composite score was separately calculated for each construct by adding the responses of



all items measuring one construct. Hence, each participant had four composite scores, as there were four constructs.

Each participant was asked to respond to the survey item that asked if they felt there were enough male teachers in their school. The response was measured on a Likert scale ranging from *strongly agreed* to *strongly disagreed*. The participants responded as follows 0.7 % strongly agreed, 3.7% agreed, 13.3% neither agreed nor disagreed, 47.4% disagreed, and 34% strongly disagreed. The researcher then added data on the Title I status and free and reduced lunch status for each of the participant schools, based on the participant's response on the schools that they worked in.

In Table 9 below, the descriptives of the administrators' and teachers' perceptions are displayed. This table displays each of the items and the mean scores by administrator participants and by teacher participants. In addition, the standard deviation and standard error are displayed.

With the exception of a male teacher making a better role model for male students, female teachers were rated with a higher mean score per item. The additional exception was the item of a male teacher making a better role model for a female student compared to female teacher making a better role model for male student. The male teacher rating was higher than the female teacher rating by 0.20 points. For the items measuring role model effectiveness, male and female teachers were rated with only a mean difference of 0.01. The rating score for females was 0.27 points higher than for male teachers. Organization was another area that female teachers were rated higher with a mean score of 4.23 than male teachers with a mean score of 3.72.

Table 9

*Perceptions of Teacher Gender Influence Descriptives*

		<i>M</i>	<i>SD</i>	<i>SE</i>	<i>95% CI</i>	
					<i>LL</i>	<i>UL</i>
Your school has enough male teachers	Administrator	2.11	1.364	.455	1.06	3.16
	Teacher	1.87	0.783	.070	1.73	2.01
	Total	1.89	0.829	.072	1.75	2.03
Female teachers make better role models for female students	Administrator	3.33	0.866	.289	2.67	4.00
	Teacher	3.16	0.911	.081	3.00	3.32
	Total	3.17	0.906	.078	3.02	3.33
Male teachers make better role models for female students	Administrator	2.44	0.527	.176	2.04	2.85
	Teacher	2.69	0.766	.069	2.55	2.82
	Total	2.67	0.754	.065	2.54	2.80
Female teachers make better role models for male students	Administrator	2.33	0.500	.167	1.95	2.72
	Teacher	2.48	0.703	.063	2.36	2.60
	Total	2.47	0.690	.060	2.35	2.59
Male teachers make better role models for male students	Administrator	3.89	0.782	.261	3.29	4.49
	Teacher	3.72	0.989	.088	3.54	3.90
	Total	3.73	0.975	.084	3.56	3.90
The female teachers I have worked with effectively serve their students as role models	Administrator	4.33	0.500	.167	3.95	4.72
	Teacher	4.05	0.633	.057	3.94	4.16
	Total	4.07	0.628	.054	3.96	4.17
The male teachers I have worked with effectively serve their students as role models	Administrator	4.22	0.441	.147	3.88	4.56
	Teacher	4.05	0.682	.061	3.93	4.17
	Total	4.06	0.669	.058	3.95	4.17

		<i>M</i>	<i>SD</i>	<i>SE</i>	<i>95% CI</i>	
					<i>LL</i>	<i>UL</i>
The female teachers I have worked with have students that emulate the teachers actions	Administrator	4.00	0.500	.167	3.62	4.38
	Teacher	4.00	0.622	.056	3.89	4.11
	Total	4.00	0.613	.053	3.90	4.10
The male teachers I have worked with have students that emulate the teachers actions	Administrator	4.00	0.500	.167	3.62	4.38
	Teacher	3.81	0.715	.064	3.68	3.93
	Total	3.82	0.703	.061	3.70	3.94
The female teachers I have worked with use effective classroom management strategies	Administrator	4.22	0.441	.147	3.88	4.56
	Teacher	3.94	0.699	.063	3.82	4.07
	Total	3.96	0.687	.059	3.85	4.08
The male teachers I have worked with use effective classroom management strategies	Administrator	4.11	0.333	.111	3.85	4.37
	Teacher	3.90	0.756	.068	3.77	4.04
	Total	3.92	0.736	.064	3.79	4.04
The female teachers I have worked with can organize classroom space to enable students access to materials, equipment and other resources.	Administrator	4.44	0.527	.176	4.04	4.85
	Teacher	4.22	0.604	.054	4.11	4.32
	Total	4.23	0.600	.052	4.13	4.33
The male teachers I have worked with can organize classroom space to enable students access to materials, equipment and other resources.	Administrator	3.56	0.726	.242	3.00	4.11
	Teacher	3.73	0.817	.073	3.58	3.87
	Total	3.72	0.810	.070	3.58	3.85

		<i>M</i>	<i>SD</i>	<i>SE</i>	<u>95% <i>CI</i></u>	
					<i>LL</i>	<i>UL</i>
The female teachers I have worked with establish clear expectations for classroom behavior.	Administrator	4.22	0.441	.147	3.88	4.56
	Teacher	4.06	0.626	.056	3.95	4.17
	Total	4.07	0.616	.053	3.96	4.17
The male teachers I have worked with establish clear expectations for classroom behavior.	Administrator	4.11	0.333	.111	3.85	4.37
	Teacher	3.97	0.751	.067	3.84	4.10
	Total	3.98	0.730	.063	3.85	4.10
The female teachers I have worked with explain and implement classroom routines and strategies to promote positive student behavior.	Administrator	4.11	0.333	.111	3.85	4.37
	Teacher	4.11	0.542	.048	4.02	4.21
	Total	4.11	0.530	.046	4.02	4.20
The male teachers I have worked with explain and implement classroom routines and strategies to promote positive student behavior.	Administrator	3.89	0.333	.111	3.63	4.15
	Teacher	3.93	0.732	.065	3.80	4.06
	Total	3.93	0.711	.061	3.80	4.05
The female teachers I have worked with are nurturing and sensitive to their students	Administrator	4.22	0.441	.147	3.88	4.56
	Teacher	4.10	0.607	.054	4.00	4.21
	Total	4.11	0.596	.052	4.01	4.21
The male teachers I have worked with are nurturing and sensitive to their students	Administrator	3.67	0.500	.167	3.28	4.05
	Teacher	3.68	0.768	.069	3.54	3.82
	Total	3.68	0.752	.065	3.55	3.81
The female teachers I have worked with are patient with their students	Administrator	4.00	0.000	.000	4.00	4.00
	Teacher	3.94	0.639	.057	3.83	4.06
	Total	3.95	0.617	.053	3.84	4.05

					95% CI	
		<i>M</i>	<i>SD</i>	<i>SE</i>	<i>LL</i>	<i>UL</i>
The male teachers I have worked with are patient with their students	Administrator	4.00	0.000	.000	4.00	4.00
	Teacher	3.90	0.560	.050	3.80	4.00
	Total	3.91	0.541	.047	3.82	4.00
The female teachers I have worked with are seen as caring by their students	Administrator	4.11	0.333	.111	3.85	4.37
	Teacher	4.09	0.568	.051	3.99	4.19
	Total	4.09	0.555	.048	3.99	4.18
The male teachers I have worked with are seen as caring by their students	Administrator	3.78	0.441	.147	3.44	4.12
	Teacher	3.92	0.617	.055	3.81	4.03
	Total	3.91	0.607	.052	3.81	4.01
The female teachers I have worked with produced positive student outcomes in reading	Administrator	4.11	0.333	.111	3.85	4.37
	Teacher	4.02	0.615	.055	3.92	4.13
	Total	4.03	0.600	.052	3.93	4.13
The male teachers I have worked with produced positive student outcomes in reading	Administrator	3.67	0.866	.289	3.00	4.33
	Teacher	3.77	0.720	.064	3.64	3.90
	Total	3.76	0.727	.063	3.64	3.89
The female teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	Administrator	3.78	0.441	.147	3.44	4.12
	Teacher	3.70	0.710	.063	3.57	3.82
	Total	3.70	0.694	.060	3.58	3.82
The male teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	Administrator	3.56	0.527	.176	3.15	3.96
	Teacher	3.55	0.712	.064	3.43	3.68
	Total	3.55	0.700	.060	3.43	3.67
Students learn reading best from female teachers	Administrator	2.78	0.441	.147	2.44	3.12
	Teacher	2.68	0.819	.073	2.53	2.83
	Total	2.69	0.799	.069	2.55	2.82

		<i>M</i>	<i>SD</i>	<i>SE</i>	<i>95% CI</i>	
					<i>LL</i>	<i>UL</i>
Students learn reading	Administrator	2.78	0.441	.147	2.44	3.12
best from male teachers	Teacher	2.62	0.779	.070	2.49	2.76
	Total	2.63	0.761	.066	2.50	2.76

Statistical power. The statistical power, or the ability of a statistical test to correctly reject a false null hypothesis, was conducted using the G-power program. The statistical power was calculated using the effect size of .506 and the error probability of 0.05. In addition, the total sample size of 135 participants and three tested predictors were used in the calculation. The statistical power of the study was 1.00.

#### Correlations

Non-parametric correlation using Kendall tau-b coefficients were computed in SPSS version 25 to evaluate the relationships between the independent variables (Composite score variables of relationships, role model, classroom management and achievement/learning) with the dependent variable of male students' ELA growth percentile scores by school. Significance levels of .05 was used in the correlation analysis.

Perceptions of male teacher influence. The correlation results are displayed in Table 10. The correlation between the composite score of role model and classroom management was .270, indicating that when it was perceived that male teachers were positive role models, then it was also perceived that they were also successful in the areas of classroom management and learning/achievement. The correlation between the composite score of role model and composite score for relationship was .186.

The correlation between the composite score of classroom management and composite score for relationships was .477. The correlation between the composite score

of classroom management and learning/achievement was .405, indicating that administrators and teachers perceived that the learning achievement of students in a male teacher's classroom was reliant on a higher perception of classroom management.

The perceptions of male teachers' relationships composite score correlated at the value of .477 with classroom management, indicating that administrators and teachers perceived that there was a relationship between quality relationships with male teachers that leads to higher levels of classroom management for male teachers. Although relationships correlated at a significant level with role model, it was the weakest correlation of the three factors.

A statistically significant correlation was found between learning achievement and the other three composite score variables. The highest correlation was between classroom management and relationships ( $r = .477$ ). This result indicated that if administrators' and teachers' perceptions of male teachers was higher for the influence of the construct of relationship, the better the classroom management rating was for the male teacher. Learning and achievement composite score correlation ( $r = .264$ ) indicates that administrators and teachers perceive that male teachers with good relationships will lead to higher levels of learning and achievement. The correlation between learning composite with role model ( $r = .156$ ) indicated that the perception of role models was viewed as significant, but not having as high of an impact as other factors for male teachers.

The correlation between ELA growth percentile score and role model composite was .087. The correlation between ELA growth percentile score and learning achievement was .121. The correlation between students' ELA growth percentile reading scores and the four composite score variables were low and statistically non-significant. The correlation between classroom management and school male SGP is .000 to the significance level of .997. The correlation value was .000 and not to a statistically significant level, indicating no relationship. Hence, the researcher fails to reject all four null hypotheses.

Table 10

*Non-Parametric Correlations Between Male SGP and Composite PTGI Survey Scores*

		SGP ELA males	Role Model Composite	Classroom Management composite	Relationship composite	Learning composite
SGP ELA males	<i>r</i>	--				
	<i>p</i> (2-tailed)	.				
	<i>N</i>	135				
Role Model Composite	<i>r</i>	.087	--			
	<i>p</i> (2-tailed)	.186	.			
	<i>N</i>	135	135			
Classroom Management Composite	<i>r</i>	.028	.270**	--		
	<i>p</i> (2-tailed)	.668	.000	.		
	<i>N</i>	135	135	135		
Relationship Composite	<i>r</i>	-.011	.186**	.477**	--	
	<i>p</i> (2-tailed)	.875	.007	.000	.	
	<i>N</i>	135	135	135	135	
Learning Composite	<i>r</i>	.121	.156*	.405**	.264**	--
	<i>p</i> (2-tailed)	.068	.022	.000	.000	.
	<i>N</i>	135	135	135	135	135

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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



Two non-linear regression analyses were conducted. Role model composite and learning achievement were the independent variables in the first and second model respectively. ELA growth percentile reading scores were the dependent variable in both non-regression models.

A non-linear regression was conducted based on the small correlation between role model and SGP. This analysis was conducted only for role model and learning, and achievement based on the correlation results. There were small correlations for those two constructs. In order to add further understanding to the data about the perceptions of administrator's and teachers' of male teachers, exploration of the variance explained by both the independent variables on the dependent variables was needed. Although classroom management had a correlation with SGP ELA males (.028), it was a very weak correlation near 0, thus the need for the further understanding of variance that could be found through a regression was not present.

The non-linear regression was conducted to predict schools' male ELA growth percentile scores from administrators' and teachers' perceptions of male teachers' influence through role models. Both role model and ELA growth percentile scores were mean centered (that is, the variable mean was subtracted from the individual score). Tables 11, 12 and 13 present the results of quadratic non-linear regression model. Tables 14, 15 and 16 present the results of cubic non-linear regression model. Table 11 displays the model summary of the non-linear regression model.

The quadratic non-linear regression results indicate a non-significant regression model [ $F(2, 132) = 1.300, p > .05$ ], with  $R^2$  of .019 indicating that 1.9% of variance in male ELA growth percentile scores could be accounted by role model composite score

variable. Predicted weight on ELA growth percentile scores is equal to  $0.087 + 0.023 \times (\text{Role Model composite score})$  when independent variable was measured in scale points. For every one scale point increase in role model composite score, the ELA growth percentile reading scores increased by 0.023 units. However, role model composite score variable was not a statistically significant predictor of ELA growth percentile reading scores.

Table 11

*Model Summary Quadratic Non-Linear Regression: Role Model and Student Growth Percentile*

<i>r</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Std. Error of the Estimate
.139	.019	.004	6.796

a. Dependent Variable: SGP ELA males

b. Independent Variable: Role Model composite

Table 12 presents the ANOVA output for the non-linear regression model. The model was not statistically significant ( $F = 1.3, p > .05$ ). The sum of squares residual value was very much higher (6097.27) than the sum of squares regression (120.068), indicating that the proportion of unexplained variation in the regression model is high compared to explained variation. Hence, role model composite score variable is not a good predictor of male ELA growth percentile scores.

Table 12

*ANOVA of Quadratic Non-Linear Regression of Influence of Male Teachers: Role Model*

	Sum of Squares	df	Mean Square	F	p
Regression	120.068	2	60.034	1.300	.276
Residual	6097.265	132	46.191		
Total	6217.333	134			

The independent variable is RMComposite\_MeanCenter.

Table 13 showed the unstandardized and standardized beta regression coefficients, corresponding *t*-values and significance value for the non-linear regression model. The standardized beta coefficients ( $\beta = 0.137$ ) was not significant to a statistically significant degree because the significance value was greater than .05.

Table 13

*Coefficients Quadratic Non-Linear Regression with Teacher and Administrator Perceptions of Influence of Male Teachers: Role Model*

	<u>Unstandardized</u>		<u>Standardized</u>		<i>t</i>	<i>p</i>
	<u>Coefficients</u>		<u>Coefficients</u>			
	$\beta$	SE	$\beta$			
RMComposite_MeanCenter	0.513	.322	.137	1.591	.114	
RMComposite_MeanCenter ** 2	0.025	.094	.023	0.265	.791	
(Constant)	43.473	.662		65.644	.000	

The cubic non-linear regression results indicate a non-significant regression model [ $F(3, 131) = 0.984, p > .05$ ], with  $R^2$  of .022, indicating that 2.2% of variance in male ELA growth percentile scores could be accounted for by role model composite score variable. Predicted weight on ELA growth percentile scores is equal to  $-0.103 + 0.079^*$  (role model composite score) when the independent variable is measured in scale points. For every one scale point increase in role model composite score, the ELA growth

percentile scores increased by 0.079 units. However, role model composite score variable was not a statistically significant predictor of ELA growth percentile reading scores.

Table 14

*Model Summary Cubic Non-Linear Regression: Role Model and Student Growth Percentile*

<i>r</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Std. Error of the Estimate
.148	.022	.000	6.813

a. Dependent Variable: SGP ELA males

b. Independent Variable: Role Model composite

Table 15 presented the ANOVA SPSS output for the non-linear regression model. The model was not statistically significant ( $F = 0.984, p > .05$ ). The sum of squares residual value is very high (6080.37) than sum of squares regression (136.96) indicating that the proportion of unexplained variation in the regression model was high compared to explained variation. Hence, role model composite score variable was not a good predictor of male ELA growth percentile scores.

Table 15

*ANOVA of Cubic Non-Linear Regression of Influence of Male Teachers: Role Model*

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Regression	136.960	3	45.653	0.984	.403
Residual	6080.373	131	46.415		
Total	6217.333	134			

The independent variable is RMComposite\_MeanCenter.

Table 16 showed the unstandardized and standardized beta regression coefficients, corresponding t-values and significance value for the non-linear regression model. The standardized beta coefficient ( $\beta = 0.079$ ) was not significant to a statistically significant degree because the significance value was greater than .05.

Table 16

*Coefficients Cubic Non-Linear Regression with Teacher and Administrator Perceptions of Influence of Male Teachers: Role Model*

	<u>Unstandardized</u>		<u>Standardized</u>		<i>t</i>	<i>p</i>
	<u>Coefficients</u>		<u>Coefficients</u>			
	$\beta$	<i>SE</i>	$\beta$			
RMComposite_MeanC enter	0.289	.492	.077	0.589	.557	
RMComposite_MeanC enter ** 2	0.030	.095	.027	0.316	.753	
RMComposite_MeanC enter ** 3	0.015	.025	.079	0.603	.547	
(Constant)	-0.103	.664		-0.154	.878	

The correlation value was low and not to a statistically significant level, indicating no relationship. For Research Question 2, the null hypothesis failed to be rejected.

A non-linear regression was conducted based on the small correlation between achievement/learning and ELA growth percentile scores. The non-linear regression was conducted to predict schools' male SGP from administrators' and teachers' perceptions of male teachers' influence through achievement/learning. Both role model and ELA growth percentile scores were mean centered (the variable mean was subtracted from the individual score).

Tables 17, 18 and 19 presented the results of quadratic non-linear regression model. Tables 20, 21 and 22 presented the results of cubic non-linear regression model. Table 17 showed the model summary of the non-linear regression model.

The quadratic non-linear regression results indicated a non-significant regression model [ $F(2, 132) = 1.804, p > .05$ ], with  $R^2$  of .027 indicating that 2.7% of variance in male ELA growth percentile scores could be accounted for by achievement learning

composite score variable. Predicted weight on ELA growth percentile scores was equal to  $0.117 + 0.046^*$  (achievement learning composite score) when independent variable is measured in scale points. For every one scale point increase in role model composite score, the ELA growth percentile scores increased by 0.046 units. However, achievement/learning composite score variable was not a statistically significant predictor of ELA growth percentile scores.

Table 17

*Model Summary Quadratic Non-Linear Regression: Achievement Learning and Student Growth Percentile*

<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Std. Error of the Estimate
.163	.027	.012	6.771

a. Dependent Variable: SGP ELA males

b. Independent Variable: Achievement Learning composite

Table 18 presents the ANOVA SPSS output for the non-linear regression model. The model was not statistically significant ( $F = 1.804, p > .05$ ). The sum of squares residual value was much higher (6051.950), than sum of squares regression (165.383), indicating that the proportion of unexplained variation in the regression model was high compared to explained variation. Hence, role model composite score variable was not a good predictor of male ELA growth percentile scores.

Table 18

*ANOVA of Quadratic Non-Linear Regression of Influence of Male Teachers: Achievement Learning*

	Sum of Squares	df	Mean Square	F	p
Regression	165.383	2	82.691	1.804	.169
Residual	6051.950	132	45.848		
Total	6217.333	134			

The independent variable is Achievement Learning Composite\_MeanCenter.

Table 19 shows the unstandardized and standardized beta regression coefficients, corresponding *t*-values, and significance value for the non-linear regression model. The standardized beta coefficients ( $\beta = 0.148$ ) was not significant to a statistically significant degree because the significance value was greater than .05.

Table 19

*Coefficients Quadratic Non-Linear Regression with Teacher and Administrator Perceptions of Influence of Male Teachers: Achievement Learning*

	<u>Unstandardized</u>		<u>Standardized</u>		<i>t</i>	<i>p</i>
	<u>Coefficients</u>		<u>Coefficients</u>			
	$\beta$	<i>SE</i>	$\beta$			
ALComposite_MeanCenter	0.655	.389	.148	1.685	.094	
ALComposite_MeanCenter ** 2	0.073	.141	.046	0.520	.604	
(Constant)	-0.177	.670		-0.264	.793	

AL Composite Mean Center=Achievement Learning Mean Center.

Using a quadratic non-linear methodology, a non-significant regression equation was found [ $F(2, 132) = 1.804, p > .05$ ], with  $R^2$  of .033, indicating that 3.3% of variance in ELA SGP for males could be accounted for by a composite score for role model.

Predicted weight on SGP English Language Arts for males is equal to  $-0.177 +$

$0.046 * (\text{achievement/learning composite score})$  when independent variables are measured

in scale points. For every one scale point increase in achievement/learning composite score, the SGP English Language Arts for males increased by 0.046 units. However, the independent variable was not a predictor to a statistically significant level.

Table 20

*Model Summary Cubic Non-Linear Regression: Achievement Learning and Student Growth Percentile*

<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Std. Error of the Estimate
.181	.033	.011	6.776

a. Dependent Variable: SGP ELA males

b. Independent Variable: Achievement Learning Composite

Table 21 presented the ANOVA SPSS output for the non-linear regression model. The model was not statistically significant ( $F = 0.984, p > .05$ ). The sum of squares residual value was very much higher (6014.12) than sum of squares regression (203.21), indicating that the proportion of unexplained variation in the regression model was high compared to explained variation. Hence, role model composite score variable was not a good predictor of male ELA growth percentile scores.



Table 21

*ANOVA of Cubic Non-Linear Regression of Influence of Male Teachers: Achievement Learning*

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Regression	203.211	3	67.737	1.475	.224
Residual	6014.122	131	45.909		
Total	6217.333	134			

The independent variable is Achievement Learning Composite Mean Center.

Table 22 shows the unstandardized and standardized beta regression coefficients, corresponding *t*-values, and significance value for the non-linear regression model. The standardized beta coefficients ( $\beta = -0.121$ ) was not significant to a statistically significant degree because the significance value was greater than .05.

Table 22

*Coefficients Cubic Non-Linear Regression with Teacher and Administrator Perceptions of Influence of Male Teachers: Achievement Learning*

	<u>Unstandardized</u>		<u>Standardized</u>		<i>p</i>
	<u>Coefficients</u>		<u>Coefficients</u>	<i>t</i>	
	$\beta$	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
ALComposite_MeanCenter	1.021	.560	.230	1.822	.071
ALComposite_MeanCenter ** 2	0.120	.150	.075	800	.425
ALComposite_MeanCenter ** 3	-0.040	.044	-.121	-908	.366
(Constant)	-0.236	.674		-350	.727

AL Composite Mean Center= Achievement Learning Mean Center Composite score from PTGI

The correlation value was low and not to a statistically significant level, indicating no relationship. For Research Question 4, the null hypothesis failed to be rejected.

### Interpretation of Results

A quantitative study was conducted to answer the research question “Is there a relationship between elementary school administrators’ and teachers’ perceptions of the influence of male teachers and a school’s male students’ achievement growth?”

There was a large body of work, as presented in Chapter II, that indicated four areas of male teacher influence on students: role models, classroom management, relationships, and learning/achievement. However, there were mixed findings on the impact of teacher’s gender on overall student achievement outcomes. As the findings for the influence of male teachers on male student achievement were inconsistent and inconclusive, the concept of student achievement growth had not previously been explored. The goal of this study was to explore the perceptions of teachers and administrators of the influence of male teachers on male students ELA growth percentile scores. The perceptions were measured by using four constructs: relationships, role model, learning achievement and classroom management. The quantitative correlational research design was conducted through the examination of non-parametric Kendall tau-b correlations and non-linear regressions where the correlation results indicated a potential relationship.

Very few teachers or administrators indicated that they had enough male teachers in their buildings. Results indicated that 81.4% of the participants disagreed or strongly disagreed that they perceived the need for male teachers as relevant, and meeting this

perceived need was not occurring in most schools. All correlations were statistically non-significant, even with the perceived need for more male teachers. Based on the study results, the influence of male teachers in all four areas did not have a relationship to a statistically significant level on the male SGP scores for ELA. In all four research questions, the results failed to reject the null hypothesis. Thus, the null hypothesis of the overarching research question of “Is there a relationship between elementary school administrators’ and teachers’ perceptions of the influence of male teachers and a school’s male students’ achievement growth?” failed to be rejected.

### Summary

Correlation analysis of non-linear regression was conducted. The perceptions of elementary administrators and teachers were collected through the PTGI instrument. The results of each of the correlations and subsequent non-linear regressions failed to reject each of the four individual null hypotheses, thus indicating that the perceptions of teachers and administrators of male teachers did not have a relationship with the male SGP scores for ELA.

However, the findings do not indicate that male teachers were not important to male and female students alike in elementary schools, simply that they may not have a relationship to student growth. Most participants responded that there were not enough male teachers in their buildings. This indicated that there was a perception that male teachers needed to be represented in the elementary schools. Discussion of the relation between the findings of the current study and past research is provided in Chapter V.

## CHAPTER V

### DISCUSSION

#### Summary of the Study

The purpose of this quantitative correlational study was to understand the perception of need and the effectiveness of school districts, in general, and elementary schools, specifically, to recruit and retain male teachers in the context of understanding the achievement gap between male and female students. The discussion included the perceptions that administrators and teachers had of the influence of male teachers on male SGP for ELA as measured by the Georgia Milestones End of Grade Assessment. The measures of perceptions included four constructs of potential influence of male teachers: Classroom management, role models, relationships, and achievement/learning. Discussion also included the study findings examined through the lens of the theoretical framework. The chapter concluded with a discussion of the limitations of the study, areas for future research recommendations, and a brief summary.

This study was designed to answer the overarching research question that this study was designed to answer, “Is there a relationship between elementary school administrators’ and teachers’ perceptions of the influence of male teachers and a school’s male students’ achievement growth in English Language Arts?” Within this chapter, discussion and future potential research projects to assist in answering this question, as well as the four individual research questions, are presented.

RQ 1: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students' ELA growth percentile scores?

RQ 2: Is there a correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores?

RQ 3: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores?

RQ 4: Is there a correlation between teacher and administrator perceptions of the influence of male teachers on their student's achievement and learning and the male students' ELA growth percentile scores?

#### Analysis of Research Findings

The potential influence of male teachers can be categorized in four major areas through the findings of the pilot reviewed in Chapter III (classroom management, role models, relationships, and achievement/learning). Data on perceptions were collected from administrators and teachers utilizing the PTGI measure that was validated through the pilot study. The main study examined the perceptions of the administrators and teachers of the influence of male teachers in each of the four areas on male SGP, which was the dependent variable, and male SGP in ELA as measured by the Georgia Milestones End of Grade Assessment. The survey results of the PTGI reinforced the concept that there was a belief that there were not enough male teachers. In addition, the survey results confirmed that administrators and teachers perceive that male teachers

have influence on their students in the four construct areas. Non-parametric correlation was conducted and revealed that there were small correlations between the independent variables of survey composite scores of role model, classroom management, and learning with the dependent variable of male SGP for ELA. Non-linear regressions were run for the independent variables with the higher correlations (role model and learning). The results revealed small variances, none of the variances measured at a statistically significant level. All null hypotheses could not be rejected because of statistically non-significant correlations between the composite scores of four constructs (i.e., role model, relationships, classroom management, and achievement) and male SGP scores for ELA.

#### Discussion of Research Findings

The study utilized the Perceptions of Teacher and Gender Influence, a survey that was adapted from a qualitative survey “Teacher Perceptions of Gender-Based Differences Among Elementary School Teachers” (Wood, 2012). Although Wood (2012) used the original instrument as a questionnaire in a qualitative study, the results were similar. Wood (2012) described four major conclusions from his study: Elementary teachers perceived differences in teachers based on gender; male teachers were perceived less positively than female teachers; a majority of participants agreed there were not enough male teachers; and the differences between male and female teachers remain unrevealed. While the study conducted by Wood (2012) did not include exploration on the impact of student learning, the perceptions of the teacher participants were consistent with the current study. Female teachers were rated higher in most areas than male teachers. Ratings by teachers’ gender was different, thus supporting the conclusion that there were perceived differences based on the gender of the teacher. While administrators’ and

teachers' perceptions of the influence of male teachers had variations, the four constructs of influence were pervasive. Role Models, relationships, classroom management, and achievement/learning each have a unique dimension and connection to previous and future research in the area of teacher gender. Each construct was discussed in the following sections.

### Role Model

Male teachers have been universally seen as a solution to the achievement gap between male and female students (McGrath & Sinclair, 2013). There is a common belief that there is a need for more male teachers, and that school leaders seek them to serve as role models for both male and female students (McGrath & Sinclair, 2013; Ponte, 2012).

Paredes (2012) conducted a quantitative study in which student gender, teacher gender, and achievement were examined. The main study, although it utilized a school-level growth measure of student achievement rather than individual student data, had findings that were somewhat parallel to that of Paredes (2012). Paredes found that teacher gender had a significant impact when female students were matched to female teachers; no impact was found when male teachers were matched to male students. The main study found that there was not a significant influence of the perceptions about male teacher impact of role models on student growth performance. Paredes's study, conducted in Chile, also noted socio-economic status of the student as a major influence. Although the main study used the school-level socio-economic indicators, the individual student levels were not included in the study.

Another study conducted previously to explore the need for male teachers revealed five main areas that students and parents identified: Role models, father figures, relatability, assisting with sex education instruction, and building experience with men for female students (McGrath & Sinclair, 2013). The four constructs examined in the current study were similar to the constructs identified in McGrath and Sinclair's (2013) study. Results from the PTGI indicated that administrators and teachers both perceive that male teachers served as better role models for male students (3.73) than female teachers (2.47). However, these results were contrary to McGrath and Sinclair's (2013) study when examining the influence of male teachers as role models for female students. Administrators and teachers indicated that female teachers were better role models for female students (3.17) than male teachers (2.67); it should be noted that the results for female teachers to male students (2.47) were lower than male teachers to female students (2.67), thus potentially demonstrating the perception that male teachers have a better influence as a role model with female students.

The study findings reinforced the perception that administrators and teachers continue to see male teachers as role models for male and female students. However, the correlation analysis did not show a relationship between role model influence and SGP in ELA as measured by the Georgia Milestones. Past studies have examined this construct at the student to teacher level with achievement scores at the teacher to student level. The current study measured the SGP at the school level.

#### Relationship

Student learning outcomes and the connection of the relationship between teacher and student to those outcomes continues to be a primary topic for research (Barile et al.,



2012; Cohen & Higgins-D'Alessandro, 2013; Opdenakker et al., 2012). The current research examined the perceptions of administrators and teachers of the influence of male teachers on SGP of male students in ELA. Although numerous studies have examined the relationship of teacher to student using student perceptions, Spilt et al. (2012) conducted a quantitative study that examined gender matching and the quality of teacher-student relationships. The findings from the study indicated that female teachers had higher ratings of closeness with female students. Both male and female teachers indicated that they had less conflict with female students.

The perceptions of administrators and teachers on the influence of gender, rated the areas of nurturing and sensitivity, patience, and caring for male and female teachers. Female teachers were rated consistently higher in all areas than their male counterparts. In the areas of nurturing and sensitivity, females (4.11) scored higher than males (3.68). In the area of patience, female and male teachers scored almost equally, with females (3.95) scoring slightly higher than males (3.91). Finally, in the area of caring, female teachers scored higher (4.09) than male teachers (3.91). Split et al. (2012) did match data on the student and teacher level, whereas the current study matched data at the school level.

Split et al. (2012) measured the impact of gender and relationships but did not make the connection to student achievement. McCormick et al. (2013) examined the potential link between relationships and student achievement. In the study, teachers rated their relationships on a student level and achievement was measured through Woodcock-Johnson III Tests of Achievement. McCormick et al. (2013) found that teacher quality of relationships had an impact in mathematics scores, but not in reading. The current study

only examined ELA but indicated similar findings with the perceptions of male student influence in relationships not having a significant relationship to the male SGP at the school level.

In their original study, McCormick and O'Connor (2014) did not include gender in their research design. They continued their study and included gender of the student in the examination of teacher relationships and achievement. The findings indicated that teacher closeness impacted math achievement, but not reading achievement. When the administrators and teachers were examined on the influence of male teachers' relationships to the male students' SGP for ELA, there was no relationship to a statistically significant level. The measurement for math was not examined in the current study.

#### Classroom Management

Classroom management was viewed as a cornerstone to effective instruction and climate (Kaufman et al., 2014; Martin et al., 2016). There may be motivation on the part of school leaders to hire more male teachers, as they are seen as better classroom managers (Hjalmarsson & Löfdahl, 2014). Males have been perceived to have higher expectations and higher levels of proficiency of classroom management (Shaukat & Iqbal, 2012).

Hjalmarsson and Löfdahl (2014), conducted a qualitative study that examined the views male teachers had of their roles as teachers. They concluded that male teachers were expected to manage students better than their female counterparts (Hjalmarsson & Löfdahl, 2014). They also concluded that female teachers contributed to the perception of gender order based on their perceptions of the need for male teachers in schools

(Hjalmarsson & Löfdahl, 2014). The administrator and teacher perceptions in the current study (as collected by the Perceptions of Teacher Gender Influence) were inconsistent to the findings of Hjalmarsson and Löfdahl (2014). Females were rated at 3.96 while males were rated at 3.92 for the item, “The female/male teacher I have worked with uses effective classroom management strategies.” When teachers were rated regarding the use of resources and organization, males were rated 0.51 less than their female counterparts. In all areas of items measuring classroom management, female teachers were rated higher than their male counterparts. It was noteworthy that Hjalmarsson and Löfdahl’s (2014) study was qualitative and examined the views of male teachers, whereas the current study participants were primarily female.

The findings of perception data collected through the PTGI of the classroom management construct were inconsistent with the findings in the Sharukat and Iqbal (2012) study. In this study, the authors, Sharukat and Iqbal (2012), used the Teacher Self-Efficacy Scale survey to gather the self-perceptions of 198 teachers. Findings indicated that male teachers rated themselves as better classroom managers than female teachers (Sharukat & Iqbal, 2012). Neither of the studies conducted measured the influence of classroom management to student performance of growth. The current study did not show any significant correlation of the perceptions of male teachers in classroom management to male SGP in ELA as measured by the Georgia Milestones End of Course Assessment.

#### Achievement Learning

The achievement gap between male and female students has been the focus of many research studies. There have been long standing perceptions that the male

achievement gap may be related to the lack of male representation in the field of teaching (Burusic et al., 2012). There have been multiple attempts to measure the influence of teacher gender on student performance with varying results (Burusic et al., 2012; Dee, 2006).

Burusic et al. (2012) attempted to evaluate the influence of student to teacher gender matching through a large sample of students using the Croatian National Exam for Primary Schools. Study results indicated that there were not gender dependent implications for standardized assessments (Burusic et al., 2012). In other words, students did not perform better based on the gender of their teachers on standardized tests. This finding was consistent with the findings of the perceptions of administrators and teachers collected through the Perceptions of Teacher Gender Influence. Female teachers were rated higher (4.03) than male teachers (3.76) for producing better outcomes in reading. In addition, although the rating for producing high growth was almost the same for males (3.68) and females (3.70), there was no statistically significant correlation between the perceptions of male teachers in the areas of achievement/learning on the male SGP for ELA as measured by the Georgia Milestones End of Course Assessment.

The influence of teacher gender and achievement was explored through a study conducted by Odunaike et al. (2013). In this study, the researchers concluded that there was a relationship between teacher gender and achievement. The current study did not support those findings. It is important to note that the Odunaike et al. (2013) study was done in Nigeria, and the current study was conducted in Georgia in the United States. The potential impact of cultural and gender role difference could have significantly altered the outcomes of the study.

## Theoretical Framework

The study results were also examined against the theoretical framework presented in Chapter I. Social Cognitive Theory (Bussey & Bandura, 1999) was a theory that would support the importance of the presence of male teachers in a school for male students. Social Cognitive Theory (Bussey & Bandura, 1999) indicated that children create their views of gender and the world through a reciprocal interaction of three areas: environmental factors, behavioral factors, and personal factors.

Bussey and Bandura (1999) discussed the importance of the influence of role models as being a key impact for transmitting values, actions in the creation of gender views, and attitudes of thoughts. The current study added to this work, as administrators and teachers both indicated that male teachers served as better role models for male students, indicating a mean rating value of 3.75 on a five-point scale compared to female teachers being better role models for males having a 2.47 on a five-point scale rating.

In addition to Social Cognitive Theory, Bem (1983) found that an individual child processes gender category as schemas. In other words, if a schema were not existent in the child's world, then it would not be a part of the child's view of that schema. For example, if there were not enough male teachers in a school, children would only see teaching as a female profession. Bem's (1983) Gender Schema Theory was supported in the current study by the number of participant responses that indicated that there were enough male teachers in their school. The mean rating of PTGI survey for this item was 1.89 on a five-point scale, indicating that participants disagreed with the item.

The final section of the triad is that of behavioral or relationships (Bussey & Bandura, 1999). This section focuses on how students' relationship with others affects

their choices and behaviors (Bussey & Bandura, 1999). The impact of Stereotype Threat Theory could influence these relationships and perhaps the student behaviors (Steele & Aronson, 1995). The triad elements of Bussey and Bandura's (1999) Social Cognitive Theory interact continuously to create the way in which a child filters and interacts with the surrounding world. The current study examined the manner in which male teachers, or the lack thereof, would influence a student's efficacy through one year of academic growth on the SGP as measured by the Georgia Milestones End of Grade Assessment. Students' views, values, and efficacy were built over time. As this current study did not follow students over time, it was not possible to measure the impact of male teachers to adulthood when a final schema or triad could be fully developed. It was not possible to determine if having even one male teacher might have prevented stereotype threat for male students connected to learning being a female connected activity.

### Conclusions

A quantitative correlational study was designed to evaluate the perceptions of elementary administrators and teachers of the influence of male teachers on male students' achievement growth. The study was designed to examine the four areas of influence of male teachers: Role models, relationships, classroom management, and achievement/learning. There were unique research questions that addressed each of the constructs.

### Relationship

The connection between student learning and student to teacher relationship has been a key focus to improve student outcomes for many years (Barile et al., 2012; Cohen & Higgins-D'Alessandro, 2013; Opdenakker et al., 2012). The teacher to student

relationship was presented as more critical, more than just the teacher serving as a role model (Martin et al., 2010). A unique research question was developed to examine the perceptions of administrators and teachers of male teachers' influence of relationships on the male SGP for ELA as measured by the Georgia Milestones End of Grade Assessment.

RQ 1: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through relationships with their students and the male students' ELA growth percentile scores?

Results from the Perceptions of Teacher Gender Influence indicated that administrators and teachers rated male teachers as patient with their students. Male teachers were rated 0.18 less than female teachers on the item which measured care. Sensitivity was the only area within the relationship construct where male teachers were rated 0.33 points lower than female teachers. This result indicated that there was a perception that male teachers were less sensitive than female teachers. Overall, male teachers were rated as having qualities that represented good relationships with students. In the case of relationships, an examination of between correlations did not find a statistically significant influence on the male SGP in ELA on the Georgia Milestones End of Grade Assessment. This finding does not indicate that the influence of relationships with male students is not important. The SGP was used which is a measure of student growth. The results could be different if a measure of achievement had been used. In addition, the current study used school level data and did not match male teacher to male student to measure SGP at the classroom level.

## Role Model

The call to hire more male teachers to be role models has been pervasive (Brownhill, 2013; McGrath & Sinclair, 2013). When given the option to choose a teacher as a role model, male and female children were found to choose male teachers (Estrada et al., 2015). An individual research question was developed to examine the perceptions of administrators and teachers of male teachers' correlation of teachers as role models on the male SGP for ELA as measured by the Georgia Milestones End of Grade Assessment.

RQ 2: Is there a correlation between teacher and administrator perceptions of the influence of male teachers being role models to their students and the male students' ELA growth percentile scores?

Results from the Perceptions of Teacher Gender Influence indicated that male teachers were better role models for male students. This item was rated at a 3.73 whereas female teachers make better role models for female students was rated as 2.47. This result indicated that administrators and teachers perceive that male teachers serving as role models was more impactful than female teachers serving as role models for female students. There was only a 0.01 difference in the rating between the perceptions of female teachers (4.07) and male teachers (4.06) on the item measuring the teacher serving as an effective role model.

Correlation analysis showed that a statically significant influence on male SGP in ELA on the Georgia Milestones End of Grade Assessment was not found for the construct of role model, which was measured through the perceptions of both administrator and teachers. Student Growth Percentage was the measure of a student's growth compared to a cohort of peers based on past performance. Elementary students



only have two years of data on which this percentage is based. The relationships that male teachers have with male students could impact overall achievement. In addition, relationships were measured between individual students with an individual teacher match. The current study examined data at the school level, which could potentially have influenced the significance of the results.

### Classroom Management

Classroom management was presented as an essential element to a positive classroom environment (Martin et al., 2016; Rimm-Kaufman et al., 2014). It is possible that leaders hire more male teachers due to their belief that they were better classroom managers (Hjalmarsson & Löfdahl, 2014). In the current study, two research questions were developed to examine the perceptions of administrators and teachers of male teachers' influence of classroom management on the male SGP for English Language Arts as measured by the Georgia Milestones End of Grade Assessment.

RQ 3: Is there a correlation between teacher and administrator perceptions of the influence of male teachers through their classroom management and the male students' ELA growth percentile scores?

Results from the current study did not reinforce findings from the review of literature in Chapter II. Administrators and teachers rated female teachers slightly higher at 3.96 as compared to male teachers at 3.92. In the area of organization, female teachers were rated 0.51 higher than male teachers. Female teachers were also rated higher in the area of clear expectations for classroom behavior at 4.07, whereas males were rated 3.98. It should be noted that the results could have been different if the number of male teachers and administrators were equally sampled. It was clear that administrators and

teachers perceived males as effective classroom managers yet not better than female teachers.

For the construct of classroom management, both the perceptions of the administrators and teachers, examined through a correlation analysis and non-linear regression, did not find a statistically significant influence on the male SGP in ELA on the Georgia Milestones End of Grade Assessment. This does not indicate that classroom management does not impact student growth. However, it may indicate that classroom management was a combination of more than one simple element that may have a collective impact on overall achievement but does not impact achievement growth of male students more greatly than female students.

#### Achievement/Learning

The findings on the impact of teacher's gender matched with student's gender affecting achievement were mixed. Although there were some studies that indicate that the same gender of teacher and student improve achievement results (Dee, 2006), there were others that indicate that these mixed findings were related to inconsistent measures to evaluate achievement (Burusic et al., 2012). There continues to be the perception that achievement gap between male and female students was in part related to a lack of male teachers (Burusic et al., 2012).

A research question was developed to examine the perceptions of administrators and teachers of male teachers' influence of achievement/learning on the male SGP for ELA as measured by the Georgia Milestones End of Grade Assessment.

RQ 4: Is there a correlation between teacher and administrator perceptions of the influence of male teachers on their students achievement and learning and the male students' ELA growth percentile scores?

Findings from the administrator and teacher perceptions collected in the area of teacher influence on achievement/ learning aligned with previous research, which also indicated inconsistent findings. On the item indicating that teachers produced positive outcomes in reading, female teachers were rated at 4.03, and where male teachers were rated lower at 3.76, indicating that the administrators and teachers perceived that female teachers were better at helping students achieve at higher levels in reading. Males and females rated almost the same. With female ratings measuring slightly higher by 0.06 points on the item that measured high growth in reading on the Georgia Milestones assessment. Using the results from this one item, it could be concluded that male and female teachers were perceived to be almost equal in the area of success in providing reading instruction. In response to the item that asked participants to rate if students learn best from a male or female teacher, there was only a 0.06 difference, with slightly higher female rating. Similar to the review of research in Chapter II the perceptions gathered were mixed; some areas rated male and female teachers almost equal, and others rated female teachers higher.

For the construct of achievement/ learning, both the perceptions of administrators and teachers were examined through an analysis of correlation and non-linear regression. There was not a statistically significant influence of the administrators' and teachers' perceptions of male teachers on the male SGP in ELA on the Georgia Milestones End of Grade Assessment. This result could be in part due to a variety of interpretations of how

achievement/learning should be measured. Growth does not measure overall achievement. The current study indicates that administrators and teachers do not perceive male teachers' influence student growth in ELA, student achievement can be measured using other measures than the SGP. School districts have used other measures of student achievement, such as the Woodcock Johnson III Cognitive Ability Measure and the Weschler Intelligence Scale for Children. In addition, in the state of Georgia districts have used the Georgia Milestones End of Grade and End of Course assessments as achievement measures.

### Implications

As indicated in the Statement of the Problem, there is a significant shortage of male teachers. District and school leaders continued to seek male teachers, without a clear reason for their choices. The results from this study indicate that the perception for a need for more male teachers continues to be present. Over 80% of teachers and administrators indicated that they did not have enough male teachers in their schools. There continues to be a perception of need to increase the number of male teachers; however, an instrument was not an instrument readily available that collected perceptions of teachers by gender. The development of the study survey Perceptions of Teacher Gender Influence, adapted from the survey "Teacher Perceptions of Gender-Based Differences Among Elementary Teachers"(Wood, 2012), created a quantitatively valid and reliable instrument that can be used in future studies. The instrument developed in this study was completed by administrators and teachers; however, the instrument could be used to collect the perceptions of teachers by other groups such as parents, students, and community members. The addition of this survey to the educational community

creates a resource that can support the expansion of the body of research related to the connection of gender to the effectiveness of teaching and student outcomes.

The constructs that were examined through the perceptions of administrators and teachers for the influence of teachers with students were role model, relationship, classroom management, and achievement/learning. There were no significant findings when using school level data by testing the correlation of these perceptions with the final outcome of student growth. The constructs of how a teacher influences a student can be considered to be a direct influence at the classroom level. The study examined school level data which potentially measured a mix of direct and indirect influences. For example, some of the students in the school may have had male teachers and others may not. This study can be used by researchers in the future to examine data on a student to teacher alignment, rather than school level data.

School and districts need to continue to explore and address the issue of gender bias in the process of teaching and learning. Social Cognitive Theory (Bussey & Bandura, 1999) indicates that a student's cultural background, through the interrelation of the three main influences, affects the manner in which a student develops their views of gender and the world, which eventually impacts learning. Additional study could explore these impacts through the four constructs of teacher influence.

As schools continue to work towards the goal of improving student learning, the focus on achievement gaps between subgroups of students increases. In the state of Georgia, schools continue to create Continuous School Improvement Plans that specifically plot action steps to address achievement gaps between subgroups of students. Female students continue to outperform their male counterparts (Voyer & Voyer, 2014).

School leaders attempt to mitigate the achievement gap between male and female students by attempting to hire more male teachers. The current study was created due to a lack of research that measured the perceptions of administrators and teachers of the influence of male teachers. In past research, achievement measures were primarily summative measures. This research was designed to use a student growth measure, SGP, which was derived from student performance on the Georgia Milestones End of Grade Assessment.

#### Contributions

The key contribution of this study was that it supported the inconclusive nature of the perception that male elementary teachers influence the academic outcomes of students. The data did support that administrators and teachers have the perception that there are not enough male teachers but does not find a significant influence on student growth. Although participants rated male teachers as being the best role models for male students, this finding did not lead to an increase in SGP by the school. The issue in this finding was that decisions could be made based strictly on perceptions, and school leaders may not be making data driven hiring decisions.

Another important contribution is the validation of a survey that measures administrators' and teachers' perceptions of the male teachers' influence on student achievement. The validation of this instrument creates opportunities for future research. The measurement of the four constructs of teacher influence can be used as independent variables in future studies related to achievement or other areas that impact student learning. Although the current study collected the perceptions of administrators and teachers, future studies could examine the perceptions of students or families of the

influence of teachers, either male or female. The addition of another valid and reliable scale to use in educational research is a large contribution to the field of study.

#### Presentation of Findings

The findings from the study were presented to the Chief Academic Officer for the selected school district. The data presented allowed the school district to consider current perceptions and the relationship to the SGP. In addition, these data were helpful as the school system was developing foundational expectations for classrooms. The four constructs examined (i.e., relationships, role model, classroom management and learning achievement) were some of the major classroom influencers considered to create the areas for guidelines for classroom teachers. In addition, the findings were presented to the Chief of Human Resources for consideration in recruitment and retention practices of the district as they planned for the following school year.

The researcher has found additional potential publishing and presentation opportunities. In addition to local and state leadership conferences the researcher sought publication opportunities with the *Journal of Gender Studies* and *The Elementary School Journal*.

#### Limitations

Sampling was one of the limitations for this study, in regard to geography, size, and representation. The study was conducted in the state of Georgia, which is geographically situated in the south-eastern region of the United States. In addition, the study was conducted in only one school district in Georgia. Sampling across multiple regions of the United States, or in multiple regions of the State of Georgia, could have given a broader perspective of the perceptions of administrators and teachers.

The sample size serves as a limitation for the study. The survey return rate was measured at 10% however, a larger sample size could have presented alternative findings. The survey was administered the week before the end of the school year, which could account for the lower return rate. The final limitation for the study sample was the representation of gender. Although the sample represented the population with the percentage of males and females who participated in the study, an equal number of male and female administrators and teachers could potentially yield different results. In addition, the small number of administrators represented in the study was limiting. Increasing the number of administrators could have given the study different findings.

The current study did not measure the relationship between the student and the teacher, but rather the perception that teachers and administrators had of male teachers' ability to influence student learning through the four constructs. Through the literature review the importance of relationships was consistent. The current study did not factor in the relationship between the individual student and their assigned teacher. This alignment could have revealed additional information about the differences between male and female teachers and how they impact student learning outcomes.

Using the final dependent variable of the SGP as a measure for student achievement was a limitation. In elementary schools, this measure was based on just a few years of data. Although it was a measure of how much a student's academic score had grown compared to the student's peers who scored similarly in past years, it does not account for overall achievement. This measure also does not account for students' ability or capacity to learn at the same rate a pace as their peers. The Georgia Milestones End of Grade assessment, unlike achievement assessments in other states or nations, was not a



high stakes achievement assessment. Students do have motivation to “pass” the test, but the assessment has limits so the motivation to accelerate growth over time was not present for students. In addition, this study did not attempt to measure the motivation that a teacher can provide to a student’s academic growth. The teacher that is successful in motivating students to learn could potentially have different student learning outcomes than the teacher who is seen as less motivating by students. The data from this study were not comparable to other studies that utilized achievement measures as a dependent variable.

### Recommendations

By collecting the perceptions of administrators and teachers, the study was able to confirm the perception that there was an underrepresentation of male teachers in elementary education. However, there were not any significant findings when examining the influence of the perceptions of male teachers and the SGP as measured by the Georgia Milestones End of Grade Assessment at the school level. The question of what warrants the perception of administrators and teachers that more male teachers were needed remains unclear and unanswered conclusively. The results of this study, however, open possibilities for future research.

A mixed methods study where the study survey instrument could be used quantitatively to directly relate to student achievement data. Collecting data that connects the male teacher to the male students that they taught would potentially measure the influence of the variables of role model, relationship, classroom management, and achievement/ learning at the classroom level. In this study, the use of an achievement, rather than growth measurement, could be employed. These quantitative findings could

be combined with the qualitative methodology of focus groups with teachers and students from selected schools and classrooms. This combination could give insight into the rationale of the perceptions of male and female teachers, potentially answering the question of how they might influence the achievement of male students.

1. A correlational study could be replicated with a more expansive sample population by replicating the current study with a sample population that is equal in gender representation. In addition, a sample population that is larger in size and represents multiple regions of the United States or even international population could be implemented. Utilizing an academic measure of learning that is based in achievement rather than growth has potential for future research.
2. Researchers can conduct a mixed methods study by working backwards and identifying schools through purposive sampling where male achievement has been higher than state or national average, as well as schools that were lower than state and national average. In those schools, the perceptions of male and female teachers could be measured using the Perceptions of Teacher Gender Influence. Through focus groups, those perceptions could then be identified in the schools where male achievement was higher. These focus groups would potentially identify areas that leaders could cultivate within schools to support a higher level of learning for male students, thus closing the male to female achievement gap.
3. In a quantitative study, a cohort of students could be followed over time. Student achievement or performance data could be collected and connected to

the teacher each year, to measure student achievement and the influence of male teachers on a student over time.

### Concluding Thoughts

To address the male to female achievement gap and reform the educational system in the united states, educators must participate in self-analysis of instructional practice. Adding male representation to the teaching profession may have long term gains, by influencing students' environments and creating role models for males. However, educators need to continue to evaluate the perceptions they have of male teachers and their ability to be an immediate solution to raising achievement levels of male students. Although there has been solid evidence to support the impact of a more balanced representation of gender in the teaching profession, teacher recruitment and retention need to be focused on the qualities of effective teachers, rather than gender alone. To truly make an impact, educators need to focus on providing research based instructional strategies in an environment that supports all learners, male or female.

## REFERENCES

- Araujo, M. C., Carneiro, P., Cruz-Aguayo, Y., & Schady, N. (2016). Teacher quality and learning outcomes in kindergarten. *The Quarterly Journal of Economics*, *131*(3), 1415-1453.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, *44*(9), 1175-1187.
- Barile, J. P., Donohue, D. K., Anthony, E. R., Baker, A. M., Weaver, S. R., & Henrich, C. C. (2012). Teacher–student relationship climate and school outcomes: Implications for educational policy initiatives. *Journal of Youth and Adolescence*, *41*(3), 256-267.
- Beatty, A. S. (2013). Schools alone cannot close achievement gap. *Issues in Science and Technology*, *29*(3).
- Baye, A., & Monseur, C. (2016). Gender differences in variability and extreme scores in an international context. *Large-scale Assessments in Education*, *4*(1), 1-16.
- Bem, S. (1983). Gender schema theory and its implications for child development: Rising gender-a schematic children in a gender-schematic society. *Signs*, *8*(4), 598-616.
- Bentler, P.M. (1990), Comparative fit indexes in structural models. *Psychological Bulletin*, *107*(2), 238-246.
- Bentler, P. M., & Bonnet, D. C. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, *88*(3), 588-606.
- Bhana, D., & Moosa, S. (2016). Failing to attract males in foundation phase teaching: An issue of masculinities. *Gender & Education*, *28*(1), 1–19.

- Birnbaum, L. (2016). Single-gendered male classrooms: Do they have an effect on student achievement? (Master's thesis). Retrieved from Ontario Institute for Studies in Education of the University of Toronto
- Brownhill, S. (2014). 'Build me a male role model!' A critical exploration of the perceived qualities/characteristics of men in the early years (0–8) in England. *Gender and Education*, 26(3), 246-261.
- Burgess, S., & Greaves, E. (2013). Test scores, subjective assessment, and stereotyping of ethnic minorities. *Journal of Labor Economics*, 31(3), 535-576.
- Burusic, J., Babarovic, T., & Seric, M. (2012). Differences in elementary school achievement between girls and boys: Does the teacher gender play a role? *European Journal of Psychology of Education*, 27(4), 523-538.
- Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review*, 106(4), 676.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81.
- Coughlin, K. B. (2013). An analysis of factor extraction strategies: A comparison of the relative strengths of principal axis, ordinary least squares, and maximum likelihood in research contexts that include both categorical and continuous variables (Doctoral dissertation). Retrieved from <http://scholarcommons.usf.edu/etd/4459>
- Cerny, C. A., & Kaiser, H. F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioral Research*, 12(1), 43-47.

- Cherng, H. Y. S., & Halpin, P. F. (2016). The importance of minority teachers: Student perceptions of minority versus white teachers. *Educational Researcher*, 45(7), 407-420.
- Chick, K., & Corle, S. (2012). A gender analysis of NCSS Notable Trade Books for the intermediate grades. *Social Studies Research and Practice*, 7(2), 1-14.
- Cooper, K. S., & Miness, A. (2014). The co-creation of caring student-teacher relationships: Does teacher understanding matter? *The High School Journal*, 97(4), 264-290.
- Creswell, J. W. (2009). Mapping the field of mixed methods research. *Journal of Mixed Methods Research*, 3(2), 95-108.
- Crisp, T., & King, J. R. (2016). "I just love kids... Is that a problem?": Desire, suspicion, and other good reasons men don't choose early childhood education. *Taboo: The Journal of Culture and Education*, 15(1), 6.
- Dee, T. S. (2015). Social identity and achievement gaps: Evidence from an affirmation intervention. *Journal of Research on Educational Effectiveness*, 8(2), 149-168.
- Dee, T. S., & Wyckoff, J. (2015). Incentives, selection, and teacher performance: Evidence from IMPACT. *Journal of Policy Analysis and Management*, 34(2), 267-297.
- de Jong, R., Mainhard, T., van Tartwijk, J., Veldman, I., Verloop, N., & Wubbels, T. (2014). How pre-service teachers' personality traits, self-efficacy, and discipline strategies contribute to the teacher–student relationship. *British Journal of Educational Psychology*, 84(2), 294-310.

- Dickey, M. W. (2014). *Gender-specific instructional strategies and student achievement in 5th grade classrooms* (Doctoral dissertation). University of South Carolina, Columbia, SC.
- Ellefsen, K. L. (2015). *Content analysis of archetypal portrayal of females in picture books read in preschool classrooms* (Doctoral dissertation). Retrieved from Dissertations & Theses @ Walden University. (UMI No. 1695272320).
- Estrada, J. D., García-Ael, C., & Martorell, J. L. (2015). Gender differences in adolescents' choice of heroes and admired adults in five countries. *Gender and Education, 27*(1), 69-87.
- Falch, T., & Naper, L. R. (2013). Educational evaluation schemes and gender gaps in student achievement. *Economics of Education Review, 36*, 12-25.
- Fordice, D. J., & Nielsen, L. E. (2013). Constructing gender: Contradictions in the life of a male elementary teacher. *Journal of Research in Education, 23*(1), 20–33.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2011). *How to design and evaluate research in education*. New York, NY: McGraw-Hill.
- Frary, R. B. (2012). *A brief guide to questionnaire development*. Retrieved from [http://www.indiana.edu/~educy520/sec5982/week\\_3/questionnaire\\_development\\_frary.pdf](http://www.indiana.edu/~educy520/sec5982/week_3/questionnaire_development_frary.pdf)
- George, D., & Mallery, P. (2010). *SPSS for Windows step by step. A simple study guide and reference*. Boston, MA: Pearson.
- Georgia Department of Education. (2011). *A technical overview of the student growth percentile methodology: Student growth percentiles and percentile growth*

*project on trajectories*. Retrieved from <http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/Georgia-Milestones-Assessment-System.aspx>

Georgia Department of Education. (2018). *Assessment*. Retrieved from <http://www.gadoe.org/Curriculum-Instruction-and-assessment/Assessment/Pages/Georgia-Milestones-Assessment-System.aspx>

Georgia Department of Education. (2019). *What is the Lexile framework?* Retrieved from <http://www.gadoe.org/Curriculum-Instruction/Pages/Lexile-Framework.aspx>

Georgia Governor's Office of Student Achievement (2017). *Downloadable data* [Data file]. Retrieved from <https://gosa.georgia.gov/downloadable-data>

Gershenson, S., Holt, S. B., & Papageorge, N. W. (2016). Who believes in me? The effect of student–teacher demographic match on teacher expectations. *Economics of Education Review*, 52, 209-224.

Global Education Monitoring Report Team. (2014). *Education for all Global Monitoring Report: Teaching and learning: achieving quality for all*. Paris, France: UNESCO.

Harper, S. R., & Kuykendall, J. A. (2012). Institutional efforts to improve black male student achievement: A standards-based approach. *Change: The Magazine of Higher Learning*, 44(2), 23-29.

Hartley, B. L., & Sutton, R. M. (2013). A stereotype threat account of boys' academic underachievement. *Child Development*, 84(5), 1716-1733.

Heyder, A., & Kessels, U. (2013). Is school feminine? Implicit gender stereotyping of school as a predictor of academic achievement. *Sex Roles*, 69(11-12), 605-617.



- Hjalmarsson, M., & Löfdahl, A. (2014). Being caring and disciplinary—male primary school teachers on expectations from others. *Gender and Education, 26*(3), 280-292.
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *The Electronic Journal of Business Research Methods, 6*(1), 53-60.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55.
- Ingersoll, R., Merrill, L., & Stuckey, D. (2014). Seven trends: The transformation of the teaching force. *Consortium for Policy Research in Education, 4*, 31.
- Hox, J. J., Moerbeek, M., & van de Schoot, R. (2018). *Multilevel analysis. Techniques and applications*. New York, NY: Routledge.
- Johnson, R. L., & Morgan, G. B. (2016). *Survey scales: A guide to development, analysis, and reporting*. New York, NY: Guilford Publications.
- Jupp, J. (2013). What are the progressive masculinities? Counternarratives and contradictions of committed white male teachers in inner-city schools. *Gender and Education, 25*(4), 413-431.
- Kim, Y., & Weseley, A. J. (2017). The effect of teacher gender and gendered traits on perceptions of elementary school teachers. *Journal of Research in Education, 27*(1), 114–133.
- Koomen, H. M., Verschueren, K., van Schooten, E., Jak, S., & Pianta, R. C. (2012). Validating the Student-Teacher Relationship Scale: Testing factor structure and

- measurement invariance across child gender and age in a Dutch sample. *Journal of School Psychology, 50*(2), 215-234.
- Könings, K. D., Seidel, T., Brand-Gruwel, S., & van Merriënboer, J. J. (2014). Differences between students' and teachers' perceptions of education: profiles to describe congruence and friction. *Instructional Science, 42*(1), 11-30.
- Lai, A., & Cooper, Y. (2016). Untangling gender divides through girly and gendered visual culture. *Journal of Social Theory in Art Education, 36*(1), 11-16.
- Latsch, M., & Hannover, B. (2014). Smart girls, dumb boys!? How the discourse on "Failing Boys" impacts performances and motivational goal orientation in German school students. *Social Psychology, 45*, 112–126.
- Legewie, J., & DiPrete, T. A. (2012). School context and the gender gap in educational achievement. *American Sociological Review, 77*(3), 463-485.
- Lietz, P. (2010). Research into questionnaire design. *International Journal of Market Research, 52*(2), 249-272.
- Lovett, T. (2017). “Going going.....” why are males underrepresented in pre-service primary education courses at university? *International Electronic Journal of Elementary Education, 6*(2), 347-356.
- Lowe, R. J. (2013). Wolves in sheep's clothing: Problematic representations of gender in authentic EFL vocabulary texts. *Journal and Proceedings of the Gender Awareness in Language Education, 6*, 6-22.
- Mallozzi, C. A., & Campbell Galman, S. (2014). Guys and ‘the rest of us’: tales of gendered aptitude and experience in educational carework. *Gender and Education, 26*(3), 262-279.

- Martin, A. J., Marsh, H. W., Cheng, J. H., & Ginns, P. (2010). Fathers and male teachers: Effects on boys academic and non-academic development. *Childhood Education*, 86(6), 404-408.
- Martin, C. L., Ruble, D. N., & Szkrybalo, J. (2002). Cognitive theories of early gender development. *Psychological Bulletin*, 128(6), 903-933.
- Martin, N. K., Schafer, N., McClowry, S., Emmer, E. T., Brekelmans, M., Mainhard, T., & Wubbels, T. (2016). Expanding the definition of classroom management: Recurring themes and new conceptualizations. *Journal of Classroom Interaction*, 51(1), 36-45.
- Martinez, A. R. (2014). *An exploration of gender impacts through the portrayal of teachers in bestselling picturebook* (Honors thesis). Retrieved from University of Central Florida Showcase of Text, Archives, Research and Scholarship (1593)
- McCormick, M. P., & O'Connor, E. E. (2015). Teacher-child relationship quality and academic achievement in elementary school: Does gender matter? *Journal of Educational Psychology*, 107(2), 502-517.
- McCormick, M. P., O'Connor, E. E., Cappella, E., & McClowry, S. G. (2013). Teacher-child relationships and academic achievement: A multilevel propensity score model approach. *Journal of School Psychology*, 51(5), 611-624.
- McDonald, R. P., & Ho, M. H. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods*, 7(1), 64-82.
- McGrady, P. B., & Reynolds, J. R. (2013). Racial mismatch in the classroom: Beyond Black-White differences. *Sociology of Education*, 86(1), 3-17.

- McGrath, K., & Sinclair, M. (2013). More male primary-school teachers? Social benefits for boys and girls. *Gender and Education, 25*(5), 531-547.
- Mitrano, B. S. (2014). Men, teaching, and caring: Perspectives and possibilities. *Schools, 11*(2), 306-320.
- Moosa, S., & Bhana, D. (2017). Men managing, not teaching Foundation Phase: Teachers, masculinity and the early years of primary schooling. *Educational Review, 69*(3), 366–387.
- Nichols, J. D., & Nichols, G. W. (2014). Perceptions of school leaders: Exploring school climate data based on principal gender and student achievement. *Advancing Women in Leadership, 34*, 28-37.
- Odunaike, K. O., Ijaduola, K. O., & Amoda, M. B. (2013). Empirical analysis of teachers' gender and secondary school students' academic performance. *Asian Economic and Financial Review, 3*(3), 355-362.
- Opdenakker, M. C., Maulana, R., & den Brok, P. (2012). Teacher–student interpersonal relationships and academic motivation within one school year: Developmental changes and linkage. *School Effectiveness and School Improvement, 23*(1), 95-119.
- Osborne, J., & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research & Evaluation, 8*(2), 1-9.
- Osborne, J. W. (2000). Advantages of hierarchical linear modeling. *Practical Assessment, Research, and Evaluation, 7*, 1-3.

- Owens, J. (2016). Early childhood behavior problems and the gender gap in educational attainment in the United States. *Sociology of Education*, 89(3), 236-258.
- Pahlke, E., Hyde, J. S., & Allison, C. M. (2014). The effects of single-sex compared with coeducational schooling on students' performance and attitudes: A meta-analysis. *Psychological Bulletin*, 140(4), 1042.
- Paredes, V. (2014). A teacher like me or a student like me? Role model versus teacher bias effect. *Economics of Education Review*, 39, 38-49.
- Park, H., Behrman, J. R., & Choi, J. (2013). Causal effects of single-sex schools on college entrance exams and college attendance: Random assignment in Seoul high schools. *Demography*, 50(2), 447-469.
- Peterson, N. (2014). The 'good', the "bad" and the "ugly"? Views on male teachers in foundation phase education. *South African Journal of Education*, 34(1), 1-13.
- Petrocelli, J. V. (2003). Hierarchical multiple regression in counseling research: Common problems and possible remedies. *Measurement and Evaluation in Counseling and Development*, 36(1), 9-22.
- Psychology Dictionary. (2018). Retrieved from <https://psychologydictionary.org>
- Ponte, E. (2012). 'Wow, this is where I'm supposed to be!' Rethinking gender construction in teacher recruitment. *Asia-Pacific Journal of Teacher Education*, 40(1), 43-53.
- Riley, T. (2014). Boys are like puppies, girls aim to please: How teachers' gender stereotypes may influence student placement decisions and classroom teaching. *Alberta Journal of Educational Research*, 60(1), 1-21.

- Rimm-Kaufman, S. E., Baroody, A. E., Larsen, R. A., Curby, T. W., & Abry, T. (2015). To what extent do teacher–student interaction quality and student gender contribute to fifth graders’ engagement in mathematics learning? *Journal of Educational Psychology, 107*(1), 170-185.
- Şahin, F., & Sak, R. (2016). A comparative study of male and female early childhood teachers’ job satisfaction in turkey. *Early Childhood Education Journal, 44*(5), 473–481.
- Saigol, M., & Danish, S. (2016). Feminisation of teaching: Factors affecting low male participation in early childhood teaching at private schools in Pakistan. *Journal of Education and Educational Development, 3*(2), 147-178.
- Sari, M. (2017). Teachers' views on co-education: Co-education or single-sex education? *Acta Didactica Napocensia, 10*(3), 35-44.
- Scherpenzeel, A. C., & Saris, W. E. (1997). The validity and reliability of survey questions: A meta-analysis of MTMM studies. *Sociological Methods & Research, 25*(3), 341-383.
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational Research, 99*(6), 323-338.
- Shaukat, S., & Iqbal, H. M. (2012). Teacher self-efficacy as a function of student engagement, instructional strategies and classroom management. *Pakistan Journal of Social & Clinical Psychology, 9*(3), 82-86.
- Skelton, C. (2012). Men teachers and the “feminized” primary school: A review of the literature. *Educational Review, 64*(1), 1-19.

- Sokal, L., Thiem, C., Crampton, A., & Katz, H. (2009). Differential effects of male and female reading tutors based on boys' gendered views of reading. *Canadian Journal of Education*, 32(2), 245-270.
- Spilt, J. L., Hughes, J. N., Wu, J. Y., & Kwok, O. M. (2012). Dynamics of teacher–student relationships: Stability and change across elementary school and the influence on children's academic success. *Child Development*, 83(4), 1180-1195.
- Spilt, J. L., Koomen, H. M., & Jak, S. (2012). Are boys better off with male and girls with female teachers? A multilevel investigation of measurement invariance and gender match in teacher–student relationship quality. *Journal of School Psychology*, 50(3), 363-378.
- Starr, C. R., & Zurbriggen, E. L. (2017). Sandra Bem's gender schema theory after 34 years: A review of its reach and impact. *Sex Roles*, 76(9-10), 566-578.
- Steele, C. M., & Aronson, J. A. (2004). Stereotype threat does not live by Steele and Aronson (1995) alone. *American Psychologist*, 59(1), 47-8.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69(5), 797-811.
- Suhr, D. D. (2006). *Exploratory or confirmatory factor analysis?* Retrieved from <https://support.sas.com/resources/papers/proceedings/proceedings/sugi31/200->
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Pearson.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.

- Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, 83(3), 357-385.
- Tucker, S. I. (2015). Three men and a maybe: Identity and privilege in male preservice elementary school teachers. *The Journal of Men's Studies*, 23(1), 3-20.
- Tufan, M. (2018). Public perceptions and the situation of males in early childhood settings. *Educational Research and Reviews*, 13(3), 111-119.
- Upadyaya, K., & Eccles, J. S. (2014). How do teachers' beliefs predict children's interest in math from kindergarten to sixth grade? *Merrill-Palmer Quarterly (1982-)*, 60(4), 403-430.
- U.S. Bureau of Labor Statistics. (2017). *Employment detail by occupation, race, gender*. Retrieved from <https://www.bls.gov/cps/cpsaat11.pdf>
- U.S. Census. (2017). *Quick facts* Retrieved from <https://www.census.gov/quickfacts/fact/table/████████████████████PST045217>
- U.S. Department of Education. (2018). *Every student succeeds act*. Retrieved from <https://www.ed.gov/ESSA>
- U.S. Department of Education. (2016). *2013-2014 Civil rights data collection: A first look*. Washington, DC: Author. Retrieved from <https://www2.ed.gov/about/offices/list/ocr/docs/2013-14-first-look.pdf>
- VanGeel, M., Keuning, T., Visscher, A. J., & Fox, J. P. (2016). Assessing the effects of a school-wide data-based decision-making intervention on student achievement growth in primary schools. *American Educational Research Journal*, 53(2), 360-394.



- Verma, R. K., & Kumari, S. (2016). Effect of self-confidence on academic achievement of children at elementary stage. *PARIPEX-Indian Journal of Research*, 5(1), 181-183.
- Voyer, D., & Voyer, S. D. (2014). Gender differences in scholastic achievement: A meta-analysis. *Psychological Bulletin*, 140(4), 1174-1205.
- Walkey, F. H., McClure, J., Meyer, L. H., & Weir, K. F. (2013). Low expectations equal no expectations: Aspirations, motivation, and achievement in secondary school. *Contemporary Educational Psychology*, 38(4), 306-315.
- Wang, Q., Yu, G., Pedram, C., & Chen, C. (2018). Higher self-esteem is linked to greater stereotype threat among academically low-achieving students. *Social Behavior and Personality: An International Journal*, 46(7), 1123-1132.
- Watson, A. (2017). "Male Delivery": A critical investigation of what boys have to say about the influence of male teachers on literacy engagement and achievement. *Educational Review*, 69(1), 102-117.
- Webb, M., & Thomas, R. (2015). Teachers' perceptions of educators' and students' role in closing the achievement gap. *National Forum of Teacher Education Journal*, 25(3), 1-8.
- Weaver-Hightower, M. B. (2011). Male preservice teachers and discouragement from teaching. *Journal of Men's Studies*, 19(2), 97-115.
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with non-normal variables: Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues and applications*. Newbery Park, CA: Sage.

- Winters, M. A., Haight, R. C., Swaim, T. T., & Pickering, K. A. (2013). The effect of same-gender teacher assignment on student achievement in the elementary and secondary grades: Evidence from panel data. *Economics of Education Review*, 34, 69-75.
- Wolter, I., Braun, E., & Hannover, B. (2015). Reading is for girls!?! The negative impact of preschool teachers' traditional gender role attitudes on boys' reading related motivation and skills. *Frontiers in Psychology*, 6, 1267-1278.
- Wood, T. D. (2012). Teacher perceptions of gender-based differences among elementary teachers. *International Electronic Journal of Elementary Education*, 4(2), 317-345.
- Zhang, W. (2017). *Male teachers in early childhood education: Why more men? A review of the literature. Culminating Projects in Child and Family Studies* (Master's thesis). Retrieved from The Repository at St. Cloud State.

APPENDICES

## Appendix A

## Pilot Study Survey

**Perceptions of Teacher Gender Influence**

Adapted from Teacher Perceptions of Gender-based Differences Among Elementary School Teachers (Wood, 2012).

**Instructions:** Please give your response to the following items related to your personal experiences working with teachers in your building. Your feedback will remain strictly confidential and will not be directly linked to you. Thank you for your participation

Please select your position	Administrator	Teacher					
Please select your gender	Female	Male	I prefer not to answer				
Please select your race	American Indian/Native Alaskan	Asian	Black	White	Hispanic	Multi-Racial	Other: Please Specify

How many years have you been teaching?	0-3
	4-7
	8-11
	11 or more

Please select your school from the drop-down menu	School Name
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How many male teachers are working in your building?

Please use the following scale to answer the questions below:

SA= Strongly Agree

A=Agree

N= Neither Agree or Disagree

D= Disagree

SD=Strongly Disagree

1	Your school has enough male teachers	SA	A	N	D	SD
2	Female teachers make better role models for female students	SA	A	N	D	SD
3	Male teachers make better role models for female students	SA	A	N	D	SD
4	Female teachers make better role models for male students	SA	A	N	D	SD

5	Male teachers make better role models for male students	SA	A	N	D	SD
6	The female teachers I have worked with effectively serve their students as role models	SA	A	N	D	SD
7	The male teachers I have worked with effectively serve their students as role models	SA	A	N	D	SD
8	The female teachers I have worked with have students that emulate the teacher's actions	SA	A	N	D	SD
9	The male teachers I have worked with have students that emulate the teacher's actions	SA	A	N	D	SD
10	The female teachers I have worked with use effective classroom management strategies	SA	A	N	D	SD
11	The male teachers I have worked with use effective classroom management strategies	SA	A	N	D	SD
12	The female teachers I have worked with have organized structures and procedures in their classrooms	SA	A	N	D	SD
13	The male teachers I have worked with have organized structures and procedures in their classrooms	SA	A	N	D	SD
14	The female teachers I have worked with are nurturing are sensitive to their students	SA	A	N	D	SD
15	The male teachers I have worked with are nurturing are sensitive to their students	SA	A	N	D	SD
16	The female teachers I have worked with are patient with their students	SA	A	N	D	SD
17	The male teachers I have worked with are patient with their students	SA	A	N	D	SD
18	The female teachers I have worked with have less conflict with male students	SA	A	N	D	SD
19	The male teachers I have worked with have less conflict with male students	SA	A	N	D	SD
20	The female teachers I have worked with are seen as caring by their students	SA	A	N	D	SD
21	The male teachers I have worked with are seen as caring by their students	SA	A	N	D	SD
22	The female teachers I have worked with produced positive student outcomes in reading	SA	A	N	D	SD
23	The male teachers I have worked with produced positive student outcomes in reading	SA	A	N	D	SD
24	The female teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	SA	A	N	D	SD
25	The male teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	SA	A	N	D	SD
26	Students learn reading best from female teachers	SA	A	N	D	SD
27	Students learning reading best from male teachers	SA	A	N	D	SD

## Appendix B

## Survey Item Assignment Pilot Study Survey

*Survey Item Assignment*

Item #	Item	Measured Construct	Source
1	Your school has enough male teachers	Role Model	Wood, 2012
2	Female teachers make better role models for female students	Role Model	Truitt, 2019
3	Male teachers make better role models for female students	Role Model	Truitt, 2019
4	Female teachers make better role models for male students	Role Model	Truitt, 2019
5	Male teachers make better role models for male students	Role Model	Truitt, 2019
6	The female teachers I have worked with effectively serve their students as role models	Role Model	Wood, 2012
7	The male teachers I have worked with effectively serve their students as role models	Role Model	Wood, 2012
8	The female teachers I have worked with have students that emulate the teacher's actions	Role Model	Truitt, 2019
9	The male teachers I have worked with have students that emulate the teacher's actions	Role Model	Truitt, 2019
10	The female teachers I have worked with use effective classroom management strategies	Classroom Management	Wood, 2012
11	The male teachers I have worked with use effective classroom management strategies	Classroom Management	Wood, 2012
12	The female teachers I have worked with have organized structures and procedures in their classrooms	Classroom Management	Truitt, 2019
13	The male teachers I have worked with have organized structures and procedures in their classrooms	Classroom Management	Truitt, 2019
14	The female teachers I have worked with are nurturing are sensitive to their students	Relationship	Wood, 2012
15	The male teachers I have worked with are nurturing are sensitive to their students	Relationship	Wood, 2012
16	The female teachers I have worked with are patient with their students	Relationship	Wood, 2012
17	The male teachers I have worked with are patient with their students	Relationship	Wood, 2012
18	The female teachers I have worked with have less conflict with male students	Relationship	Wood, 2012

19	The male teachers I have worked with have less conflict with male students	Relationship	Wood, 2012
20	The female teachers I have worked with are seen as caring by their students	Relationship	Wood, 2012
21	The male teachers I have worked with are seen as caring by their students	Relationship	Truitt, 2019
22	The female teachers I have worked with produced positive student outcomes in reading	Achievement	Truitt, 2019
23	The male teachers I have worked with produced positive student outcomes in reading	Achievement	Truitt, 2019
24	The female teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	Achievement	Truitt, 2019
25	The male teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	Achievement	Truitt, 2019
26	Students learn reading best from female teachers	Achievement	Truitt, 2019
27	Students learn reading best from male teachers	Achievement	Truitt, 2019

## Appendix C

## Columbus State University IRB Approval Pilot Study

**CSU IRB** <irb@columbusstate.edu>

to me, Christopher, CSU, Institutional

Institutional Review Board  
Columbus State University

Date: 3/13/19

Protocol Number: 19-064

Protocol Title: What is the Perception of Elementary School Teachers and Principals of the Influence of Male Teachers?

Principal Investigator: Kathleen Truitt

Co-Principal Investigator: Christopher Garretson

Dear Kathleen Truitt:

The Columbus State University Institutional Review Board or representative(s) has reviewed your research proposal identified above. It has been determined that the project is classified as exempt under 45 CFR 46.101(b) of the federal regulations and has been approved. You may begin your research project immediately.

Please note any changes to the protocol must be submitted in writing to the IRB before implementing the change(s). Any adverse events, unexpected problems, and/or incidents that involve risks to participants and/or others must be reported to the Institutional Review Board at [irb@columbusstate.edu](mailto:irb@columbusstate.edu) or (706) 507-8634.

If you have further questions, please feel free to contact the IRB.

Sincerely,

Amber Dees, IRB Coordinator

Institutional Review Board

Columbus State University



## Appendix D

## Introduction to Pilot Study Email

March 14, 2019

Dear (Insert selected Principal Name):

We are asking for your participation in a survey for a critical project being conducted by Columbus State University, being conducted with teachers from the [REDACTED] School System. Henry County Schools has granted permission for the selection of your school staff, please see attached letter of permission. The purpose of the survey is to collect information about the perceptions that teachers have about the relationship between male teacher and student growth percentiles in reading. There is a much lower instance of male teachers both in the State of Georgia and [REDACTED] Schools.

Many school systems indicate that the need for a more diverse work force was a high priority for students, teachers and community stakeholders. This survey could potentially assist [REDACTED] of Education and the Georgia Department of Education create a better process to seek teacher candidates that impact student learning. Your feedback would help us immeasurably in the effort to provide you with a higher-level process and ultimately yield better academic growth for students.

In this survey your answers are completely confidential, school data will be released only as a part of group summaries. An incentive will be offered for completion of the survey, all administrators and teachers who complete the survey will be eligible for a \$10.00 Starbucks gift card. I will be following up after this email to discuss with you any questions. Please feel free to contact me before that call, [REDACTED] or [truitt\\_kathleen@columbusstate.edu](mailto:truitt_kathleen@columbusstate.edu).

Thank you very much for assisting us with this critical study.

Sincerely,

Kathleen Truitt  
Survey Director  
College of Education  
Columbus State University

## Appendix E

## Pilot Study Email

March 20, 2019

Dear Principal or Teacher:

We are asking for your participation in a survey for a critical project being conducted by Columbus State University with teachers from the [REDACTED] System. The purpose of the survey is to collect information about the perceptions that principals and teachers have about male teachers. There is a much lower instance of male teachers in elementary grades both in the State of Georgia and [REDACTED].

Many school systems indicate the need for a more diverse work force was a high priority for students, teachers and community stakeholders. Although there are not any personal benefits to taking this survey, your participation could potentially assist the [REDACTED] Board of Education and the Georgia Department of Education create a better process to seek teacher candidates that impact student learning. Your feedback would help us immeasurably in the effort to provide you with a higher-level process for recruitment and retention of the best teachers.

Your name was selected from the school website as a principal or teacher at your assigned school. The survey will take no more than 15 minutes to complete and can be taken on the device of your choice to reduce the risk of discomfort. Upon completing the survey, if desired, please print your final page, add your name, and drop it into the box in the front office to be entered a drawing for a \$10.00 Starbucks gift card. If you choose to participate in this survey, your answers are completely confidential and school data will be released only as a part of group summaries. The data will be used for this study and possibly other future research. Your participation in this research study is voluntary, you may withdraw from the study at any time, and your withdrawal will not involve penalty or loss of benefits.

If you have any questions or comments about this survey, please feel free to contact me at [REDACTED] or [truitt\\_kathleen@columbusstate.edu](mailto:truitt_kathleen@columbusstate.edu). Thank you very much for assisting us with this critical study.

Survey Link: [http://columbusstate.qualtrics.com/jfe/form/SV\\_5aOMEyohYGAaD89](http://columbusstate.qualtrics.com/jfe/form/SV_5aOMEyohYGAaD89)  
Sincerely,

Kathleen Truitt  
Assistant Superintendent  
Office of Instruction and Innovative Practice  
Henry County Schools

## Appendix F

## Follow-up Email

March 29, 2019

Dear Principal or Teacher:

A few weeks ago, you were contacted to participate in a study examining teacher perceptions of male teachers. If you have already completed the survey, thank you for your participation it is greatly appreciated. If you have not, I ask you to please consider completing the survey. This survey is for a critical project being conducted by Columbus State University, being conducted with teachers from [REDACTED] School System. The purpose of the survey is to collect information about the perceptions that teachers have about the relationship between male teacher and student growth percentiles in reading and mathematics. There is a much lower instance of male teachers in Elementary grades both in the State of Georgia and [REDACTED] Schools. We want to ensure that your voice is heard.

This survey could potentially assist the [REDACTED] Board of Education and the Georgia Department of Education create a better process to seek teacher candidates that impact student learning. Your feedback would help us immeasurably in the effort to provide you with a higher-level process and ultimately yield better academic growth for students.

If you have any questions or comments about this survey, please feel free to contact me at [REDACTED] or [Truitt\\_kathleen@columbusstate.edu](mailto:Truitt_kathleen@columbusstate.edu).

Thank you very much for assisting us with this critical study.

Survey Link: [http://columbusstate.qualtrics.com/jfe/form/SV\\_5aOMEyohYGAaD89](http://columbusstate.qualtrics.com/jfe/form/SV_5aOMEyohYGAaD89)

Sincerely,

Kathleen Truitt  
Survey Director  
College of Education  
Columbus State University

## Appendix G

## Informed Consent Pilot Study



## INSTITUTIONAL REVIEW BOARD

**Informed Consent Form**

You are being asked to participate in a research project conducted by Kathleen Truitt, a student in the Educational Leadership Department at Columbus State University. Supervised by Dr. C. Garretson.

**I. Purpose:**

The purpose of this project is to determine validity and reliability of a survey instrument to examine the perceptions of school administrators and teachers of male teachers.

**II. Procedures:**

Data collection will be limited to an electronic survey of school administrators and teachers. The survey should not take more than 20 minutes to complete. It is possible that the data collected from this survey will be used for future studies.

**III. Possible Risks or Discomforts:**

The potential risks could be discomfort from viewing the survey online, the researcher is allowing participants to take the survey on the device of their choice to minimize discomfort.

**IV. Potential Benefits:**

benefits to the individual participants are none. Benefits to society are that if the survey instrument is valid and reliable it can be used in future studies to measure administrator and teacher perceptions of teachers.

**V. Costs and Compensation:**

There is no individual compensation for study participation. Participants can opt to participate in a drawing of one \$10.00 Starbucks gift card per school. There is no cost to the individual for participation.

**VI. Confidentiality:**

All the data will be stored as electronic files. All the electronic data stored will be stored in password protected computers within the project personnel's office which is located within CSU downtown river park campus or Henry County District Office. The data will be stored for six years on the local computer of project personnel. The files are not going to a centralized location. All the data related to [REDACTED] will be deleted from the hard drive of the personnel's computer after the completion of six years. [In lay terminology, describe how the data will be de-identified, stored, and/or destroyed, who will access the data, and how it will be protected from unauthorized access.]

**VII. Withdrawal:**

Your participation in this research study is voluntary. You may withdraw from the study at any time, and your withdrawal will not involve penalty or loss of benefits.

For additional information about this research project, you may contact the Principal Investigator, Kathleen Truitt at [REDACTED] or [Truitt\\_Kathleen@columbusstate.edu](mailto:Truitt_Kathleen@columbusstate.edu). If you have questions about your rights as a research participant, you may contact Columbus State University Institutional Review Board at [irb@columbusstate.edu](mailto:irb@columbusstate.edu).

I have read this informed consent form. If I had any questions, they have been answered. By selecting the *I agree* radial and *Submit*, I agree to participate in this research project.

I agree.

I do not agree.

**Submit**

Revised 10/01/2017

## Appendix H

## Main Study Revised Survey

**Perceptions of Teacher Gender Influence**

Adapted from Teacher Perceptions of Gender-based Differences Among Elementary School Teachers (Wood, 2012).

**Instructions:** Please give your response to the following items related to your personal experiences working with teachers in your building. Your feedback will remain strictly confidential and will not be directly linked to you. Thank you for your participation

Please select your position                      Administrator                      Teacher  
Please select your gender                      Female                      Male                      I prefer not to answer

Please select your race  
American Indian/Native Alaskan  
Asian  
Black  
White  
Hispanic  
Multi-Racial  
Other: Please Specify

How many years have you been teaching?  
0-3  
4-7  
8-11  
11 or more

Please select your school from the drop-down menu                      School Name

How many male teachers are working in your building?

Please use the following scale to answer the questions below:

SA= Strongly Agree  
A=Agree  
N= Neither Agree or Disagree  
D= Disagree  
SD=Strongly Disagree

1	Your school has enough male teachers	SA	A	N	D	SD
2	Female teachers make better role models for female students	SA	A	N	D	SD

3	Male teachers make better role models for female students	SA	A	N	D	SD
4	Female teachers make better role models for male students	SA	A	N	D	SD
5	Male teachers make better role models for male students	SA	A	N	D	SD
6	The female teachers I have worked with effectively serve their students as role models	SA	A	N	D	SD
7	The male teachers I have worked with effectively serve their students as role models	SA	A	N	D	SD
8	The female teachers I have worked with have students that emulate the teacher's actions	SA	A	N	D	SD
9	The male teachers I have worked with have students that emulate the teacher's actions	SA	A	N	D	SD
10	The female teachers I have worked with use effective classroom management strategies	SA	A	N	D	SD
11	The male teachers I have worked with use effective classroom management strategies	SA	A	N	D	SD
12	The female teachers I have worked with have organized structures and procedures in their classrooms	SA	A	N	D	SD
13	The male teachers I have worked with have organized structures and procedures in their classrooms	SA	A	N	D	SD
14	The female teachers I have worked with are nurturing are sensitive to their students	SA	A	N	D	SD
15	The male teachers I have worked with are nurturing are sensitive to their students	SA	A	N	D	SD
16	The female teachers I have worked with are patient with their students	SA	A	N	D	SD
17	The male teachers I have worked with are patient with their students	SA	A	N	D	SD
18	The female teachers I have worked with are seen as caring by their students	SA	A	N	D	SD
19	The male teachers I have worked with are seen as caring by their students	SA	A	N	D	SD
20	The female teachers I have worked with produced positive student outcomes in reading	SA	A	N	D	SD
21	The male teachers I have worked with produced positive student outcomes in reading	SA	A	N	D	SD
22	The female teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	SA	A	N	D	SD
23	The male teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	SA	A	N	D	SD

24	Students learn reading best from female teachers	SA	A	N	D	SD
25	Students learning reading best from male teachers	SA	A	N	D	SD



## Appendix I

## Main Study Survey Alignment

Item #	Item	Measured Construct	Source
1	Your school has enough male teachers	Role Model	Wood, 2012
2	Female teachers make better role models for female students	Role Model	Truitt, 2019
3	Male teachers make better role models for female students	Role Model	Truitt, 2019
4	Female teachers make better role models for male students	Role Model	Truitt, 2019
5	Male teachers make better role models for male students	Role Model	Truitt, 2019
6	The female teachers I have worked with effectively serve their students as role models	Role Model	Wood, 2012
7	The male teachers I have worked with effectively serve their students as role models	Role Model	Wood, 2012
8	The female teachers I have worked with have students that emulate the teacher's actions	Role Model	Truitt, 2019
9	The male teachers I have worked with have students that emulate the teacher's actions	Role Model	Truitt, 2019
10	The female teachers I have worked with use effective classroom management strategies	Classroom Management	Wood, 2012
11	The male teachers I have worked with use effective classroom management strategies	Classroom Management	Wood, 2012
12	The female teachers I have worked with have organized structures and procedures in their classrooms	Classroom Management	Truitt, 2019
13	The male teachers I have worked with have organized structures and procedures in their classrooms	Classroom Management	Truitt, 2019
14	The female teachers I have worked with are nurturing are sensitive to their students	Relationship	Wood, 2012
15	The male teachers I have worked with are nurturing are sensitive to their students	Relationship	Wood, 2012
16	The female teachers I have worked with are patient with their students	Relationship	Wood, 2012
17	The male teachers I have worked with are patient with their students	Relationship	Wood, 2012

18	The female teachers I have worked with are seen as caring by their students	Relationship	Wood, 2012
19	The male teachers I have worked with are seen as caring by their students	Relationship	Truitt, 2019
20	The female teachers I have worked with produced positive student outcomes in reading	Achievement	Truitt, 2019
21	The male teachers I have worked with produced positive student outcomes in reading	Achievement	Truitt, 2019
22	The female teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	Achievement	Truitt, 2019
23	The male teachers that I have worked with produce high growth in reading on the Georgia Milestones assessment	Achievement	Truitt, 2019
24	Students learn reading best from female teachers	Achievement -Learning	Truitt, 2019
25	Students learn reading best from male teachers	Achievement -Learning	Truitt, 2019

## Appendix J

## Columbus State University Main Study IRB Approval

From: **CSU IRB** <irb@columbusstate.edu>  
 Date: Fri, May 10, 2019 at 5:09 PM  
 Subject: Exempt Approval Protocol 19-084  
 To: Kathleen Truitt [Student] <truitt\_kathleen@columbusstate.edu>, Christopher Garretson <garretson\_christopher@columbusstate.edu>  
 Cc: CSU IRB <irb@columbusstate.edu>, Institutional Review Board <institutional\_review@columbusstate.edu>

Institutional Review Board  
 Columbus State University

Date: 5/10/19  
 Protocol Number: 19-084 (cp 19-064)  
 Protocol Title: What is the Perception of Elementary School Teachers and Principals of the Influence of Male Teachers on Male student Growth in Reading?  
 Principal Investigator: Kathleen Truitt  
 Co-Principal Investigator: Christopher Garretson

Dear Kathleen Truitt:

The Columbus State University Institutional Review Board or representative(s) has reviewed your research proposal identified above. It has been determined that the project is classified as exempt under 45 CFR 46.101(b) of the federal regulations and has been approved. You may begin your research project immediately.

Please note any changes to the protocol must be submitted in writing to the IRB before implementing the change(s). Any adverse events, unexpected problems, and/or incidents that involve risks to participants and/or others must be reported to the Institutional Review Board at irb@columbusstate.edu\_or (706) 507-8634.

If you have further questions, please feel free to contact the IRB.

Sincerely,

Amber Dees, IRB Coordinator

Institutional Review Board  
 Columbus State University

## Appendix K

## Permission to Use Survey Items

**From:** WOOD, TRACY <>  
**Sent:** Tuesday, February 19, 2019  
**To:** Truitt, Kathleen  
**Subject:** Re: Request for Permission

Yes, I approve. Just keep me in the loop as far as your progress periodically!

**Dr. Tracy D. Wood**



On Tue, Feb 19, 2019 Truitt, Kathleen

Good Morning:

I am so glad that I found you-Thank you for your quick response. I have found that there is not a form to grant permission, but rather you would need to simply respond to this email granting permission to use the instrument.

Overarching Research Question:

Do elementary school administrators and teachers perceive that there is an influence of male teachers on a school's male students achievement growth?

Goals:

- To examine the perceptions of leaders and teachers on the influence of male teachers on male students
- To examine the combined influence of perceptions (Role models, Relationships, Student Achievement and Classroom management) to the final DV of Student Growth Percentile—in other words male teachers may not be reaching higher achievement with male students, but are they getting them to grow?

I will only be using a limited number (9) of questions, mainly related to questions that relate to relationships-in addition to questions were added to reflect specific language derived from findings in the Literature Review. The questions used will be cited and

referenced in the study. I will be conducting an Exploratory & Confirmatory Factor Analysis on the combined survey instrument in a pilot study to establish validity and reliability before conducting the main study.

Quantitative Study (Hierarchal Regression) with Administrator and Teacher perceptions on the four areas of influence (Role Models, Relationships, Student Achievement and Classroom Management) as the IV's and Georgia Milestones Student Growth percentile in reading for male students as the DV.

The findings of this study could then potentially be used to impact recruiting/retention of the male teachers, as well as understanding how the gender of the teacher may have influence on student growth.

Thank you so much again for your response, please let me know if you need additional information- I look forward to hearing from you soon-

**Kathleen E.K. Truitt**

**From:** WOOD, TRACY <[REDACTED]>  
**Sent:** Monday, February 18, 2019  
**To:** Truitt, Kathleen <>  
**Subject:** Re: Request for Permission

Yes!

Tell me more about your study. What is it for?

What is (are) your goal(s)?

**Dr. Tracy D. Wood**

[REDACTED]  
 [REDACTED]  
 [REDACTED]  
 [REDACTED]

On Mon, Feb 18, 2019 Truitt, Kathleen <> wrote:

Good Afternoon:

I hope this Monday finds you well-I am trying to locate Dr. Tracy Darrin Wood, author of the article *Teacher Perceptions of Gender-Based Differences Among Elementary School Teachers*.

I am hoping that you are than author?

I am seeking permission for the use of some of the qualitative survey/questionnaire response items that you used in the study to complete your dissertation. I am completing a quantitative study, and my proposed survey would include some of your items adapted- as well as I will be conducting an EFA and CFA on my proposed survey instrument.

If you are the correct person and may be willing to allow permission for use, I will send you the form needed. If not thank you for your time and I wish you best this school year.

Thank you in advance for your assistance-

**Kathleen E.K. Truitt**

## Appendix L

## Introduction to Main Study Email

May 14, 2019

Dear (Insert selected Principal Name):

We are asking for your participation in a survey for a critical project being conducted by Columbus State University with teachers from the [REDACTED] School System. [REDACTED] Schools has granted permission for the selection of your school staff, please see attached letter of permission. The purpose of the survey is to collect information about the perceptions that principals and teachers have of male teachers and the potential influence on Georgia Milestones Student Growth Percentiles. There is a much lower instance of male teachers both in the State of Georgia and [REDACTED] Schools.

Many school systems indicate that the need for a more diverse work force was a high priority for students, teachers and community stakeholders. This survey could potentially assist the [REDACTED] Board of Education and the Georgia Department of Education create a better process to seek teacher candidates that impact student learning. Your feedback would help us immeasurably in the effort to provide you with a higher-level understanding of the roles that male teachers play in the education system.

In this survey, your answers are completely confidential and school data will be released only as a part of group summaries. The data will be used for this study and possibly other future research. An incentive will be offered for completion of the survey. All administrators and teachers who complete the survey will be eligible for a \$10.00 Starbucks gift card. I will be following up after this email to discuss with you any questions. Please feel free to contact me before that call, [REDACTED] or [truitt\\_kathleen@columbusstate.edu](mailto:truitt_kathleen@columbusstate.edu).

Thank you very much for assisting us with this critical study.

Sincerely,

Kathleen Truitt

## Appendix M

## Main Study Email

May 16, 2019

Dear Principal or Teacher:

We are asking for your participation in a survey for a critical project being conducted by Columbus State University with teachers from the [REDACTED] School System. The purpose of the survey is to collect information about the perceptions that principals and teachers have about male teachers, and the potential influence on Georgia Milestones Student Growth Percentiles. There is a much lower instance of male teachers in elementary grades both in the State of Georgia and [REDACTED] Schools.

Many school systems indicate the need for a more diverse work force was a high priority for students, teachers and community stakeholders. Although there are not any personal benefits to taking this survey, your participation could potentially assist the [REDACTED] Board of Education and the Georgia Department of Education create a better process to seek teacher candidates that impact student learning. Your feedback would help us immeasurably in the effort to provide you with a higher-level process for recruitment and retention of the best teachers.

Your name was selected from the school website as a principal or teacher at your assigned school. The survey will take no more than 15 minutes to complete and can be taken on the device of your choice to reduce the risk of discomfort. Upon completing the survey, if desired, please print your final page, add your name, and drop it into the box in the front office to be entered a drawing for a \$10.00 Starbucks gift card. If you choose to participate in this survey, your answers are completely confidential and school data will be released only as a part of group summaries. The data will be used for this study and possibly other future research. Your participation in this research study is voluntary, you may withdraw from the study at any time, and your withdrawal will not involve penalty or loss of benefits.

If you have any questions or comments about this survey, please feel free to contact me at [REDACTED] or [truitt\\_kathleen@columbusstate.edu](mailto:truitt_kathleen@columbusstate.edu). Thank you very much for assisting us with this critical study.

[http://columbusstate.qualtrics.com/jfe/form/SV\\_56c2sY6db7hrCiV](http://columbusstate.qualtrics.com/jfe/form/SV_56c2sY6db7hrCiV)

Sincerely,

Kathleen Truitt



## Appendix N

## Follow-up Email

May 30, 2019

Dear Principal or Teacher:

A few weeks ago, you were contacted to participate in a study examining teacher perceptions of male teachers. If you have already completed the survey, thank you for your participation, it is greatly appreciated. If you have not, I ask you to please consider completing the survey. This survey is for a critical project being conducted by Columbus State University, and being conducted with teachers from the [REDACTED] School System. The purpose of the survey is to collect information about the perceptions that teachers have about male teachers and the potential influence on Georgia Milestones Student Growth Percentiles. There is a much lower instance of male teachers in elementary grades both in the State of Georgia and [REDACTED] Schools. We want to ensure that your voice is heard.

This survey could potentially assist the [REDACTED] Board of Education and the Georgia Department of Education create a better process to seek teacher candidates that impact student learning. Your feedback would help us immeasurably in the effort to provide you with a higher-level process and ultimately yield better academic growth for students.

If you have any questions or comments about this survey, please feel free to contact me at [REDACTED] or [truitt\\_kathleen@columbusstate.edu](mailto:truitt_kathleen@columbusstate.edu).

Thank you very much for assisting us with this critical study.


[http://columbusstate.qualtrics.com/jfe/form/SV\\_56c2sY6db7hrCiV](http://columbusstate.qualtrics.com/jfe/form/SV_56c2sY6db7hrCiV)

Sincerely,

Kathleen Truitt

## Appendix O

## District Research IRB Approval



February 4, 2019



Kathleen Truitt



Dear Ms. Truitt:

Your request to conduct research in our school system as part of your **Doctoral Degree** requirements from **Columbus State University** has been reviewed. Specifically, consideration was given to the description of your research project, proposed data collection procedures, instruments and research timeline.

It is my understanding that you plan to examine, *The Need and Effectiveness of School Districts to Recruit and Retain Male Teachers*. Please note that participation in this study is completely voluntary and that all information obtained for this study must be completely confidential. Although you have been approved to conduct research in our district, please note that students, faculty and staff are not required to participate in your study. To preserve the privacy of student and staff information, pseudonyms for teachers, students, schools, and this system must be used in all written reports. This data must be used solely for the purpose articulated in the research application. Please note that our district does not provide contact information for participants you want to include in your sample. You might obtain this information from the school principal, should she/he be willing to participate or from the individual websites.

After considering all of the information submitted, it appears that your research request meets the requirements . I am, therefore, approving your request to conduct the research in our school system as described in your proposal. I hope that your research project goes well and that the information you obtain will be beneficial to you and the students of .

Sincerely,



Copy: District and School Performance



## Appendix P

## Informed Consent Main Study



## INSTITUTIONAL REVIEW BOARD

**Informed Consent Form**

You are being asked to participate in a research project conducted by Kathleen Truitt, a student in the Educational Leadership Department at Columbus State University. Supervised by Dr. C. Garretson.

**I. Purpose:**

The purpose of this project is to evaluate the perceptions of elementary administrators and teachers of the influence of male teachers on student achievement growth in reading.

**II. Procedures:**

Data collection will be limited to an electronic survey of school administrators and teachers. The survey should not take more than 20 minutes to complete. The data collected from this study may be used in future research projects.

**III. Possible Risks or Discomforts:**

The potential risks could be discomfort from viewing the survey online, the researcher is allowing participants to take the survey on the device of their choice to minimize discomfort.

**IV. Potential Benefits:**

Benefits to the individual participants are none. Benefits to society are that if the survey instrument is valid and reliable it can be used in future studies to measure administrator and teacher perceptions of teachers.

**V. Costs and Compensation:**

There is no individual compensation for study participation. Participants can opt to participate in a drawing of one \$10.00 Starbucks gift card per school. There is no cost to the individual for participation.

**VI. Confidentiality:**

All the data will be stored as electronic files. All the electronic data stored will be stored in password protected computers within the project personnel's office which is located within CSU downtown river park campus of [REDACTED] District Office. The data will be stored for six years on the local computer of project personnel. The files are not going to a centralized location. All the data related to the project will be deleted from the hard drive of the personnel's computer after the completion of six years.

**VII. Withdrawal:**

Your participation in this research study is voluntary. You may withdraw from the study at any time, and your withdrawal will not involve penalty or loss of benefits.

Revised 10/01/2017

For additional information about this research project, you may contact the Principal Investigator, Kathleen Truitt at [REDACTED] or [Truitt\\_Kathleen@columbusstate.edu](mailto:Truitt_Kathleen@columbusstate.edu). If you have questions about your rights as a research participant, you may contact Columbus State University Institutional Review Board at [irb@columbusstate.edu](mailto:irb@columbusstate.edu).

I have read this informed consent form. If I had any questions, they have been answered. By selecting the *I agree* radial and *Submit*, I agree to participate in this research project.

I agree.

I do not agree.

**Submit**