



reading. Students also completed a reading self-efficacy questionnaire and an assessment of information text comprehension. While controlling for socioeconomic status, hierarchical multiple regressions and MANOVA were conducted.

African American students perceived statistically significantly higher levels of teacher competence support for reading compared to their European American peers. European American students performed at a higher level on the reading achievement measure, and there was no significant difference between groups in self-efficacy. Teacher competence support was significantly associated with self-efficacy regardless of ethnicity, and was also significantly associated with reading achievement, but only for African American students. Self-efficacy was significantly correlated with reading achievement for both ethnic groups; however, this correlation was statistically significantly higher for European American students. Post hoc analyses revealed that the correlation between self-efficacy and reading achievement was significant for European American students regardless of perceived level of teacher competence support, and the self-efficacy and reading achievement relationship was significant for African American students only if they perceived high levels of teacher competence support.

TEACHER COMPETENCE SUPPORT FOR READING  
IN MIDDLE SCHOOL

By

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Dissertation submitted to the Faculty of the Graduate School of the  
University of Maryland, College Park, in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
2012

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## **DEDICATION**

This dissertation is lovingly dedicated to Dean Nicholas, James Randall, Kailey Madison, and Joanne Moskey.

## ACKNOWLEDGEMENTS

First and foremost, thank you to my wonderful family who provided both support and insight throughout this process: Xavier and Carla Comment, Andrea Brown, Debra DeLone, Dr. William DeLone, Karen Whitehead, and Nellie Faye McRae. My parents Denis Comment and Anna Mae Brown Comment consistently nurtured my love of reading as a child, and continue to inspire me to persist through all obstacles – thanks, and I love you, Mom and Dad! This dissertation could not have been written without the unending patience and support of my husband, Kevin McRae. Your devotion and persistence are inspiring. Thank you for your constant encouragement that has pushed me through to the finish line.

Dr. John Guthrie, my advisor, mentor, and the guiding force behind every bit of my success as a graduate student and scholar: I cannot express the depth of gratitude I have for your contribution to my work and to my life. You have consistently gone above and beyond, and you have taught me to expect the same from myself. Thank you.

To my committee members: you have all provided amazing guidance and have helped my dissertation exceed even my own expectations: thank you so much, Dr. Mariam Jean Dreher, Dr. Min Wang, Dr. Kathryn Wentzel, and Dr. Allan Wigfield for your encouraging words and instrumental help through the years.

My friends and fellow graduate students could always be counted on to propel me forward, even when I was unsure of my direction, and I owe you all many thanks: Elton Porter, Dr. Laurel Hoa, Dr. Kathleen Perencevich, Marguerite Tom-Wigfield, Dr. Cassandra Coddington, Dr. Alexis Williams, Dr. Emily Fox, Dr. Charles Glover, Dr. Aaron Ament, Dr. Asha Lateef Williams, Shanna Smith, Angel Miles, Michelle Beadle

Holder, and Robert Holder – I could not have done this without you. Special recognition goes to the people who have worked tirelessly on the PROMISE program, Dr. Renetta Garrison Tull, Dr. Johnetta Davis, and Dr. Carol Parham – thank you for all you have done to support students in their pursuits along this sometimes difficult, but always rewarding, path.

I have received academic, emotional, and every other conceivable form of support from faculty, staff, and students in the Department of Human Development and Quantitative Methodology: Dr. Ann Battle, Dr. Patricia Alexander, Dr. David Miele, Dr. Brenda Jones-Harden, Eileen Kramer, Dr. Susan Lutz Klauda, Dr. Patricia Richardson, Amanda Mason-Singh, Amy Ho, Wei You, Katie Muenks, Lauren Musu-Gillette, Jennifer McPeake, Akhila Iruku, Michael Price, Dennis Wigfield, and Noel Wigfield have been instrumental in getting me to this point; and a special thank you to Ellen Kaplan for her invaluable support.

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## **CHAPTER 1: INTRODUCTION**

### **Overview**

Proficient reading in middle school is vital in all subject areas. Once limited to elementary school and remedial secondary programs, reading classes are now found in many middle schools, in addition to, and independent of, courses in other academic domains. This emphasis on the continuation of reading instruction beyond elementary school is an indication of the need for investigations centering on the support for reading competence in middle school. Educators and researchers have tried to discover the psychological contributors to student achievement in this area, in the hopes of improving our understanding of reading processes and predictors (Breslau et al., 2009; Eamon, 2005; Ripski & Gregory, 2009; Uguroglu & Walberg, 1986). In addition to cognitive variables, researchers have found that social and motivational variables contribute greatly to student achievement and progress in reading (Martin & Dowson, 2009; Murphy & Alexander, 2000; Pintrich & DeGroot, 1990; Wentzel, 2009). This is consistent with the view that the student is an active participant in the learning experience, and brings background knowledge, experiences, beliefs, and goals to the context of the classroom.

The primary purpose of this dissertation is to distinguish teacher competence support from other provisions that teachers make such as emotional or autonomy support. Although extensive research has documented the influence of teacher emotional support (see Martin & Dowson, 2009) and autonomy support (Ciani et al., 2010; Ryan & Deci, 2000; Stornes, Bru, & Idsoe, 2008) on academic motivation and achievement, the differentiation of teacher behaviors supporting competence is seldom explicit in the theoretical framework of these studies (Wentzel, 2009). It can be presumed that teachers intend to provide support for student competence, and so it follows that empirical studies



should attempt to measure teacher competence support and determine possible links to student motivation and achievement. Therefore, in this study, a principal focus will be the description of the interrelationships between perceived teacher competence support, self-efficacy, and reading achievement.

African American students are outperformed in both reading and math by their European American peers on a national level (National Center for Education Statistics, 2010); however, in the few studies that have linked some aspect of teacher competence support to self-efficacy (see Table 1), it is rare for results to be reported for African American student samples. There have been a number of studies documenting interventions in low-income African American communities that aim to close the achievement gap (Murray & Malmgren, 2005), as well as qualitative studies where urban, low-income African American students and their teachers are interviewed or observed for insight as to their academic needs (Teel, Debruin-Parecki, & Covington, 1998). While informative, these studies do not provide empirical data on middle-income African American students, an often neglected population in the existing literature. This study therefore includes a significant number of middle-income African American students in the sample.

For the purposes of this study, I use the term ‘European American’ in order to be consistent with the already established term of ‘African American,’ and because identification of students by color names tends to lead to distinctions based on skin color, rather than on cultural and ethnic heritage, which are more accurate indicators of social groupings. In the review of previous literature, I will continue to use ‘African American’ and ‘European American’ to identify samples in order to be consistent, and some of the

researchers (usually in the more recent studies) employ these terms. However, it should be noted that “Black,” “White,” “Caucasian,” and “Negro” have been used as demographic descriptors in past research literature.

Another important characteristic of the sample is the academic grade level of the students. From a developmental perspective, when students transition to middle school, there is a documented decline in reading motivation (Anderman & Midgley, 1997; Eccles & Midgley, 1989; Unrau & Schlackman, 2006; Wigfield & Eccles, 2002; Wigfield, Eccles, Mac Iver, Reuman, & Midgley, 1991). There are few existing research studies that include measures of self-efficacy as it relates to teacher competence support as perceived by middle school students, a relationship that may shed some light on the nature of middle school students’ motivation. Within this group of middle school students, African American students’ perceptions of teacher competence support and how this relates to their self-efficacy is rarely investigated, even though it is likely these students experience the same decline in motivation as their European American peers. In general, quantitative studies on African American motivation have found that when these students perceive that they have a positive relationship with their teachers, they are more likely to be motivated to do well academically (Baker, 1999; Goodenow & Grady, 1993; Newman, 2000; Potter, McCormick, & Busching, 2001). However, the analysis of how the varying mechanisms of these relationships impact each of the constructs of motivation for middle school students needs to be extended. This study investigates the associations between student perceptions of teacher competence support for reading, student self-efficacy in reading, and reading achievement.

Empirical research has yielded substantial evidence of a statistically significant association between reading achievement and a variety of motivations. The motivation constructs of self-efficacy, perceived difficulty, intrinsic motivation, autonomy, goal orientation, and social motivation have been studied and are all predictive of reading achievement, as measured by both classroom measurements (grades, student portfolios) and standardized tests (Guthrie, McRae, & Klauda, 2007). Motivation has been measured widely, using student questionnaires, and the responses to these questionnaires are then analyzed, along with student scores on reading achievement measures. Motivations such as self-efficacy and intrinsic motivation are consistently found to be significantly positively correlated with these scores (Guthrie et al., 2007; Taboada, Tonks, Wigfield, & Guthrie, 2009; Wigfield et al., 2008), and perceived difficulty has been significantly negatively correlated with achievement scores (Guthrie et al., 2009). However, these relationships are at times different in nature for African American students (Guthrie & McRae, 2011). Self-efficacy, in particular, is a motivation of interest, as the correlation between self-efficacy and achievement has been found to be weaker for African American students than it is for European American students in some studies (Baker & Wigfield, 1999; Graham, 1994a; Stevenson et al., 1990). It is therefore expected that there may be a significant difference in the strength of the association between self-efficacy and reading achievement based on ethnicity for this sample of students.

The research on motivation related to schooling has considered a person-environment-fit perspective, where the environment of the student is thought to play an important role in the internal development of goals and beliefs (Davis, 2003; Gurtner et

al., 2001; Turner, 2001; Watson & Battistich, 2006; Wosnitza & Nenniger, 2001). The concept of socialization is now being applied to schooling, and is illustrated in research on the cognitive, behavioral, and motivational consequences of interacting with important people in one's life, or socializers. Previous studies have established that three of the major socializers in a student's academic life are teachers, parents, and peers (Wentzel, 2009). These are the people who most often interact with the student in potentially positive or negative ways. When these interactions are positive, or supportive, the student generally benefits academically. Although peer and parent support are certainly significant, this study focuses on the contributions of perceived teacher competence support (teacher support for student competence in reading) to student motivation and achievement.

Teacher-student relationships have been examined using the framework of parenting research, with studies initially focusing on the parallels between the home and school environments. Teachers exhibit controlling and affective behaviors similar to those in parents (Baumrind, 1971), and consequently, children's relationships with their teachers are highly associated with their motivational and cognitive development, just as these outcomes are associated with parent-child relationships (Wentzel 2002, 2010). Prosocial goals are often measured as the student outcome that is influenced by the teacher-student relationship. Wentzel (2000, 2009) describes the teacher-student relationship as teachers communicating goals to their students, and the students adopting those goals, such as following class rules and being helpful, as their own. Teacher-student relationships that are positive are also predictive of student motivation (Martin & Dowson, 2009).

Studies have consistently found that teacher support is related to students' levels of reading engagement, self-efficacy, intrinsic motivation, mastery goal orientation, autonomy, and prosocial goals (Martin & Dowson, 2009; Wentzel, 2009). Students whose teachers have high expectations, for example, have high levels of reading achievement and engagement (Wharton-McDonald, Pressley, & Hampston, 1998). A number of studies have also investigated the implications of negative teacher behaviors and found that students who perceive these teacher behaviors have lower levels of motivation and achievement. For example, harsh criticism has been correlated with low initiation of academic activity (Cooper, 1977), and students in classrooms with low support have lower achievement when compared to peers in highly supportive classrooms (Hamre & Pianta, 2005). It should be noted that the majority of these studies have examined these variables with predominantly European American samples.

Teacher support has been defined by many researchers as general positive interaction with students, often with an affective component such as 'emotional support' or 'caring' (Davis & Lease, 2007; Pintrich, 2003; Wentzel, 2010; Wigfield, Eccles, Schiefele, Roeser, & Davis-Kean, 2006). Davis and Lease (2007) describe supportive relationships between teachers and students as having low levels of conflict and high levels of closeness, and student perceptions of warm and caring behavior are included as dimensions of teacher support in studies of motivation (Pintrich, 2003; Wentzel, 2010). While this has resulted in significant gains for the field of social and educational psychology, few studies have narrowed the focus to teacher support for students' academic competence, and fewer yet have included ethnically diverse student samples (see Table 1 and Table 2).

Employing teacher behaviors as measures of teacher support allows for questionnaire items that are specific, with minimal ambiguity. When students are merely asked if their teachers are “supportive,” the interpretation of results could vary widely depending on how the students define the term, which could range from affective communication to provision of lesson materials. Teacher competence support, like teacher emotional support, is comprised of teacher behaviors that are likely to influence a student’s academic performance, cognitive processes, and self-concept of ability, but does not include an explicitly affective component (Wentzel, 2009). Several types of supportive behaviors exhibited by teachers in the classroom have been extensively studied with European American students. These behaviors include providing instruction, emotional reactions to students, conveying beliefs about student abilities, and verbal feedback that can be either positive or negative, to name a few (Wentzel, 2009).

Teacher behaviors, framed in the construct of ‘teacher support,’ are associated with student achievement and motivation, according to previous studies. Self-efficacy, intrinsic and extrinsic motivation, goal orientation, autonomy, and social goals have all correlated significantly with teacher support for samples ranging from preschool through university aged students (Martin & Dowson, 2009). Very few studies have measured student perceptions of their self-efficacy in relation to their perceptions of teacher competence support (See Table 1). While there is considerable literature reporting a significant relationship between general teacher support and motivation, in general, there is currently insufficient evidence for the association of teacher competence support with self-efficacy.

## **Guiding Theory and Research**

### **A Socialization Perspective**

The complexity of the relationship between teacher and student has been a research topic of interest for many years. Studies have examined teacher behaviors, both verbal and nonverbal, and student behaviors, as well as how each group reacts to and influences the behaviors of the other (Furrer & Skinner, 2003; Graham, 1996; Skinner & Belmont, 1993). Over time, a socialization perspective for teacher-student relationships was conceptualized, where, based on Ecological Systems Theory (Bronfenbrenner, 1989), an individual is greatly influenced by social interactions within a micro system of, in this case, school (Wentzel, 2009). Researchers have defined socialization as occurring in multiple settings and through multiple agents, with an ultimate objective: for children to behave in ways that are accepted within their community, as well as to adopt the values and motives of that community (Maccoby, 1992). This can be applied to the social dynamic within the classroom, where teachers act as agents whose primary goal is to socialize their students to participate in school in appropriate and productive ways (Wentzel, 2002, 2009). Just as children internalize messages from their parents (Grusec & Goodnow, 1994), students may internalize messages from teachers, and ultimately their academic performance is impacted.

Wentzel (2002) used the heavily researched area of parenting as a framework for developing the study of teacher support. Based on previous research showing that positive parent-child relationships facilitate children's internalization of parent values and goals (Grusec & Goodnow, 1994), teachers' influence on students is thought to operate in the same way. Parenting styles and children's reactions to interactions with parents proved to be similar to ways in which students interact with and react to their teachers in

Wentzel's 2002 study of middle school students. I will therefore include research on parent support in my review of the literature in chapter 2 of this proposal. These studies present evidence for the influence of the social context on children's academic motivation and achievement. The research on parenting has also greatly informed studies of teaching styles and behaviors, and how students react to these teaching styles and behaviors. More specifically, parents' support for their children's academic competence, in the form of instrumental help, for example, serves as a model for conceptualizing teacher support for students' academic competence. While not the focus of this study, the construct of parental competence support is acknowledged as a contributor to our theoretical understanding of teacher competence support.

It is with this socialization perspective that I will present this study. The socio-cognitive theory of motivation is presented next, and this theory, along with the remainder of this study, is embedded within the larger socialization perspective. This ensures that the focus remains on the influence of socializers on reading motivation and achievement in middle school.

### **Socio-cognitive Theory**

Students' perceptions of teacher competence support are the central concern in this proposed study. With this in mind, self-efficacy is decidedly relevant, and is therefore paramount for inclusion in this study. The theoretical framework for self-efficacy is Bandura's (1986) socio-cognitive theory. As a guiding theory for the use of self-efficacy in the present study, socio-cognitive theory provides a well-established model of how teacher competence support can be associated with student motivation and achievement. Socio-cognitive theory examines the reciprocal relationship between



cognition, behavior, and environment (Bandura, 1986; Schunk & Pajares, 2005). Taking this view, the environment consists of, among other things, social relationships with significant others such as teachers, parents, and peers. These relationships influence and are influenced by the individual's behaviors and psychological processes. Teachers, therefore, play an important role in the development of the cognition and behavior of their students. As these relationships are reciprocal, it is challenging to determine causality without an extensive longitudinal undertaking; therefore, the current study will seek only to establish certain links between dimensions of these components.

Self-efficacy is defined as the individual's belief that he/she is competent to complete certain tasks successfully (Bandura, 1997; Schunk, 1991). Within an academic context, when students attempt a challenging task, the perception of the difficulty of that task, and the confidence for successfully completing the task are measurements of the self-efficacy of that student (Graham & Weiner, 1996; Schunk & Pajares, 2005). Studies have consistently reported that self-efficacy can be influenced, either positively or negatively, by the more general feedback individuals receive from socializers such as teachers and parents (Bandura, 1997; Schunk & Pajares, 2005). I therefore feature self-efficacy as a student outcome that is expected to be associated with perceived teacher competence support.

The association of teacher competence support and student self-efficacy can also be explicated in part by expectancy-value theory. Several studies of teacher competence support include expectancy-value theory as part of their theoretical framework, specifically measuring teacher expectations (Weinstein, Marshall, Sharp, & Botkin, 1987; Wentzel, 2009; Wigfield & Harold, 1992). Perceptions of the expectations and attitudes

of others affect students' task value, goals, self-schema, and performance, according to expectancy-value theory (Eccles et al., 1983; Wigfield & Eccles, 2000, 2002). Teachers convey their expectations through verbal and written communication to their students, both directly and indirectly. When expectations are clear, appropriate, and positive, students begin to adopt these expectations for themselves within the classroom setting, for example, expecting that they will succeed academically (Jussim & Eccles, 1992; Raudenbush, 1984; Rubie-Davies, 2006; Tenenbaum & Ruck, 2007). Teachers' expectations for academic performance have a positive influence on students when these expectations are flexible and change over time (Kuklinski & Weinstein, 2000). This allows for changes in task difficulty, pace of learning, and progress of the student. If the expectations are stable and do not change or adapt throughout the school year, students tend to exhibit diminished academic achievement (Graham, 1994a).

The positive, negative, stable, or flexible teacher expectations perceived by students continue to affect their motivation and achievement as these students transition to middle school. This finding supports the methodology employed by some studies where the students report their perceptions of teacher support, rather than teachers reporting whether they see themselves as supportive (Brattesani, Weinstein, and Marshall, 1984). As the variable in question is the student perceived outcome of self-efficacy, the measure of teacher support will take the perspective of the student as well. The perspective of the teacher, while relative, was not measured. The extent to which my research is guided by expectancy-value theory, therefore, is limited to the students' perceptions of teacher expectations, and the possible connection with their own self-efficacy in the classroom.

## **Purpose and Significance of the Study**

There are four objectives I propose to address with this study. The first objective is to investigate differences in the extent to which African American and European American middle school students perceive teacher competence support, report self-efficacy for reading, and exhibit achievement in reading. I will present previous studies that have examined teacher praise and criticism, as well as emotional support, instrumental help, and teacher expectations. These studies have found that when teachers interact with students in positive and supportive ways, students respond with increased academic achievement, improved behavior, and increased motivation (Wentzel, 2009). This current study of perceived teacher competence support seeks to extend the previous research by explicitly defining and measuring teacher competence support as encouraging feedback, instrumental help, and teacher expectations. The student reports of the frequency with which their teachers exhibit these behaviors will be interpreted as perceptions of high or low teacher competence support for reading. These mean levels of perceived competence support may be statistically significantly different for African American and European American students.

The second objective of this study is to investigate the extent to which perceived teacher competence support is associated with self-efficacy for African American and European American students. Based on previous research, general teacher support is associated with self-efficacy, although these studies are often measuring self-efficacy in general school performance or in math (Murdock & Miller, 2003; Roeser, Midgley, & Urdan, 1996; Usher & Pajares, 2006). The goal of this proposed study is specifically to describe the association of perceived teacher competence support and self-efficacy for reading in middle school. In contrast to studies of motivation that do not differentiate

motivational constructs, the inclusion of self-efficacy allows for an explicit interpretation of the way perceived teacher competence support relates to student motivation, and of the possible differences between ethnic groups in their reading self-efficacy.

The third objective of this study is to investigate the extent to which perceived teacher competence support is associated with reading achievement for African American and European American students. This study proposes to ascertain the impact of students' perceptions of teacher competence support on student reading achievement in middle school. As with motivation, previous studies have established a link between general teacher support and academic achievement (Hamre & Pianta, 2005), but few studies focus on perceived teacher competence support and its association with reading achievement in middle school. Due to the achievement gap in reading between African American and European American students (NCES, 2010), the relationship of perceived teacher competence support and reading achievement will be described separately for each group, with attention to any potential differences between these groups in the significance or strength of the relationship.

The fourth objective of this study is to investigate the extent to which the association of self-efficacy and reading achievement is moderated by ethnicity. Previous studies have established a link between self-efficacy and achievement, and several studies have shown that teacher competence support is associated with academic achievement (Guthrie et al., 2009; Guthrie et al., 2007; Taboada et al., 2009; Wigfield et al., 2008). Evidence is lacking, however, for the role perceived teacher competence support may play in the association of self-efficacy and reading achievement.

Theoretically, support for student competence in reading should strengthen the relationship between a student's self-efficacy and actual success at reading (Guthrie, McRae, & Lutz, 2007; Guthrie, McRae, & Coddington, 2009). Students who perceive high competence support from their teachers may have a more accurate assessment of their potential competence (self-efficacy), which would be reflected in achievement that correlates with that assessment; for example, students with low self-efficacy performing poorly at reading and students with high self-efficacy performing well at reading. Students who perceive low competence support from their teachers may have difficulty with gauging their self-efficacy, or may have inconsistent views of their self-efficacy, resulting in a weaker correlation with reading achievement.

I will examine the relationship between perceived teacher competence support, self-efficacy, and reading achievement by testing for the possibility of ethnicity acting as a moderating variable. In other words, the extent to which self-efficacy is statistically significantly related to achievement may be influenced by the level of teacher competence support perceived by the student. This study will determine whether this is the case for this sample of students. If teacher competence support does in fact act as a moderator, the relationship between self-efficacy and achievement will be different for African American and European American students only in the presence of either perceptions of high teacher competence support, or perceptions of low teacher competence support, but not in the presence of both. Alternately, perceptions of teacher competence support may result in a significant relationship between self-efficacy and achievement for one ethnic group but not for the other.

This study will investigate the extent to which each of these relationships differs for African American and European American students. There are instances of research reporting that European American teachers experience weaker relationships with their African American students compared to European American students, and view their African American students more negatively (Kesner, 2000). The relationship between self-efficacy with reading achievement has also proved to differ in strength for African American and European American students, with European American students exhibiting a statistically stronger association between self-efficacy and reading achievement (Baker & Wigfield, 1999; Graham, 1994a; Stevenson et al., 1990). There is therefore significant evidence for potential ethnic differences in perceptions of teacher competence support, reading self-efficacy, and the association of these constructs with each other and with reading achievement.

A significant contribution of this study is the empirical evidence for the association of teacher competence support, self-efficacy, and reading achievement in middle school. The aspects of perceived teacher competence support that will be measured in this study are instrumental help, encouraging feedback, and teacher expectations. Previous studies have included some combination of these aspects of teacher competence support, although other teacher behaviors are often interspersed, or only one of the components is represented (Wentzel, 2009). The examination of these variables for possible inclusion in a competence support composite will explicate the understanding of teacher support as a theoretical construct that may be subdivided into emotional support and competence support. In addition, some previous studies of teacher support are not student perceptions of teacher competence support, but the researcher's

observations of the classroom, or teacher self-reports, and the subjects of these studies have historically been either primarily, if not entirely, European American (see studies listed in Tables 1, 2, 3, and 4).

In addition to the primary goal of contributing to the theoretical understanding of teacher support, this dissertation will provide empirical evidence of the nature of the aforementioned variables, and their interactions, for a diverse sample. Relatively few studies have measured reading motivation for African American students, or how motivation is influenced by teacher-student interactions. As there is a documented difference in the academic performance of African American and European American students (National Center for Education Statistics, 2010), it follows that there may be significant differences for these groups when teacher support and motivation are measured. Including these students in the study is an important step towards furthering our comprehension of African American achievement motivation and how this interacts with perceptions of teacher competence support.

The variable of gender will not be examined in the current study, due to limitations in sample size. Although there is potential for differences based on gender of the student (Usher & Pajares, 2006), previous studies have found that teacher support is significantly associated with motivation and achievement independent of gender, or with weak gender effects at best (Hughes, Zhang, & Hill, 2006; Sirin & Rogers-Sirin, 2005, Weinstein et al., 1987). It is therefore assumed that in the current study, the relationships seen between variables are not a consequence of gender differences, and this claim would need to be substantiated in a future study with a larger sample size.

## **Research Questions**

The proposed study addresses the way in which African American and European American middle school students perceive teacher competence support, and the association of these perceptions with their reading self-efficacy and achievement. For the purposes of this study, perceived teacher competence support consists of encouraging feedback, instrumental help, and teacher expectations. The main research questions follow.

1. To what extent do African American and European American students experience significantly different levels of:
  - a. perceived teacher competence support?
  - b. self-efficacy for reading?
  - c. reading achievement?
2. To what extent is perceived teacher competence support associated with self-efficacy differently for African American and European American students?
3. To what extent is perceived teacher competence support associated with reading achievement differently for African American and European American students?
- 4a. To what extent is self-efficacy associated with reading achievement differently for African American and European American students?
- 4b. To what extent is the association of self-efficacy and reading achievement moderated by ethnicity differently for students perceiving high and low levels of teacher competence support?



## **Method**

The participants that took part in this study consisted of 183 African American and 183 European American seventh-grade students. These students attended a public school district in a mid-Atlantic state that is diverse socioeconomically and ethnically. The students were administered two questionnaires, one measuring their perception of teacher competence support, and one measuring their reading motivation in the form of self-efficacy and perceived difficulty. The students' reading achievement was measured using a test of information text comprehension.

In this study, student perceptions of teacher competence support were measured through student perceptions of teacher behaviors. Teachers' support for competence is meant to positively influence students' effort and performance in class, which then leads to academic success (Furrer & Skinner, 2003; Graham, 1996; Skinner & Belmont, 1993). When students see themselves as academically efficacious, their desire to continue that success increases, thereby increasing effort and persistence, which are associated with increased academic achievement (Murdock & Miller, 2003). Within the context of this study, self-efficacy is described as students' feelings of competence about academic tasks (Bandura, 1997; Schunk, 1991). As I am investigating student perceptions of teacher competence support, self-efficacy is a highly relevant motivational construct, and therefore the student outcome measured, along with reading achievement.

## Definition of Terms

The definitions that follow are meant to reflect the meanings of these terms within the context of reading and classroom instruction in language arts.

*Achievement motivation* – expectations and values that students hold for doing well academically, usually within a classroom context

*African American students* – students who have been self-identified as Black or African American, based on official school district forms

*Encouraging feedback* – verbal statements that teachers make to individual students that are positive in affect and convey acceptance or validation of a student’s behavior or abilities with respect to reading; specific praise for an accomplishment

*Ethnicity* – the classification of people into categories based on shared racial, linguistic, religious, and cultural backgrounds

*European American students* – students who have been self-identified as White or Caucasian, based on official school district forms

*Instrumental help* – teacher assistance with academic tasks and strategies

*Motivation* – the goals, values, and beliefs related to students’ activities and dispositions

*Negative criticism* – verbal statements that teachers make to individual students that are negative in affect and convey disapproval or low estimation of a student’s behavior or abilities with respect to reading

*Parent competence support* - assistance from either parents or guardians specifically with regard to academic performance; includes help with homework, involvement with school, monitoring academic performance (Grolnick, Ryan, & Deci, 1991)

*Parent support* – assistance from either parents or guardians; may be academic, emotional, or social

*Perceived competence* – perceived ability and proficiency at tasks one has completed  
(Chapman & Tunmer, 1995)

*Perceived difficulty* – viewing a task as being formidable and beyond one's capacity  
(Rodgers, Connor, & Murray, 2008); believing that reading is hard or problematic  
(Chapman & Tunmer, 1995)

*Reading achievement* – student's ability to decode and comprehend grade-level text

*Reading motivations* – the constructs that relate to interest, goals, values, and beliefs  
concerning text interaction

*Reading self-efficacy* – the belief in one's capacity to complete reading tasks successfully  
(Chapman & Tunmer, 1995)

*Teacher competence support* – assistance to students specifically with regard to academic  
performance; includes encouraging feedback, instrumental help, and teacher expectations  
(Kuklinski & Weinstein, 2000; Wentzel, Battle, Russell, & Looney, 2010)

*Teacher expectations* – teacher-conveyed beliefs in a student's ability or capacity to  
complete class work

*Teacher support* – general assistance to students; may include academic, emotional, or  
social support

## **Chapter 2: Literature Review**

### **Overview of Literature Review**

The purpose of this literature review is to present research that examines the roles that teacher and parent competence support play in elementary and secondary school student motivation, with particular attention paid to research that includes African American students in middle school. The socialization context (Wentzel, 2002) is presented as a conceptual basis for the investigation of teacher and parent competence support for motivation. Student motivation is conceptualized from the perspective of socio-cognitive theory (Bandura, 1986) that encompasses both perceived competence and self-efficacy, both of which will be discussed in relation to social support. Within this review of literature, I include research on general teacher support, but emphasize one aspect consisting of teacher support for student perceived competence and self-efficacy.

The teacher-student relationship is a vital aspect of effective classroom instruction. In this chapter, I address this relationship from the perspective of the student, emphasizing teacher competence support and its association with motivation and achievement. Previous research has established an association between teacher-student relationships and a range of motivations including intrinsic motivation, prosocial goals, valuing, and self-efficacy (Wentzel, 2009), all of which have been shown to be associated with reading achievement. Teacher support for student motivation is frequently studied as a component of the teacher-student relationship. These studies are often conducted within the socialization perspective, and employ socio-cognitive theory as a conceptual framework (Wentzel, 2009).

Across the studies reviewed here, researchers have defined teacher support in general terms, with varying emphasis on one or more of the specific teacher behaviors

that characterize teacher support (see Table 2 and Table 4). In some of these studies, emotional support of the student is conceptualized as central and is measured by asking students to rate their perceptions of teacher caring (Wentzel, 2002), respect, liking, or simply whether they feel the teacher is “supportive,” with no further specification. The structure provided by the teacher is also considered a form of teacher support (Skinner & Belmont, 1993). Setting goals and routines, explaining the requirements of the class and its organization, and providing instruction that is conducive to learning all represent ways in which teachers provide support. Often these behaviors are measured through researcher observation (Teel et al., 1998).

Teacher support for students’ competence will be emphasized in this dissertation. Although it is explicitly described less often than other teacher characteristics in previous research, teacher competence support can be conceptualized as the presence of teachers’ encouraging feedback, positive expectations, and instrumental help, along with the absence of negative criticism (Skinner & Belmont, 1993; Weinstein, Marshall, & Brattesani, 1982; Wentzel, 2009, 2010). Whereas these components of teacher competence support have been studied in previous research, they have usually been measured in combination with teacher support for emotional well-being, social competence, or feelings of belonging (Wentzel, 2010). This is optimal when the motivational outcomes variables in the study consist of goal orientations, self-esteem, peer relationships, or intrinsic motivation. However, this study emphasizes teacher competence support; therefore, the students’ motivation of self-efficacy, which reflects students’ beliefs in their competence, will be emphasized in this dissertation.

To characterize teacher competence support, I rely on guidance from literature on parent-child relationships. Research on parent-child relationships has informed the study of teacher-student relationships, and research on parent competence support likewise informs the study of teacher competence support. Parallels have been drawn by several researchers between parent and teacher support (most notably, Wentzel, 2002), and the existing research describing parents' impact on student motivation and achievement will be examined in this review.

The students in this study were African American and European American. The majority of the studies presented in this literature review are based on samples of European American students, or report diverse samples without conducting separate analyses for African American students. Much of the research, therefore, can be generalized for the European American population only, and I will use samples of both ethnic groups. Several studies have found that for African American students, parent competence support has a positive association with academic outcomes, and studies of parent-child relationships have provided a framework for the study of teacher-child relationships for these students (Aunola, Nurmi, Lerkkanen, & Rasku-Puttonen, 2003; Grolnick, Ryan, & Deci, 1991; Grusec & Goodnow, 1994). The competency-supporting characteristic of parent-child relationships is used to conceptualize the construct of teacher competence support in this study. It is proposed that teacher competence support will be associated with students' self-efficacy, which refers to their belief in their competence in academic tasks.

In studies that compare the self-efficacy of African American and European students, some researchers have found self-efficacy of the African American students to

be statistically significantly higher, while others have found the levels to be similar (Baker & Wigfield, 1999; Roeser, Midgley, & Urdan, 1996). However, the strength of the association between self-efficacy and achievement has been shown consistently to be lower for African American students when compared to European American students (Baker & Wigfield, 1999; Guthrie, McRae, & Coddington, 2009; Long, Monoi, Harper, Knoblauch, & Murphy, 2007; Usher & Pajares, 2006; Wigfield, Cambria, & Ho, 2012). I expect that this may be attributable to African American students' perception that teacher competence support is relatively low. However, these results are represented by a minimal number of studies, and I will investigate these issues more fully.

There is a gap in the literature on African American middle school students' perceptions of teacher competence support and its relation to self-efficacy. Although the positive effects of teacher competence support on a variety of motivations have been shown for African American elementary school students and for European American middle school students (see Table 1 and Table 3), the effects of teacher competence support on self-efficacy for middle school African American students have not been investigated sufficiently. At the conclusion of this literature review, I will present research questions that propose to address the effects of middle school African American and European American students' perceptions of teacher competence support on self-efficacy and achievement in reading.

Teacher reports of support are often in studies of younger children in conjunction with teacher reports of the student outcomes (Carter & Doyle, 2006; Pianta et al., 1997); however, as the students in this study are middle school students, it is appropriate to use student reports as the measure of teacher competence support. The students in this study

rated their perceptions of teacher competence support and they reported their self-efficacy for reading well in school. A reading achievement measure was also administered to the students. The review of literature will show that researchers have consistently found that high levels of teacher competence support are associated with high levels of student motivation and achievement, and that motivation mediates the effect of teacher support on achievement. Through correlational and regression data analyses, I will extend the existing research by investigating similarities and differences between African American and European American students in terms of the strength and association of teacher competence support, self-efficacy, and reading achievement.

Parenting practices and their influence on academic outcomes such as perceived competence, motivation, and achievement are presented first, as part of the socialization perspective to identify potentially important aspects of teacher support. Parenting styles and parental involvement in children's academic lives have historically been used as a basis for understanding and measuring teacher support (Wentzel, 2002), and so a brief review of this domain is included here. I will then present evidence for the association of teacher-student relationships and motivation in the classroom, with a special focus on teacher support for student competence. This will be followed by a closer view of these relationships, with a number of characteristics presented that contribute to teacher support. As the realm of teacher-student interaction is not exclusively positive, certain negative aspects of teacher behaviors are examined, particularly negative criticism. Expanding on the aforementioned evidence for the correlation of teacher-student relationships and motivation, I will then specifically address teacher competence support and its influence on motivation and engagement.



The next section in this review includes studies of teacher-student relationships that have samples of primarily African American students, or in some cases, samples that are diverse and incorporate a significant amount of African American students. The studies focus specifically on these students' perceptions of teacher support and the association of this perceived support with student motivation and engagement. There is an urgent need for empirical research conducted with this population in order to better comprehend the motivation, and ultimately, the academic achievement as it exists for students of diverse backgrounds; implications for research in this area are presented in the final section. Although the focus of this study is middle school students, the research presented in this literature review includes elementary, middle school, and high school students, in order to provide a broad view of teacher support; research explicitly measuring teacher competence support for African American middle school students is limited. Whenever possible an emphasis is placed on those studies with samples of adolescent learners for whom social support is decidedly relevant. Finally, I will present the research questions for this study.

### **Studies of Parent Support Inform Teacher Support Research**

The research on teacher support has been largely informed by previous studies of parent-child relationships. In seeking to investigate the aspects of teacher support that may influence students, especially African American students, I am guided by the socialization perspective (Wentzel, 2009) which forwards the proposition that parenting characteristics may be typical of effective teachers, as proposed by Baumrind (1971) and others. In this section, I present research on parenting practices related to academic motivation and achievement, beginning with generalized support that refers broadly to

parents' involvement in education. Next, I describe studies that identify parents' explicit behavioral support for students' academic competencies. This addresses parents' actions taken to help their children succeed academically, which is related to parental beliefs about children's competencies (Klauda, 2009) but is not identical to their beliefs. In the studies described in this section, parent support for academic competence has been explicitly measured, whereas teacher competence support has been rarely measured separately from teacher general support. The impact of parent competence support is likely indicative of the impact of teacher competence support on the child.

### **Parental Support for Academic Outcomes**

Parental factors relating to student motivation have been extensively studied, although these factors can be as salient as physical home environment or as abstract as parent beliefs and expectations. Often, studies measure parent influence on achievement by parent demographic information (socioeconomic status, level of education, etc.), the parent's literacy behaviors (amount of reading by the parent), number of books in the home, or in the case of young children, amount of time spent reading to the child (see Klauda, 2009). Important factors that impact achievement and motivation also include parenting style, involvement, academic assistance, and encouragement, which will be the focus of the studies presented here.

Baumrind (1971) developed a scheme for measuring parental control and warmth by creating parenting style dimensions. These dimensions exemplify degree of parental control exerted on the child in question, with a continuum from total control to no control to neglect. The warmth aspect ranges from an accepting, respecting affect to a harsh, critical affect. The dimensions of parenting style are authoritarian, authoritative, and

permissive. The authoritarian style is the most controlling, where parents allow little or no contribution from the child in decision making or even family discussion. The parents maintain that as children have less experience, they do not know as much as adults, and should therefore submit without question to whatever the adult (in this case, the parent) deems acceptable in terms of the child's actions, words, or thoughts. Along with this extreme form of control, which has been shown in studies to be counterproductive to the child's social and academic development (Wang, Pomerantz, & Chen, 2007), having an affect that is harsh or non-responsive puts this type of parent in the authoritarian dimension.

According to Baumrind (1971), Parents who are authoritative exert some amount of control, but they concurrently allow the child his/her own thoughts and opinions on the way 'things should be.' These parents have rules and expectations that are consistently enforced, as well as justified if questioned by the child. Compared to the authoritarian parent, the authoritative parent is willing to explain rules to the child, and at times, even negotiate these rules based on the child's input. The affect of this parent is often nurturing and caring, and this parenting style contributes to positive social and academic outcomes for the child.

The third parenting style, permissive, can best be described as the name implies, being overly pliable (Baumrind, 1971). This type of parent may have some loosely defined rules, but does not enforce them with any consistency. The child is left to guess at expectations and limits, two facets of parenting that children generally need to be clearly established and enforced. The permissive parent is sometimes perceived by the

child as uncaring or preoccupied, leading to negative effects on social and academic development.

Parental involvement in school is one area of parental support that affects children's academic outcomes. Parent interest is often manifested by communication with the teacher and principal, attendance at parent-teacher conferences and school-community functions, participation in the child's homework, and assessment of academic progress. Studies of parental involvement indicate a correlation between communication with the teacher and student academic motivation and achievement. Grolnick and Slowiaczek (1994) measured parental involvement in terms of interaction with the school and the child's perception of parental interest in their time at school. The 11- to 14-year-olds completed a self-perception questionnaire assessing academic competence, and teachers provided their perceptions of each student's academic competence and their grades, averaged across subjects. Parent involvement was highly correlated with perceived competence as well as academic achievement. Path analysis confirmed the mediating role that perceived competence played between parental support and academic achievement.

In addition to involvement with school-based personnel and activities, parents' academic goals and expectations for their children can serve as a form of parental support. Dornbusch, Erickson, Laird, and Wong (2001) reported that parental statements of attachment to their adolescent children predicted students' initiation of deviant behaviors such as smoking, delinquency, and violence. Parents usually express these attachments through high, yet realistic, expectations and relevant academic goals, which their children tend to adopt as their own. For instance, a parent may verbally encourage

their child by calling attention to his/her successes and conveying confidence that these successes will be repeated. Even when faced with failure, a parent can express high expectations by constructively appraising their child's performance, and offering recommendations for future attempts. Likewise, parents convey the academic goals they have for their children through their actions, and reactions, to their children's academic performance. For parents who aspire for their child to graduate from high school and attend college, the process of selecting courses may be of particular importance to the parent, who knows that the child will need to complete specific requirements in order to be considered for college acceptance. They may encourage or discourage certain activities, based on possible ramifications on the ultimate goal of college entry. This planning and monitoring exemplifies the parents' goals and increases the chances of the child adopting similar, if not the same, goals for themselves.

### **Parenting Practices Feature Competence Support**

Parental support for children's academic competence has been extensively studied, and it has been shown to be associated with, and in most cases predictive of, reading achievement, perceived competence, and both intrinsic motivation and self-efficacy (Klauda, 2009). In some studies that will be presented, these factors were examined together, and the analyses revealed that motivation mediated the association of parental support and achievement. Investigations that focus on African American students have likewise shown correlations between parental support and cognitive competence, school readiness, grades, engagement, and intrinsic motivation, among other academic outcomes. These studies have samples ranging from elementary to middle school, and are described in this section.

Although not physically present in the classroom, parents have the ability to provide substantial support for their children's competence in school. In addition to providing a safe home environment where the child's physical welfare is ensured, parents have the ability to create an environment conducive to reading, completing homework, and academic advancement; when parents provide support like homework help and guidance regarding challenges posed at school, their children experience positive outcomes (Klauda, 2009). This may be because the autonomy and sense of confidence engendered by parents when they support academic competence contribute to the development of positive academic and motivational outcomes. Parents who provide an environment that is literacy-rich are exhibiting a merger of behaviors, values, and attitudes that foster reading motivation (Baker, Scher, & Mackler, 1997).

Helping with homework can be a particularly potent representation of parental support for academic achievement. This can consist of checking that homework is completed, providing guidance or re-direction for difficult assignments, discussing relevant concepts and sharing their own prior knowledge about the content, and communicating with the teacher when problems with homework arise. This is not always possible, as parents may not be available after school due to work schedules, or some parents may not have the knowledge necessary to help with a particular content area. Certainly, this could be a deficit for parents who are low-income and those who have a limited education, and often there is an overlap between these groups. The obstacles that prevent some parents from being fully immersed in the academic lives of their children may compound the other hindrances these families face, ultimately undermining the

child's academic growth (see Klauda, 2009, for a review of literature on parental support for reading).

Students who perceive their parents as supporting their competence have higher grades, standard achievement test scores, motivation, and their perceived competence is highly correlated with achievement. Grolnick, Ryan, and Deci (1991) presented an empirically tested model indicating that the relationship between achievement and parent support was mediated by the child's perceived competence. This study of third through sixth graders reported that positive performance in math and reading was significantly correlated with the children's perception of parental support, and that achievement was significantly correlated with motivation. Structural equation modeling showed that the specified model, in which parent support predicts motivation, and motivation predicts achievement, provided a good fit to the data.

Parents' competence support remains relevant even as children enter adolescence and transition to middle and high school. Involvement in school, conveying value for academic achievement, and an authoritative parenting style are all significantly correlated with academic achievement. Paulson (1994) found this effect for 247 ninth graders, showing that a significant proportion of the variance in academic achievement was statistically predicted by parental support for students' competence in school.

Ginsburg and Bronstein (1993) tested the relationship between parental control and external motivation in fifth graders. Parental control referred to the extent to which parents monitored student homework, with parents who had 'high surveillance' being seen as controlling, since this may negatively impact the perceived competence of students, making them more dependent upon extrinsic factors. Parent responses to grades

were also measured, with rewards for good grades being related to lower achievement. Verbal encouragement for good grades was positively correlated with intrinsic motivation. A longitudinal study of motivation followed students from fifth through seventh grade and measured similar factors (Bronstein, Ginsburg, & Herrera, 2005). Students were asked about parent external control, guidance, and autonomy support, and provided ratings of their perceived competence and motivational orientation. Harter's (1981) Intrinsic versus Extrinsic scale was used to create academic mastery and judgment factors, representing intrinsic/extrinsic motivation and trusting own/others' judgments, respectively. Structural equation modeling revealed that fifth-grade students who perceived their parents as controlling were relatively extrinsically motivated by the time they reached seventh grade, while autonomy support from parents led to students' intrinsic motivation. These findings reveal a crucial distinction between parental competence support and excessively controlling behaviors. Although a parental behavior such as "helping with homework" may be intended to support students' school-related competence, if the behavior is expressed in a commanding or domineering manner, it will be interpreted as excessive control and will be detrimental, rather than facilitative, to academic motivations such as self-efficacy. To be effective, parental competence support is also favorable towards students' interests, intentions, and dispositions.

A direct link between parent competence support and student self-efficacy for reading was shown in a nationally representative sample by Fan and Williams (2010). Over 15,000 10<sup>th</sup> graders and parents were included in the sample, taken from the Educational Longitudinal Study of 2002 (NCES, 2004). The students rated themselves on measures of self-efficacy, intrinsic motivation, and engagement. Parents rated the extent



to which they provided academic advice to their children, participated in school functions, and remained in contact with the school. Self-efficacy and intrinsic motivation for reading, as well as engagement, were highly correlated with the parent reports of their support. Multiple regression models revealed that parent support explained variance in students' engagement, self-efficacy, and intrinsic motivation for reading.

Parental competence support contributes to children's approach to academics and their performance in school. Parents who provide their children with the resources, help, and encouragement, as well as their involvement with the school community, lay a foundation for a successful school experience (Klauda, 2009). It must be noted, however, that these studies are of primarily European American families and therefore implications of the findings are limited.

### **Teacher-Student Relationships**

The broader context of teacher competence support is the relationship between the teacher and student in the classroom. I will begin by describing this relationship and the ways in which it is associated with student outcomes such as motivation. Teacher competence support is an integral part of the teacher-student relationship, and will be addressed once the general nature of this relationship is discussed. Teachers can positively impact the students in their middle school classrooms by setting up a physical environment that is conducive to learning, establishing rules and procedures, encouraging appropriate peer interaction, and by fostering a good relationship with their students (Carter & Doyle, 2006). The social context in which student motivation occurs is complex and multi-layered, and the nature of that context influences students' motivations (Davis, 2003; Gurtner et al., 2001; Turner, 2001; Watson & Battistich, 2006; Wentzel & Wigfield, 1998; Wosnitza & Nenniger, 2001).

This social context refers to students' experiences both in and outside of middle school (Bronfenbrenner, 1989; Martin & Dowson, 2009; Perry, Turner, & Meyer, 2006; Pintrich, 2003; Skinner, 1998; Wentzel, 1999a). Students who feel cared for by parents and teachers, and who feel a sense of belonging, are more likely to pursue prosocial goals. The socialization context of the teacher-student relationship provides support similar to the context of parent-child relationships, and invokes similar positive outcomes when the child perceives positive support (Wentzel, 2002, 2010).

In an extensive review of empirical and theoretical literature on contextual effects of teacher-student relationships on student motivation, Wentzel (2009) argues that teachers form relationships with students, and these relationships are related to academic accomplishment through the communication of goals and appropriate ways of behaving in the classroom. Such behaviors and dispositions include sharing, being helpful, and complying with classroom rules and routines (Wentzel, 2000). When students receive clear direction in this vein, they begin to value and eventually adopt the goals and behavioral patterns encouraged by the teacher, such as being cooperative, responsible, cautious, and conforming (Wentzel, 2002).

Good relationships with teachers are also emphasized as central to motivation by Martin and Dowson (2009). In a review of more than 120 empirical articles, they proposed that "relatedness [between teachers and students] is linked to key psychological needs in a way that fosters achievement motivation" (p. 330). They argue that positive relationships enable students to develop agency. This refers to students' self-perceptions that they are valued individuals, which gives rise to self-expansion and self-protection (Bakan, 1966). Martin and Dowson (2009) suggested that relatedness can increase and

become connected to autonomy as elaborated in self-determination theory (Ryan & Deci, 2000), which enables the individual to be an effective student in a particular academic situation. This situated efficacy can generalize to becoming well adapted to and achieving in other academic contexts. These positive relationships between teachers and students are often studied through the lens of teacher support. In the following section, I present dimensions of teacher support that are relevant to students' academic competence, as well as some frequently studied dimensions of teacher support that are integrated with the research literature on teacher competence support.

### **Dimensions of Teacher Support**

The dimensions of teacher support will be described in this section, with an emphasis on teacher competence support. Other dimensions of support are included due to the overlap usually present in the current literature between types or characteristics of support; however, the teacher behaviors that are most theoretically related to students' competence are rarely studied as a distinct dimension of teacher support. The current study measured student perceptions of the teacher behaviors that reflect support for student competence in reading. Emotional support, teacher communications, and competence support will each be addressed in order to provide a substantive view of the field of teacher support research. A brief discussion of student perceptions of teacher behaviors will add perspective to the study of teacher competence support as it relates to my study.

Broadly defined, teacher support encompasses all the ways teachers help students learn. The existing literature, for the most part, examines components of teacher support either individually or collectively. Studies of teacher support have identified qualities of teacher support such as caring, formative appraisals, instructional feedback, provision of

resources and safety, goal orientations and expectancies, and support of academic and social competence (Wentzel, 2009). These qualities, along with a variety of other teacher behaviors, can be categorized to a certain extent as either competence support, emotional support, or social support, in some cases overlapping between categories. Teacher competence support may increase achievement by increasing appropriate use of self-regulated academic behaviors, and by facilitating the process of students learning procedures for performing academic tasks through the teacher's instrumental help (Wentzel, 2009). Emotional and social support are often studied in conjunction with students' personal and non-academic outcomes, such as feelings of belonging, feeling respected and liked, and social interaction with peers (Pianta, Nimentz, & Bennet, 1997; Peisner-Feinberg et al., 2001; Wentzel, 2009). It must be noted, however, that both emotional and social support are correlated with motivation and achievement (Wentzel, 2009, 2010).

To a certain degree, these various components of teacher competence support have been shown to vary in their influence on different outcomes (Wentzel, Battle, & Looney, 2007). These components function in conjunction with each other to foster student cognitive and social development within the context of the classroom (Wentzel, 2002). It is nevertheless helpful to examine each of these separately in order to determine possible unique contributions to specific behavioral, motivational, social, and cognitive outcomes. Teacher competence support is relatively neglected as a distinct construct, and teacher behaviors that support competence are often embedded in studies of teacher caring or the behaviors are not measured together in the given study (Wentzel, 2009). Although teacher caring, an aspect of emotional support, was not measured, there is

extensive research that shows the significant relationship between emotional support and the student outcomes of motivation and achievement. These studies of teacher emotional support often include aspects of competence support, and are presented first within this literature review.

### **Emotional Support**

Perhaps one of the most frequently researched dimensions of teacher support is the affective component of emotional support, grounded in the framework of attachment theory (Wentzel, 2009). I include this brief section describing emotional support because there are often intersections and overlap with competence support in the studies reviewed. Often measured with perceptions of teacher caring, this form of teacher support has been clearly linked with both achievement and motivation for students from primary through high school grade levels, although the majority of these studies focus on the early childhood years in preschool and elementary school. Teachers are supporting students when they provide the necessary resources, both academic and social, for the students to succeed in the classroom. These resources may include an environment that encompasses a safe physical setting, cognitive stimulation, and positive social atmosphere that are conducive to learning. Students who report that their teachers are providing these resources are likely to be less aggressive, have positive social self-concept, and show evidence of higher motivation and academic performance (Wentzel & Looney, 2007). Teachers also support students by providing a comfortable and safe social environment (Mitchener & Schmidt, 1998). In their positive relationships with students, teachers are trusting, caring, and respectful, which in turn fosters student engagement (Pintrich, 2003; Wigfield et al., 2006).

Teacher caring is perhaps the aspect of support most often measured in studies of teacher-student relationships. When students perceive that their teacher is invested in educating them and cares about their ultimate outcome, it is more likely that they will put forth effort to do well academically, and both the way in which the teacher is perceived as treating the student and the perceived goal structure of the classroom play a part in affecting the students' performance (Furrer & Skinner, 2003; Skinner, Furrer, Marchand, & Kindermann, 2008; Wentzel, 2009). To characterize caring, investigators often directly ask students to rate the extent to which they feel their teacher cares about their learning, their wellbeing, and how much the teacher cares in general about each student as a person. As this study does not focus on emotional support, I will provide a fairly brief overview of this dimension here, and will subsequently indicate when it is measured in studies that are presented in other sections of this chapter.

Students place importance on their teachers' actions and the way in which they treat their students. Davis and Lease (2007) emphasized student perception of teacher-student relationships to describe the classroom environment in a study that examined how students assigned status to their peers. Middle school students were asked to rate their peers according to how much they thought the teacher liked each individual student. The students also completed the Relational Schema Scale for Teachers (Davis et al., 2000), which measured students' beliefs about getting along with teachers using affective, behavioral, and motivational dimensions. Students and teachers were given the Student-Teacher Relationship Scale (Pianta, 1996), which evaluates the degree of conflict, closeness, and dependency within the relationship. In order to measure motivation, students were given both the Self-Esteem Questionnaire (DuBois, Felner, Brand, Phillips,

& Lease, 1996), as well as self-efficacy and intrinsic value scale items from the Motivated Strategies for Learning Questionnaire (Pintrich and De Groot, 1990). The students who were rated by their peers as being liked by the teacher tended to be more motivated and have more positive beliefs about the teacher. Included in the measure of beliefs about teachers were student-rated statements referring to teacher support (or lack thereof). The researchers also found that prior motivation significantly predicted the way that teachers rated the quality of their relationship with individual students, and there were differences in relationship quality based on students' at-risk status.

Adolescent students' perceptions of teacher caring, in particular, have been found to be substantially associated with students' level of self-efficacy for school tasks, and intrinsic valuing of education (Murdock & Miller, 2003). This relationship is sustained even when motivational influences from parents and relationships with peers are statistically controlled. In other words, the positive motivational effects of teachers caring about students are relatively independent of parental influences and peers' contributions to students' motivations for school. In the Murdock and Miller (2003) study, the sets of support variables were additive, rather than multiplicative or interdependent, in their effects on student motivation. The impact of student perception of teacher caring will be addressed further in the upcoming section on student motivation.

### **Teacher Communications**

Studies have shown it is important to take aspects of teacher communication, as well as emotional support in the classroom, into account in attempting to characterize influences of teacher-student relationships on motivation (Graham, 1996; Skinner & Belmont, 1993; Furrer & Skinner, 2003). Teacher communication refers to the teacher's

goal setting and organization of the general classroom activities. In some studies, this has been referred to as ‘structuring’ (Skinner & Belmont, 1993). Whether directly or indirectly stated, teacher communications can convey judgments about student ability for a given task, affecting social cognitive motivation (Graham, 1994a).

Besides instructive or organizational verbal statements, teacher communication can consist of encouraging feedback and negative criticism. Encouraging feedback includes positive statements regarding students’ behavior in the classroom. This encouraging feedback is often a verbal assessment of the students’ academic work, worded with positive affect. It is possible that feedback may be perceived differently by teacher and student. For example, the teacher could make a statement that she feels is neutral or even affirming, yet the student perceives it as undermining. I refer to non-supportive teacher feedback as negative criticism. Whether directly or indirectly stated, teacher behaviors can convey low expectations or judgment that the student has low ability for a given task, affecting social cognitive motivation (Graham, 1994a). Both encouraging feedback and negative criticism can influence students’ self-efficacy (Schunk & Pajares, 2005) and their social and academic goals (Wentzel, 2006). In some cases, teachers making affirming or undermining statements about students can alter how their peers perceive them (White & Kistner, 1992; White, Sherman, & Jones, 1996).

### **Teacher Competence Support**

**Encouraging feedback.** One dimension of teacher support that has been included in the motivation research is teacher encouraging feedback (at times referred to as teacher feedback). To a lesser extent, negative teacher-student interactions, usually in the form of teacher negative criticism, have also appeared in the literature. I will first



present studies on general teacher feedback, followed by a brief discussion of research focusing on negative teacher communication.

Teacher feedback is generally defined as verbal statements that teachers make in response to students in the classroom. The content of the feedback may consist of observations about student behavior, appraisals of ability, or information about academic tasks. For the purposes of this review, the feedback discussed does not include neutral discourse consisting of questions or academic instruction or directions. The way in which teachers communicate with their students can be very influential in shaping students' perceptions of themselves, as well as their feelings of competence in the given subject matter (Marshall & Weinstein, 1986; Skinner & Belmont, 1993; Wentzel, 1997). Teacher statements to students can impact student help-seeking behavior (Wigfield et al., 2006), as well as how students feel about themselves and the larger classroom environment, which in turn affects how students fare in school (Marshall & Weinstein, 1984). There are likely to be additional effects of teacher support on constructs of student motivation that remain to be examined.

An important aspect of teacher competence support is the manner in which a teacher expresses feedback to students, in terms of tone and sensitivity (Pianta, 2006). In addition to giving instructions, telling stories, and requesting information, the teacher responds to student behaviors, which may affect student motivation. Feedback is one component of the more general teacher-student interaction that can be examined in order to determine its nature and relationship to motivation (Perry et al., 2006). This communication of feedback is frequently offered for the purposes of instruction, encouragement, and support for participation.

**Negative criticism.** Students in classrooms with teachers who tend to be overly critical are not as motivated as students who are criticized sparingly (Cooper, 1977; Wharton-McDonald et al., 1998). Research shows that when the general climate of the classroom is negative, students' academic achievement is lower than that of their peers in emotionally supportive classrooms (Hamre & Pianta, 2005); therefore, this negative environment undermines students. Undermining teacher behaviors include comments made to students that indicate displeasure on the part of the teacher. This is not the inverse of teacher support, but rather a distinct construct with unique effects on student motivation (McRae & Guthrie, 2007). Research has shown that if students perceive negative interactions with teachers, there is an effect on their perception of that teacher-student relationship (Hughes, Cavell, and Willson, 2001). If a student does not feel a sense of safety in the classroom, particularly if the teacher repeatedly has negative interaction with that student, then it is likely the student will feel disconnected to not only the teacher, but to the academic tasks that the teacher assigns, and by extension, the course material.

In addition to positive feedback such as praise, it is important to take into account the unique and separate role that negative interaction plays in the teacher-student relationship. Hughes et al. (2001) sought to make this distinction as they examined student perceptions of teacher-student relationship quality. In this study, 993 third- and fourth-grade students evaluated their peers' relationship with the teacher using a peer nomination form where they would sort students into one of two categories. The first was "teacher support," and was described to the students as: "These children get along well with their teachers. They like to talk to their teachers, and their teachers enjoy

spending time with them.” The second category was “teacher conflict,” and students nominated peers based on the statement: “These children don’t get along with their teachers. They often argue with their teachers and they do things that their teachers do not like.” Teachers then rated students within the sample who were at risk, using The Child Behavior Checklist – TRF (Achenbach, 1991) to rate the level of aggression they perceived in each of these students.

The authors found that teacher support and teacher conflict each uniquely predicted peer outcomes, thereby showing these variables to be independent and not direct opposites of each other. There were some gender differences present, where students perceived that girls received more teacher support than did boys. These results are an indication of the multifaceted nature of teacher support and student perception of that support.

**Teacher expectations.** Teachers are supporting their students’ competence when they provide clear and age-appropriate expectations. The view that teacher expectations influence students’ school achievement and motivation has been widely studied in the psychological literature (Jussim & Eccles, 1992; Raudenbush, 1984; Rubie-Davies, 2006; Tenenbaum & Ruck, 2007), and the prevailing view is that multilayered, self-fulfilling prophecies have created inequities in achievement (Weinstein, Gregory, & Strambler, 2004). Fundamental to this view is the assumption that the expectations that children have for themselves are likely to be impacted by the expectations they perceive teachers have for them, often measured as student perceptions of differential treatment in the classroom.

Kuklinski and Weinstein (2001) found significant differences in elementary students' self-expectations based on the perceived differential treatment teachers had for hypothetical low- or high-achieving students. The authors (Kuklinski & Weinstein, 2000) also established that teacher expectations, as measured by student perceptions of differential treatment, can remain stable or can be flexible over time, the latter being more conducive to a supportive environment, as "children might be more vulnerable to internalizing teacher expectations as their own" (p. 29). This extends earlier work by Brattesani, Weinstein, and Marshall (1984) establishing the correlation between student perception of teacher differential treatment and self-expectations, as well as the work of Thorkildsen and Nicholls (1998), which established, through factor analyses, that perceptions of teacher differential treatment, goal orientations, and student beliefs were distinct constructs for upper elementary school students. These findings were replicated in the Weinstein et al. (1987) study that explored the developmental trajectory of elementary students, as they progressively adopt self-expectations based on observations of teacher differential treatment by the time they reach fifth grade. Weinstein and her colleagues proposed that once the observed expectation is adopted, the student begins to perform accordingly, at times leading to a gap in achievement based on high or low teacher expectancy (McKown & Weinstein, 2008). Darley and Fazio (1980) proposed a similar model, where expectations are developed and then acted upon (in this case, by teachers); subsequently, others (in this case, students) perceive the actions, interpret them as expectations, and respond.

Responses to teacher expectations may come in the forms of academic performance and achievement motivation. In a study of sixth-grade math students,

Jussim and Eccles (1992) found a significant correlation between teacher expectations and student achievement. The expectations were self-reported, so although this lends support for the link between middle school students' achievement and teacher expectations, it is not explicitly measuring student perceptions of teacher expectations. Researchers have found some evidence, however, that student perceptions of teacher expectations and teacher reports are somewhat consistent (Kuklinski & Weinstein, 2000).

**Instrumental help.** Instrumental help is defined as the provision of information, advice, and modeled behavior (Wentzel, 2009). Teachers are directly addressing the needs of students in the classroom when they offer help that advances the students' knowledge, participation, effort, and mastery of material. There has been extensive research conducted on student help-seeking behaviors, and the ways these behaviors are positively associated with motivation and achievement. Providing instrumental help, and encouraging help-seeking behaviors, can lead to increased competence, autonomy, and self-efficacy (Newman, 2000; Ryan, Gheen, & Midgley, 1998; Wentzel, 2009). Help-seeking in the classroom is more likely to occur when teachers are supportive, where students feel comfortable asking for help, and they do not anticipate negative judgments or punishments as a result of asking for help (Ryan, Pintrich, & Midgley, 2001). Conversely, teachers who do not provide necessary help, or who react negatively to requests for help, are likely to contribute to students' avoidance of help-seeking behaviors, which in turn is associated with lower motivation and achievement (Ryan, Gheen, & Midgley, 1998).

Students who report positive relationships with teachers are more likely to seek help in elementary, as well as, middle school. There are developmental differences,

however; studies have found that the amount of help-seeking may decrease with age, while at the same time becoming more differentiated in terms of the type of help sought (Newman, 2000). They are also more likely to seek help from teachers, rather than peers, according to a study of third-, fifth-, and seventh-grade students (Newman & Schwager, 1993). The fifth- and seventh-grade students perceived stronger teacher support for help-seeking than the third-grade students, and the seventh-grade students reported that they believed high-achieving students are more likely to ask questions in class. This reinforces the importance of teacher support in the form of instrumental help. Encouraging students to seek help by providing help, teachers can perhaps foster positive help-seeking behaviors in students, thereby increasing their academic performance. Frequently providing unsolicited help, on the other hand, potentially produces a negative effect. Graham and Barker (1990) asked children to view videos of students being helped, both unsolicited and as a result of seeking help. The 6- to 12-year-old children in the study inferred that the students receiving unsolicited help were lower in ability than their counterparts. It is therefore important to acknowledge that as with the other dimensions of teacher support, the relationship between the provision of instrumental help and student perceptions about ability is complex and in need of further investigation.

### **Student Perception of Teacher Support**

Students' perception of teacher behavior is often distinguished from teachers' perceptions of their own behavior in the classroom. The studies presented thus far, as well as the research throughout this review, most often measure teacher support through student report. As the outcome variables of interest are student centered (motivation and achievement), it follows that teacher support is defined from a student perspective.

Although at times teacher and student perspectives may relate to motivational variables in similar ways, as seen in the following study, they remain separate and distinctive.

Skinner and Belmont (1993) conducted a study of the reciprocal social relationship between teacher and student, and its impact on the level of student participation and enjoyment in classroom activities (engagement). The researchers hypothesized that (1) teacher behavior and student engagement would be mediated by student perceptions of teacher behavior, and (2) the relationship between student engagement and teacher behavior would be mediated by teacher perception of student motivation. One hundred forty-four students in grades 3 to 5 were surveyed, with the sample divided equally by sex, and were predominantly European American (94%).

In order to measure teacher behaviors, three aspects of behavior were included in a questionnaire: involvement (affection and dependability), structure (clarity of expectations and adjustment of teaching strategies), and autonomy support (respect and choice). Teacher involvement was rated by students based on their perceptions of teacher affection and attunement, among other qualities. Teachers filled out a questionnaire as a form of self-report of their behaviors and students filled out a questionnaire reflecting their perceptions of these teacher behaviors. Student engagement was also measured using questionnaires, where students self-reported on their engagement and teachers reported their perceptions of student engagement. Both behavioral and emotional elements were included in the items, which were answered using a 4-point Likert-type scale. Skinner and Belmont (1993) found that there was indeed a reciprocal relationship between teacher behavior and student engagement based on other-perceptions rather than self-perceptions. Consistent with the first hypothesis, student perception of teacher

behavior was found to be influential in student classroom engagement. Teacher perceptions of student engagement also predicted teacher behaviors, as stated in the second hypothesis. In a longitudinal study, Mistry, White, Benner, and Huynh (2009) reported a similar reciprocal relationship for low income students.

### **Summary of Dimensions of Teacher Support**

In this study, teacher competence support is identified as a distinct aspect of teacher general support, which also includes emotional support and a range of teacher communications. Students' perceptions of their reading teachers' encouraging feedback, negative criticism, expectations, and instrumental help may be synthesized into a composite of teacher competence support. The emotionally supportive behaviors of caring, liking, and interest in students remain important to the study of teacher support. It is useful, however, to differentiate teacher competence support as a distinct quality of the teacher-student relationship.

### **Teacher Competence Support Influences Student Motivations and Engagement**

Because teacher competence support is the primary construct under investigation in this dissertation, I selected self-efficacy as the primary motivational construct due to their alignment with each other. If teachers are supporting the competence of students in reading, it is likely that their competence will increase, as well as their confidence in their reading abilities (Wentzel, 2009). Teacher general support has been studied in conjunction with such motivations as intrinsic and extrinsic motivation and social goal orientations. The relationship between teacher competence support and self-efficacy is a major focus of this study. Evidence for the effect of teacher general support and teacher



competence support on motivation will be presented in this section. This will be followed by a description of the role of motivation as a mediator in the relationship between teacher support and achievement. I will begin with a brief foundation regarding the conceptualizations of motivation drawn from the prominent theoretical framework of socio-cognitive theory (Bandura, 1986). The conceptual framework most relevant to research on teacher support, the socialization perspective (Wentzel, 2009), will also inform this study. Each of these has been related to the interpersonal relationships between teachers and students in a review of research encompassing more than 120 studies by Martin and Dowson (2009). Consequently, these theoretical and conceptual frameworks are briefly presented next.

### **Student Motivations**

Much of the research on teacher-student interaction is grounded in the extensive work utilizing a socialization perspective on teacher support. Wentzel (2002) hypothesized that teaching is like parenting, and has drawn parallels between nurturing parents and caring teachers. Parents who are perceived by their children as being involved in their academic lives foster achievement motivation, as do teachers who are perceived by students as supportive. The parenting literature has been influenced by the framework for practices proposed by Baumrind (1971) emphasizing attributes including warmth, control, and decision making. In positive forms, these attributes enable children to acquire school-related competencies and psychological adjustment (Murray, 2009). Teachers who are nurturing and facilitating cognitive and motivational growth possess similar attributes and express them to children in forming relationships with them (Wentzel, 2002). For example, this expectation was confirmed by Murray and Greenburg

(2000) who reported that students with weak relationships with teachers had low emotional adjustment, according to self ratings and teacher ratings.

Of particular relevance is the affective quality of these teacher-student interactions. The way in which students perceive teacher communication has a profound influence on the relationship between teacher behavior and student outcomes like performance and self-concept (Marchant, Paulson, & Rothlisberg, 2001; Murray & Greenberg, 2000; Rosenfeld, Richman, & Bowen, 2000). The constructive critique of a student's work, praise that emphasizes student effort, and the expression of concern for the student are likely to facilitate the student's sense of belonging and relatedness in the classroom. When teachers are overly negative in their feedback to students, or if they are perceived as unfair or disrespectful, students' behavior is impacted. Students may devalue school achievement (Graham, Taylor, & Hudley, 1998), feel increased anxiety related to school, or show increases in socially deviant behaviors (Dornbusch et al., 2001; Gregory & Weinstein, 2008; Rudasill, Reio, Stipanovic, & Taylor, 2010) when teacher behavior is undermining in nature. Teacher-student interactions that are negative also contribute to low self-efficacy, and ultimately to low academic performance. Conversely, students who perceive their teachers as caring are less alienated from the school experience, and therefore are invested in their own academic achievement (Baker, 1999) and exhibit fewer behavior problems (Bub, 2009).

Teachers who are perceived by their students as supportive are seen as having the aforementioned affective qualities in their interactions with the students. In the existing research literature, teacher support is loosely defined as caring or helping students. Wentzel (2010) has sought to refine the conceptual definition of teacher support by

specifying the provisions that teachers make in the classroom for emotional well being, instrumental help, expectations and values, and safety. These aspects of teacher support encompass the interactions that ultimately result in the development of prosocial goals, student engagement, and motivation in the classroom (Wentzel, 2009).

In expectancy value theory, motivation is defined as the individual's beliefs, values, and goals, as well as the desire to perform a task. In this theory, motivation is comprised of many constructs that have been extensively measured both independently and in conjunction with achievement (Meece, Anderman, & Anderman, 2006; Urdan & Turner, 2005; Wigfield & Guthrie, 1997; Wigfield et al., 2006). As outlined by Wigfield, Tonks, and Kluda (2009), this theory centers on the child's beliefs, values, expectations, and goals. These are derived from the major socializers including parents and teachers. These attributes influence the child's expectations for success and importance of success attached to certain classes of academic tasks. Researchers have found significant relationships between parent, as well as teacher, expectations and student outcomes, such as motivation and achievement (Beghetto, 2007; Beghetto, 2009; Pintrich & Blumenfeld, 1985; Dornbusch et al., 2001; Schunk & Swartz, 1993; Weinstein et al., 1987). Under optimal conditions, students make achievement-generating choices, such as reading books frequently or selecting challenging courses, and achieve highly in the academic arena. These constructs are usually examined separately to determine student motivation in a particular domain, but can be measured together, such as in the Wigfield and Guthrie study of reading motivation (1997), and the constructs can be shown to account for reading achievement in experimental studies (Wigfield & Guthrie, 2010).

Social cognitive theory addresses the reciprocal interaction of cognition, behavior, and environment (Bandura, 1986; Schunk & Pajares, 2005). Within this theoretical framework, self-efficacy refers to the confidence one has in completing a task or learning a skill, and the individual's belief that one is competent to complete the task successfully (Bandura, 1997; Schunk, 1991). These beliefs are based on past performance, but are also future oriented (expectations of future performance), and are most evident when students are faced with a challenging task and maintain the expectation for success (Graham & Weiner, 1996; Schunk & Pajares, 2005). According to Bandura (1997), social persuasion, for example, verbal judgments that others make, also result in the development of self-efficacy, and may either strengthen or weaken self-efficacy, depending on the positive or negative nature of the statements (Schunk & Pajares, 2005).

The construct of self-efficacy, which is integral to socio-cognitive theory, has particular importance for studies of African American students' motivation. There are two reasons for this. First, Guthrie et al. (2009) reported that when self-efficacy and perceived difficulty, which was approximately the inverse of self-efficacy, were entered simultaneously as predictors of achievement, self-efficacy had a higher correlation with achievement for European American students than for African American students. In contrast, when they were entered simultaneously, perceived difficulty had a higher prediction of achievement for African American students than for European American students. Winston, Eccles, Senior, and Vida (1997) confirmed this finding by reporting that the correlation between self-efficacy and achievement in middle school was significantly stronger for European American students than it was for African American students. These findings are consistent with the report of Long et al. (2007) that there

was no correlation between self-efficacy and achievement for ninth-grade African American students when other motivations of goal orientations and word avoidance were controlled. In addition, Stevenson et al. (1990) conducted a study showing that African American students' self-efficacy was not significantly correlated with their academic achievement. In sum, several investigators reported that self-efficacy is less well correlated with achievement for African American students than for European American students, but the issue warrants further research with stronger controls for demographic variables, such as socioeconomic status.

The second reason it is importance to investigate the self-efficacy of African American students is the discrepancy in levels of self-efficacy based on ethnicity. Baker and Wigfield (1999) showed that self-efficacy for students in grades 5 and 6 was higher for African American than for European American students on a self-report measure of self-efficacy in comprehending books. However, unlike European American students, African American students' self-efficacy was not significantly correlated to reading achievement. This is consistent with Roeser, Midgley, and Urdan's (1996) finding that African American students' self-efficacy was significantly higher than European Americans.' Wigfield, Cambria, and Ho (2012) confirmed this correlational effect for students in Grade 7 using a broader measure of self-efficacy for text comprehension. The authors found a significant correlation between self-efficacy and reading comprehension for European American students only. African American students reported higher perceived difficulty (agreeing that reading is very difficult) for reading than did European American students, and African American students' perceived difficulty was significantly correlated with reading comprehension.

This relatively low association of self-efficacy and reading achievement for African American students may plausibly be parallel to the processes of disidentification among African American students. Osborne (1997) suggested that African American students may disidentify with school and supported this concept with data showing that African American boys' self-esteem was not significantly correlated with their achievement. They interpreted this result by suggesting that in the face of low evaluations of their achievement, African American students protect their self-worth by decoupling their self-esteem from indicators of achievement such as grades. Usher and Pajares (2006) suggested that African American students may base their perceptions of competence on social persuasions, rather than their academic performance. Because self-efficacy has not consistently related to achievement or to teacher support for African American students in several empirical studies (Baker & Wigfield, 1999; Graham, 1994a; Stevenson, Chen, & Uttal, 1990), it may be valuable for the understanding of African American students' achievement to study this variable more fully and relate self-efficacy to teacher support for competence of both African American and European American students.

### **Evidence for Effects of Teacher General Support on Motivation**

Teacher behaviors have been linked positively to competence and motivation for students, particularly adolescents, when these behaviors are perceived by the students as being supportive and caring (Wentzel, 2006). To complement this process, teachers' beliefs about their students influence the nature of the teacher-student interaction in the classroom (Calderhead, 1996). These beliefs, along with teachers' displays of trust, caring, and respect impact student motivation and sense of belonging (Certo, Cauley, &

Chafin, 2003; Eccles, 2007; Ibañez, Kuperminc, Jurkovic, & Perilla, 2004; Perry et al., 2006; Stipek, 1996). Students' pursuits of social responsibility and prosocial goals are also related to their perceptions of teacher general support (Wentzel, 1991, 1996). When students perceive their teachers as caring, they are more likely to relate to that teacher, and adopt goals valued by that teacher, such as following class rules and achieving academically (Wentzel, 1999b). Many of the following studies incorporate aspects of both emotional support and competence support; therefore, I use the general term 'teacher support' as I describe these studies.

In studies of elementary school students, teacher support is positively correlated with motivation constructs such as intrinsic motivation, self-efficacy, and autonomy (Midgley et al., 1989; Patrick et al., 2007). As students transition to middle school, their relationship with the teacher remains influential on motivation (Danielsen, Wiium, Wilhelmsen, & Wold, 2010; Stornes, Bru, & Idsoe, 2008), and continues into high school (Ciani, Middleton, Summers, & Sheldon, 2010; Chouinard, Karsenti, & Roy, 2007; Plunkett, Henry, Houlberg, Sands, & Abarca-Mortensen, 2008; Sánchez, Colón, & Esparza, 2005). Teacher support, in the forms of respect, trust, and caring, predicted students' feeling of school belonging, which in turn predicted self-efficacy, according to a study of eighth graders by Roeser et al. (1996). The students' self-efficacy was also associated with academic achievement, even when prior achievement was controlled, leading the authors to present a model in which school belonging and self-efficacy mediated the relationship between teacher general support and academic achievement. Consistent with these results, Uwah, McMahon, and Furlow (2008) found that the self-efficacy of African

American males in grades 9 and 10 was correlated with their sense of belonging in school.

Teacher support has been associated with students' engagement in academic activities in several studies. Furrer and Skinner (2003) surveyed 641 elementary school students on their academic engagement in order to study the effects of relatedness on engagement and performance in school; the sample consisted of equal numbers of boys and girls in grades 3 to 6, and 95% were European American. Engagement was defined by the authors as a construct of motivation that serves as a pathway between motivation and learning, and was measured by 24 items that included both behavioral and emotional aspects of engagement, on a 4-point Likert-type scale. These two types of items were then combined to form a total engagement score for each student. Relatedness was also a self-reported measure completed by students that included items about mother, father, teacher, classmates, and friends. Students rated statements about their feelings of acceptance and their perceptions of teacher caring. Student perception of relatedness to the teacher was found to be related to their engagement.

In a related study, teacher support showed a substantial influence on student engagement, according to Skinner et al. (2008) who examined this relationship for fourth through seventh graders in suburban New York. The 805 students were predominantly European American, and came from middle income families. Both teachers and students reported their respective perceptions of teacher support, and students reported on classroom engagement, disaffection, perceived competence, and control, autonomy, and relatedness to the teacher. Students rated their perceptions of teacher liking as a measure of teacher support. Teacher perception of their general support for students was



measured through their ratings of whether they liked or enjoyed teaching each student. Engagement was measured using a student questionnaire that tapped students' interest and enjoyment.

The researchers found that teacher general support played a role in student emotional and behavioral engagement in the classroom. Further analysis revealed that teacher support contributed to student behavioral engagement through the impact that support had on student perceptions of teacher-student interaction. The reason for this impact may be the effect of perceived teacher support on students' perceptions of competence, autonomy, and relatedness, according to Skinner (2008) and colleagues. Consistent with this view, high school students self-reported that engagement in the instructional program was associated with their perception that the teachers provided authentic learning activities, challenging tasks, and showed interest in student accomplishments (Certo et al., 2003).

Teacher support has been found to be related to peer acceptance as well as classroom engagement. Hughes et al. (2006) reported that teacher support impacted engagement independent of student gender, ethnicity, and relative amount of individual teacher support. To establish the relationship between teacher support and student engagement for students in the primary years of elementary school, the researchers administered questionnaires and interviews to 509 students in first and second grades. The sample was ethnically diverse, and about half of the students were of low socioeconomic status (SES). Students nominated peers who manifested the behaviors of enjoying talking with the teacher, and with whom the teacher enjoyed spending time. These peer-reported behaviors represented student perception of provision of teacher

support. Normative teacher support was calculated as the median number of teacher support nominations received by students, divided by number of students in the class. To measure engagement, teachers completed the Conscientious scale from the Big Five Inventory (John & Srivastava, 1999), rating their perceptions of individual students' work ethic. In light of the finding that teacher support in the form of explicit behaviors increased classroom engagement, the authors concluded that finding ways to help teachers make emotionally positive connections with diverse students must be a priority for schools.

The extent to which effects of teacher support for engagement vary for African American than European American students has not been fully studied. However, Sirin and Rogers-Sirin (2005) reported for a sample of African American high school students that "amount of engagement" (school participation, attendance, and attention in class) predicted academic performance, even after controlling for gender, grade, and parental education. It appears that students' behavioral engagement is a promising variable that may mediate the effects of teacher support on achievement for African American students as well as European American students. Another aspect of support affecting engagement and achievement comes from the home environment, and influences the way students perceive their academic competence.

### **Evidence for Effects of Teacher Competence Support on Motivation**

As stated previously, this dissertation uses the socialization perspective to guide the formulation of teacher support and the conceptualization of constructs contained within teacher support. In this perspective the parenting qualities initially proposed by Baumrind (1971), consisting of such dimensions as warmth, control, and decision making

are incorporated into the viewpoints of teacher support by including constructs such as teacher caring and emotional nurturance of students (Wentzel, 2009). These teacher support constructs emphasize the affective quality of the relationships of teachers and students, and are known to be associated with student achievement and school adjustment (Wentzel, 2002).

In addition to the affective quality of parent-child relationships, the literature reviewed here revealed that parent-child relationships are also characterized by parental support for the child's competencies, especially for school age children. These parent supports for competency include a belief in the child's capacity to perform well in school and succeed in academic tasks, which is correlated with school-based achievement (Aunola et al., 2003). Although this belief is imbued with an affective quality, it is also associated with explicit behaviors of parents that empower their children to succeed in school. Investigators have referred to these behaviors as competence-supporting (Grolnick et al., 1991). For example, these behaviors include helping with homework, setting rules to assure that school work is completed, communicating with teachers to determine the child's achievement levels, rewarding good grades, and encouraging effort in school. Such competence-generating behaviors are associated with school performance, including grades and teacher ratings of adjustment, even when gender (Ginsburg & Bronstein, 1993) is statistically controlled. Parent-child relationships that influence school achievement could be typified both by positive affective qualities and parental competence-supporting behaviors that facilitate appropriate school behaviors, based on this research.

In light of the parenting behaviors that explicitly support students' competence in school and their association with motivation (Klauda, 2009), it is plausible to suggest that teacher behaviors that explicitly support student competence will be associated with students' motivation in school. Although teacher competence support may influence a variety of motivations, it is likely that this support will be related to students' perceptions of their competence in performing school tasks such as reading. This perceived competence is highly similar to self-efficacy in Bandura's socio-cognitive theory (1986), where self-efficacy refers to belief in capacity to succeed at relatively specific tasks.

Teachers' competence support, in the form of formative feedback, encouragement for academic tasks, teacher expectations, instrumental help, and the lack of negative or critical comments, is significantly related to self-efficacy for European American students in elementary school (Beghetto, 2009; Pintrich & Blumenfeld, 1985; Schunk & Swartz, 1993; Weinsten et al., 1987) and in middle school (Beghetto, 2007). In an explicit application of research on teacher-student relationships to education, Martin and Dowson (2009) proposed that "effective instruction include[s] maximizing opportunities for students to develop competence, providing clear feedback to students, explaining things clearly and carefully, ...encouraging students to learn from their mistakes, ...[and]ensuring all students keep up with the work" (p. 346). Each of these teacher behaviors is intended to foster competence in performing cognitive classroom tasks, which is the basis for using the term 'teacher competence support' to represent this dimension of the relationship between teachers and students.

**Encouraging feedback.** Teacher feedback has been embedded within the measures of a number of studies that examine student achievement motivation (Baker,

1999; Carter & Doyle, 2006; Furrer & Skinner, 2003; Roeser, Peck, & Nasir, 2006; Skinner & Belmont, 1993; Tucker et. al., 2002). The majority of the research on teacher feedback focuses specifically on the nature and effects of praise. Research in this area has shown that it is important to distinguish between effects of praise that highlights intelligence versus praise that focuses on effort (Dweck, 2002). Students may perceive teacher praise as an indication of student competence, as praise may act as a low ability cue, meaning that when teachers continually praise students for easy tasks, the inference is that the student is capable of nothing more challenging; however, when praise is specific, given for challenging tasks, and dependent upon the target student behavior, it increases self-efficacy (Gaskill & Hoy, 2002; Graham, 1984b; Graham, 1990; Graham 1994b; Weiner, Graham, Taylor, & Meyer, 1983). Graham (1984a) also found that when teachers express sympathy following failure, students perceive low ability, and when teachers express anger, low effort is perceived by the students. In a study by Barker and Graham (1987), the relationship between praise and perception of ability was found to be dependent on the age of the student, where 5-year-old students were less likely to perceive low ability than 11-year-olds, and no strong correlations were seen for 8-year-olds, indicating a developmental change in perception of praise and its relation to effort and ability.

Student perceptions of teacher feedback play an important part in the student's interaction with the teacher. Although their perceptions may not always accurately reflect the teacher's intentions, these perceptions do play a part in the motivation of the student (Wentzel, 1999b), as well as their achievement (Waxman & Eash, 1983). If a student perceives that the teacher is continuously negative in affect when giving

feedback, for example, it is less likely that the student will feel confident about his/her ability in the classroom, and may not be motivated to fully participate in the learning process (Wentzel, 2002). It is not known whether African American student outcomes are affected by perceptions of relatively less encouragement. However, Tenenbaum and Ruck (2007) found that teachers directed encouraging speech and positive remarks more to European American students than African American students, based on a meta analysis of 11 studies. The research did not, however, measure any possible connection to motivational outcomes. Casteel (1998) reported that in addition to receiving less encouraging remarks, African American students received less help from teachers during lessons. Again, the association between this observation and motivation or achievement was not measured.

In a study conducted by Skinner and Belmont (1993), the relationship between teacher and student and its impact on the level of student participation and enjoyment in classroom activities (engagement) were analyzed according to student perceptions of the relationship. The authors found that it was student perceptions of teacher behavior that explained the association between teacher behavior and student engagement. That is, student perception of teacher behavior was found to be influential in student classroom engagement. Marshall (1987) found that upper elementary school students appeared to be more engaged in the classroom of the teacher who framed her lessons with motivational feedback and emphasized challenge and enjoyment for learning, compared to the teacher who used threats and controlling behavior as external sources of motivation for students to complete tasks. Students in the first classroom were more focused, had

less off-task behavior, and on several occasions, even asked for additional work, based on Marshall's qualitative analyses.

**Negative criticism.** When a teacher constantly criticizes a student, particularly using negative affect, that student may be less likely to put effort into academic pursuits. In addition, even more general teacher negative behaviors may lead to lower student motivation. One study by Wentzel (2002) revealed that the student motivation outcomes of mastery orientation, interest in class, prosocial behavior, and social responsibility were significantly associated with teacher motivation, fairness, rule setting, and high expectations. All four of the student motivation outcomes in the study were negatively associated with negative teacher behaviors. When teachers exhibited undermining behaviors, the mastery orientation, interest in class, and prosocial and responsibility goal pursuits of the students were low (Wentzel, 2002). Student academic valuing is also affected negatively by teacher criticism, and elementary school students tend to value academics more if they perceive that the teacher cares about them (Strambler & Weinstein, 2010). Undermining teacher behavior also has an effect on students' emotions, causing anxiety and anger for students who experience harsh teacher comments in the wake of their academic failure (Frenzel, Pekrun, & Goetz, 2007).

**Teacher expectations.** Rubie-Davies (2006) reported an association between teacher expectations and student outcomes for elementary school students. In a longitudinal study, teacher expectations had an effect on self-efficacy, among other variables. When teacher expectations were low, students experienced a decline in self-efficacy over the school year, and when teacher expectations were high, self-efficacy

increased. Student perceptions of teacher expectation also declined over the school year for students whose teachers reported low expectations.

In Patrick, Anderman, Ryan, Edelin, and Midgley's (2001) mixed method study, two African American and two European American teachers were observed and categorized as either high or low mastery focused, and either high or low performance focused, as perceived by their students. Some of the instructional practices observed were assignment of tasks, locus of authority in the classroom, methods of recognition, grouping, evaluation, and help-seeking. A major finding was that the teachers differed in their expectations for student participation. Both of the high mastery teachers had positive ways in which to encourage student participation in classroom discussion, and many different students would be called on to answer questions. The low mastery teachers, however, exhibited negative methods for generating student participation. One teacher did not call on students unless they volunteered; the other teacher called on students as a form of punishment for not paying attention in class.

Recognition was utilized by the high mastery teachers in a way that was focused on individual improvement. Students were consistently given suggestions related to academic improvement, and positive expectations were conveyed. In the low mastery classrooms, the feedback provided was based on behavior and procedures, and praise was given for tasks such as following directions. One of the low mastery teachers consistently conveyed low expectations for his students. Over the course of the school year, continued help-seeking behaviors were noted in the high mastery classrooms, but not in the low mastery classrooms. Giving students the option of asking either the teacher or a peer for help, and having the student make the choice of the appropriate time



to do so was very empowering, according to the students. This helped to develop a positive relationship between the teacher and student, where the student felt comfortable in asking for help and was confident that there would be no penalty for seeking to clarify or improve comprehension. Unfortunately, teacher expectations were associated with myriad other teacher qualities and behaviors which makes it impossible to attribute any student outcome effects to any one of the teacher characteristics (Patrick, 2001).

The effects of teacher expectations for success on motivation have been documented for European American students (Rubie-Davies, 2006; Weinstein, 2002); due to the relative priority for representing research on African American students in this review, I will briefly present research on teacher expectations that focused on implications for African American students. Epstein, March, Connors, and Jackson (1998) found that compared to European American students, teachers rated African American students as having higher externalizing behaviors. In Tenenbaum and Ruck's (2007) meta analysis of research on differential teacher behaviors based on ethnicity, an analysis of 32 studies revealed that teachers reported having higher and more positive expectations for European American students than for African American students, including students at the middle school level (Tettegah, 1996). African American students are aware of low teacher expectations as early as elementary school, and this awareness grows over time, according to a longitudinal study by McKown and Weinstein (2003). When these students attribute low teacher expectations to their own ethnicity, their academic performance is lower than that of European American students, even those who perceive negative teacher stereotypes toward themselves (McKown & Weinstein, 2003).

**Instrumental help.** Instrumental help has been associated with motivation; however, this aspect of teacher competence support is frequently discussed in the literature with respect to students' help-seeking behaviors. Newman (1990) found developmental differences in help-seeking behaviors in third-, fifth-, and seventh-grade students. Perceived competence and intrinsic orientation were stronger influences on elementary school students' attitudes toward help-seeking, compared to the attitudes of seventh graders in his study. When seventh-grade students believed that help-seeking was highly beneficial and would incur low costs, they were more likely to seek help; whereas elementary school students did not vary help-seeking behaviors based on perceived costs. Newman also connected perceived competence to attitudes about help-seeking. Students who had high levels of perceived competence in turn did not have strong perceptions of costs being associated with help-seeking, and were therefore more likely to seek help when necessary. For elementary school students, dependence on the teacher was associated with higher levels of help-seeking. Seventh graders, on the other hand, were more likely to seek help when they sought independence. For all grade levels, help-seeking was correlated with preference for challenge.

Students pursuing extrinsic goals in the classroom are more likely to perceive negative reactions (threats) from teachers when their perceived competence is low (Ryan & Pintrich, 1997). This means that students who believe they are not competent, while placing importance on external rewards for work completion, are less likely to seek help from teachers. As with Newman's (1990) study, the middle school students in Ryan and Pintrich's (1997) study were more likely to seek help when they perceived resulting

benefits. If they perceived a cost to seeking help, in this case, teacher threat, students avoided help-seeking.

Academic self-efficacy has also been studied in reference to help-seeking behaviors. Ryan, Gheen, and Midgley (1998) found results consistent with the studies previously discussed, in that self-efficacy was significantly correlated with help-seeking. Middle school students with low self-efficacy were less likely to ask for help in math class when they needed it. Help-seeking was also higher if students perceived their classroom as being task-focused (emphasizing individual effort and mastery), and help-seeking was avoided if the classroom structure was perceived as relative-ability (comparing students).

### **Motivation Mediates the Effect of Teacher-Student Relationships on Achievement**

The relationship between teachers and middle school students is complex and interacts with student variables that are well defined and extensively studied, such as motivation and achievement. Although there are significant connections between motivation and achievement in teacher-student relationships (Martin & Dowson, 2009), these variables have the distinctive pattern of mediation. Researchers have found that motivation may act as a mediator for the positive effects of teacher support on student achievement as early as elementary school (Patrick, Ryan, & Kaplan, 2007). In middle school, Wentzel et al. (2010) found that the teacher-student relationship, and specifically adolescents' perception of teacher support, was significantly related to student interest in academic activity. Furthermore, Wentzel (1998) conducted a study of the impact that social relationships have on motivation and achievement for sixth-grade students. In this study, the 167 participants were predominantly European American and came from a

suburban, middle class neighborhood. To measure student perception of teacher support, the Teacher Social Support and Academic Support subscales of the Classroom Life Measure (Johnson, Johnson, Buckman, & Richards, 1985) were administered, with students rating their perception of teacher caring. Motivation was measured using the School Motivation Scale (Ford & Tisak, 1982), where students rated their level of interest and enjoyment in school. Wentzel found that teacher support was indirectly associated with student GPA, with student interest acting as a mediator.

Martin and Dowson (2009) stated:

relatedness may act as a mediating variable with respect to the interface of goals and achievement motivation. In performance-oriented environments, where students experience positive relationships, these environments may be perceived by students as being supportive in the path to achievement... On the other hand, a performance-oriented environment in the context of poor relationships may be perceived as a 'dog-eat dog' context rather than a supportive one. Hence, relatedness could be a mediating process that can inform current theoretical debates... (p. 331)

This view is consistent with the result reported by Marchant et al. (2001) that student motivations and self-efficacy (termed self-competence) mediated the effects of teaching practices (control and responsiveness) and parenting practices on students' academic achievement. It is possible that the effects of psychologically supportive relationships between students and peers and parents are independent of the effects of relationships with teachers.

The mediation view is also consistent with the theoretical formulations of goal theory. The framework of achievement goal theory posits that teachers have considerable

influence in the motivation of the student. In this view, teachers who espouse mastery goals in the classroom (deep understanding), rather than performance goals (grades or test scores), focus on skill development and improvement. This leads students to acquire mastery goals in the immediate present and exhibit a mastery orientation in the longer term, which in turn fosters positive achievement patterns, so that motivation is facilitating the relationship between teacher support and achievement (Meece et al., 2006).

### **Summary of the Effects of Teacher Competence Support**

Studies have shown that when student motivations for reading (including mastery goals) are high, achievement scores on standardized tests are higher than when motivation is low (Guthrie et al., 2004). Mastery orientation in turn fosters such behaviors as perseverance when the task at hand is difficult (Martens & Witt, 2004). Teacher competence support is therefore an integral part of the student's school experience and serves as a source of motivation to achieve (Wentzel, 2009). However, self-efficacy and its relation to teacher competence support and student reading achievement have not been extensively studied, nor have alternate models of interactions between these variables (see Table 1). It is essential, therefore, to expand the study of teacher support to include the construct of teacher competence support as a contributor to motivation and achievement that is distinct from emotional or autonomy support. It must be noted that various forms of teacher support such as competence, emotional, and autonomy support while distinctive, nevertheless complement each other and possibly encompass overlapping characteristics and effects. Expanding the literature to include the empirical study of teacher competence support will broaden our understanding of the multifaceted nature of teacher support. In view of the emphasis this dissertation is

placing on the inclusion of a diverse sample, the influence of teacher competence support on motivation and engagement for African American students is reviewed in the following section.

### **African American Students in Research on Academic Support**

I will now present studies that have investigated the extent to which African American parents provide competence support, and how this support influences students' motivations and achievement. African American students are rarely included in empirical studies of teacher general support, teacher competence support, and reading motivation. In view of the limited research that includes African American students, the studies of parent competence support for African American students included in this review are a basis for the conceptualization of the construct of teacher competence support. Studies of teacher competence support for African American students are presented next, along with evidence for the association of competence support and motivation for African American students. A few studies have found significant differences in self-efficacy levels of African American and European American students (e.g., Baker & Wigfield, 1999). These results, coupled with findings that correlations of self-efficacy with achievement are lower in strength for African American students, will be discussed in this section.

### **Effects of Parental General Support on Motivation for African Americans**

As with the studies in the previous section, researchers have used Baumrind's (1971) parenting style framework as they investigate parents' support for their children's academic competence. Parental monitoring of children's activities, specifically, performance in reading classes, has been used as an indicator of school involvement and

is a measure of competence support, which is associated with higher grades and lower behavioral problems at school. Brody and Flor (1998) found that for African American students, maternal involvement in school activities was related to children's cognitive competence through its association with the self-regulation of the child. "No nonsense" parenting, described by Brody and Flor as high in both parental control and affection, was also linked to cognitive competence through self-regulation. The authoritarian style of parenting frequently adopted by African American parents may be employed as an adaptive response for the purpose of protecting the child from participating in or becoming a victim of perceived dangers in the community. According to Brody and Flor, this "no nonsense" type of parenting would fall between authoritative and authoritarian styles from Baumrind's typology.

In another study of low income African American single mothers, Brody, Flor, and Gibson (1999) proposed a conceptual model suggesting that maternal (self) efficacy beliefs would be associated with parenting that promotes competence, mediated by maternal developmental goals. According to the model, competence promoting parenting subsequently correlates to academic competence of the child, mediated by the child's self-regulation. In this study, developmental goals were characterized by wanting the child to be respectful, well educated, and to get along with others. Competence promoting practices consisted of family routines, mother-child interactions, and involvement with school.

To determine parenting styles for low income, single African American mothers of preschool aged children, McGroder (2000) used the Maccoby and Martin (1983) four group typology – authoritative, authoritarian, indulgent, indifferent/uninvolved, and

Baumrind's (1971) parenting styles – authoritative, authoritarian, permissive. The four parenting styles that emerged from the Cluster analysis were Aggravated but Nurturant, Cognitively Stimulating, Patient and Nurturant, and Low Nurturance. Results indicated that parenting patterns predict differences in children's cognitive school readiness, after controlling for maternal background and psychological well-being. The children of mothers who were either Cognitively Stimulating or Patient and Nurturant had greater cognitive school readiness than the children of mothers who were Aggravated but Nurturant or exhibited Low Nurturance. Both the Brody and Flor (1998) and McGroder (2000) studies utilized interviews and observations for the majority of their variables.

In a comparison of ethnic groups from low income families, Ispa et al. (2004) found that African American maternal intrusiveness was higher than the intrusiveness of European American mothers, and African American maternal warmth was lower than the maternal warmth of European Americans. Mothers were videotaped while engaged in a 10 minute semi-structured play session with their toddlers, and a 2 hour home observation was conducted. Maternal warmth was defined as “the mother's physical and verbal expressions of love, attentiveness, and respect or admiration for the child” (Ispa et al., 2004, p. 1620). Warm behaviors that were recorded were nonverbal affect, attentive looking at the face of the child, and verbal praise and encouragement. Maternal intrusiveness referred to the mother's controlling behavior while interacting with the child, such as grabbing toys, taking charge of the activity, and not letting children determine the focus or pace of play. For African American families, warmth moderated the relationship between maternal intrusiveness and child negativity (toward the mother). For these mothers, intrusiveness predicted child negativity when warmth was low, but not



when warmth was high. Intrusiveness predicted child negativity for the European American group at both levels of warmth. For both groups, high levels of maternal warmth predicted higher levels of child engagement.

Differences between ethnic groups were investigated by Dornbusch, Ritter, Leiderman, Roberts, and Fraleigh (1987) using Baumrind's typology with an ethnically diverse sample of adolescent students. A student questionnaire of 25 items describing authoritarian, permissive, or authoritative parenting styles was administered. The researchers recommended differentiating between neglectful, uncaring parenting attitudes and caring, but ideologically permissive, parenting attitudes. This would result in higher reliability for the "Permissive Index," in light of Cronbach's alpha of .60 for the measure reported in this study. Student GPA and self-report of grades served as the achievement measures. African American parents were higher on the authoritarian index and lower on the permissive and authoritative indices than were European American parents. For both groups, authoritarian and permissive parenting styles significantly correlated with lower grades, and authoritative parenting was significantly associated with higher grades. Parenting behaviors showing support and caring, while instilling and enforcing expectations that are discussed with the child, are therefore conducive to academic achievement. For the sample included in this study, African American students' academic outcomes were presumably impacted negatively by parenting behaviors to a greater extent than were European American students' outcomes. Differences in parenting styles based on ethnicity and their impacts on academic outcomes are likely also attributable to factors such as socioeconomic status, and there is a need for further

research to disentangle the complexity of the interactions between home, school, and student achievement.

In addition to academic achievement, parental support impacts motivation for African American children. Working with three different samples of African American students in three locations in the country, Connell, Spencer, and Aber (1994) investigated how context, self, and action contributed to positive and negative outcomes. In this alignment of factors that impact outcomes in the form of grades and test scores, the parental support for schooling represented the dimension of context. Parental support facilitated the 'self' variables which were students' motivations consisting of intrinsic and identified motivations. These motivations increased students' behavioral engagement, which was termed "action." Action referred to high rates of participation, enthusiastic effort, and high rates of attention to class work. Positive forms of these behavioral engagements generated positive outcomes of grades and relatively high test scores, while low levels of these behavioral engagements generated negative outcomes of truancy, low achievement, and dropping out of school. While students' motivations played a contributing role to outcomes, the role was indirect. Motivations in the form of self-confidence and intrinsic motivation for reading in school did not directly produce positive results, but enabled positive outcomes indirectly by increasing levels of behavioral engagement. In other words, parental support increased motivation, and behavioral engagement mediated the effect of motivations on positive educational outcomes for these African American adolescents.

Mandara and Murray (2002) proposed a typology of family functioning for African Americans, based on their study of 116 adolescents from various income levels.

The authors used cluster analysis to identify three types of families: Cohesive-Authoritative, Conflictive-Authoritarian, and Defensive-Neglectful. They reported a family-type effect on adolescent self-esteem such that students from Cohesive-Authoritative families had higher self-esteem than students from the other two types of families. This study is indicative of the need to study within group differences for African American families. Parental support clearly influences motivation and achievement for both European American and African American students, and the study of parenting behaviors provides a valuable foundation for the investigation of teacher support for competence.

### **Effects of Multiple Sources of Support on Motivations**

The majority of the studies presented in this review examine either parent or teacher support and the ways in which they are associated with motivation. There are a small number of investigations that seek to compare parent, teacher, and at times, peer support, as they relate to motivation. Parent and peer support were compared to teacher support in a study that focused on teacher support and its connection to engagement for Hispanic girls (Garcia-Reid, 2007). The participants in the study were 133 female seventh-grade students. Five scales from the School Success Profile package (Bowen & Richman, 1997) were used to measure parent, teacher, and peer support, “neighborhood dangerousness,” and school engagement. To measure school engagement, students rated their enjoyment for school, and students’ perceptions of teacher caring characterized teacher support. A path model predicting school engagement was analyzed, and social support was found to be positively associated with school engagement. Within the components of the model, teacher support provided the strongest influence on school

engagement for Hispanic girls living in at-risk neighborhoods, more so than parent or peer support.

Several studies have found that teacher and parent support (Thijs & Verkuyten, 2009) contribute uniquely to student outcomes such as achievement and motivation. In some cases, parent support predicted student perception of teacher support (O'Connor, 2010; Ryan, Stiller, & Lynch, 1994). Other studies have established the additive nature of the teacher and parent support contributions to self-efficacy and academic achievement (Gregory & Weinstein, 2004; Murdock & Miller, 2003; Rosenfeld et al., 2000).

Rosenfeld and colleagues (2000) surveyed sixth through 12<sup>th</sup> graders and found that school satisfaction, engagement, and self-efficacy were most influenced by parent and teacher support. These studies concluded that for adolescent students, perceiving high levels of both teacher and parent support resulted in significantly higher levels of engagement, self-efficacy, and achievement than when there was a perception of a high level of support from only one of these sources.

It is possible that one source, such as teachers, could compensate for lack of another source, such as parental competence support. On one hand, Gregory and Weinstein (2004) and Murdock and Miller (2003) reported that there was no evidence of a compensatory process for teacher and parent support effects on motivation or achievement. On the other hand, in a study of 277 African American 7- to 15-year-olds, Brody, Dorsey, Forehand, and Armistead (2002) found contributions from teacher and parent sources of support for perceived competence; they also interpreted their data to document that the presence of one could compensate for the absence of the other. The evidence on possible compensation effects is mixed at present.

The teacher-student relationship is similar to the parent-child relationship in that the child looks to the adult as a caregiver who provides nurturing and structure (Wentzel, 2002). However, some important distinctions should be made to distinguish the parent-child relationship from the teacher-child relationship. The teacher-child relationship is generally one that is short term, lasting a few months to a few years, at most, and students may be taught by several teachers concurrently throughout the school year. The teacher is expected to attend to dozens of students each day, and is in a constant state of semi-formal evaluation, as compared to the parent, who is responsible for fewer children, and has no formal guidelines for guiding the development of their children. Teachers are also required to show a certain amount of emotional restraint, and have very strict boundaries when it comes to physical interaction with their students. This creates a dynamic where the student may view the teacher as an authority figure that may be similar to the parent, but with a distinct and separate role, perhaps as a temporary caretaker who focuses on academic development.

Wentzel et al., (2010) reported that there were differences between the peer, parent, and teacher support mechanisms in the ways in which each of these influences students. Each of the support sources predicted motivation for the students, but there were no significant interactions of the perceived peer, parent, and teacher support in their effects on motivation. This is a strong indicator of the need for the independent study of teacher support and its association with motivation and achievement.

As the existing research is limited, there is no definitive answer as to the relative impact parent and teacher competence support have on specific motivation constructs. It is clear, however, that the parental support experienced by children is parallel in many

ways to the support they receive from their teachers. The extensive research on general parent-child interactions is therefore an appropriate lens through which we can view teacher competence support.

### **Evidence of Teacher General Support for African Americans**

**African American students' perceptions of teacher support.** It is not known whether African American student outcomes are affected by perceptions of relatively less encouragement. Tenenbaum and Ruck (2007) found that teachers directed encouraging speech and positive remarks more to European American students than to African American students, based on a meta-analysis of 11 studies. The research did not, however, measure any possible connection to motivational outcomes this finding may have. Casteel (1998) reported that in addition to receiving less encouraging remarks, African American students received less help from teachers during lessons. African American students also perceive higher levels of negative criticism from teachers compared to European American students (Marcus, Gross, & Seefeldt, 1991). Again, the association between this observation and motivation or achievement was not measured in either of these studies.

When comparative studies have been conducted, differences between European American and African American students' perceptions of teacher support often appear. Witty and DeBaryshe (1994) surveyed 14 classrooms for both student and teacher perceptions. Twenty-four African American and 36 European American students were included in the study; 20 students each in high-, average-, and low-achieving groups. In both the high and average groups, there were six African Americans and 14 European Americans, and in the low-achieving group there were 12 African Americans and eight

European Americans. Of the 14 teachers involved in the study, five were African American and nine were European American. Motivations of self-efficacy, goal orientations, and subject matter interest all predicted achievement in grades 8 and 9 for African American students, although the correlations were not completely consistent across the grades.

The surveys also addressed the provision of opportunities for classroom interaction, feedback, warmth, and expressions of personal regard. Teachers were more likely to encourage class participation from high- and average-achieving students as compared to low-achieving students. Although students did not perceive a difference in teacher encouragement for interaction based on achievement level or race; high-achieving students did perceive that teachers directed more negative interactions toward the average- or low-achieving students. Witty and DeBaryshe (1994) found that there was significant concordance between teachers' and students' perceptions of classroom interaction.

**Studies with diverse samples.** There has been extensive research conducted on achievement and motivation that focuses on European American students, but few studies have included significant samples of African American students, and the studies that do focus on African American students primarily consist of low-income samples (Graham, 1992; Slaughter-Defoe, Nakagawa, Takanishi, & Johnson, 1990). One exception is a study by Kesner (2000), which showed that African American elementary school students were viewed more negatively by European American teachers than by African American teachers. European American teachers reported their relationship with African American students was weaker than their relationship with European American students because the

African American students were more dependent on them and less self-reliant than the European American students.

Sandra Graham has conducted extensive research on African American students' school experiences and, specifically, motivation. An early study by Graham (1984a) examined the role of emotions in motivation for 176 sixth-grade students in Los Angeles. Half of the students were African American and half were European American, and within both of these groups half of the students were classified as low SES and half were middle SES. The experimenters met with students one at a time and gave them puzzles to complete. One puzzle was designed to be unsolvable, and so measured the students' persistence. The other puzzle was presented with an unrealistically short time constraint, causing students to fail in solving the task. Upon the student's failure to complete the puzzle, the experimenter would either speak to the student in a sympathetic way or in an angry manner. To express sympathy, experimenters used a soft tone of voice and looked directly at the child saying, "I feel sorry for you because you haven't gotten any of these puzzles right so far." To convey anger, experimenters said, "I'm angry with you because you haven't gotten any of these puzzles right so far," and used a tone of higher intensity with no eye contact. The students then completed a questionnaire rating the experimenters' affect and attribution.

Students consistently reported that the sympathetic observer believed they had lower ability, and that the angry observer thought that they were not trying hard enough. The affect of the "angry" experimenter also related to students attributing failure to lack of effort. There were no differences in the African American and European American groups in their responses to affective cues and no differences in their perceptions of



personal responsibility for failure. There was, however, a difference between the middle SES African American students and the other three groups. They had higher expectations for success, perceptions of competence, effort attributions, and persistence than the low SES African Americans and the European American students in both SES groups. The middle SES African American students were also observed to be the only group in the study that was mastery oriented, although this was not statistically measured. Further research of African American achievement motivation was suggested by the author as necessary for possible explanation for this discrepancy.

In a documentation of the effects of teacher support on achievement among African American students, Elias and Haynes (2008) conducted a study that focused on student perception of teacher support that consisted predominantly of African American students in third grade. The school was located in an at-risk community, where the crime index was twice the national average, and the unemployment rate was 9.2%. In order to measure teacher support, a shortened form of the Survey of Children's Social Support (Dubow and Ullman, 1989) was administered. Students rated the frequency with which they perceived teacher caring using a Likert-type scale. Report card grades were used as the measure for school outcomes.

The researchers found that student perception of teacher support decreased between the beginning and end of the school year, and this change impacted school performance. There were also ethnic group differences in the change in perception of teacher support, where European American students, being the minority group in the school, perceived lower levels of teacher support compared to African American students. In addition, the students identified as less competent perceived more teacher

support than did the more competent students, which was attributed by the researchers as being the result of teachers' extra attention given to lower-achieving students. African American students perceived more teacher support than did European Americans, but within a majority African American context. Although not conclusive, this research suggests that minority status and perceived competence make a difference in students' perceptions of teacher support. This is particularly relevant, as Oates' (2003) analysis of a national sample using the National Education Longitudinal Study data base showed that European American teachers' perceptions of African American students, in most cases the minority group, had more effect on student performance than other combinations of the ethnicities of teacher and student.

Au (1998) proposed that cultural differences among minorities may account for some of the academic difficulty these students may have when placed in a situation where standards and expectations are not consistent with what they experience at home. In addition, the discourse and self-disclosure styles, mannerisms, and behaviors that may be customarily accepted in African American communities may be met with a negative response by teachers of a different background, or, at best, miscommunication (Gay, 2006), which may, in turn, affect student perceptions of teacher support. African American boys' declining achievement values as they reach adolescence may be related to negative stereotypes of minorities (Graham, 2004). Although students who anticipate future discrimination may be more motivated to achieve in order to be better prepared, those who experience repeated racial discrimination in the classroom by teachers are less likely to be motivated, and more likely to be depressed (Eccles, 2007).

Economic inequities may contribute to African American students' perceptions of their school environment. For example, the resources and quality of teacher preparation in low income schools tend to be at the extreme low end of the scale as compared to the schools that are in the upper and upper middle class neighborhoods where the majority is European American (Sanderson & Richards, 2010; Ward, 2006). Students in low income neighborhoods may be accurate in perceiving that they are not well supported by teachers and schools. However, the nature of teacher competence support and how it is perceived by African American students in middle school has not been adequately studied. This is a precarious situation, since African American students who are categorized as low SES are more likely to experience school failure and perceive themselves as failing in classroom tasks than their middle SES African American and their European American peers (Graham, 1988).

### **Teacher General Support Influences Motivation Among African American Students**

Several studies have established the relationship between general teacher support and various constructs of motivation for African American students (Baker, 1999; Goodenow & Grady, 1993; Newman et al., 2000; Potter et al., 2001). Potter et al. (2001) interviewed African American students when they were in fifth, sixth, and tenth grades, and found that perceiving the teacher as caring was identified by the students as a positive contribution to their academic motivation. Newman (2000) also conducted an interview study of African American students as they transitioned to ninth grade, where students' low motivation was attributed in part to unsupportive teachers. Even when peer support is taken into account, teacher support is shown to be positively and significantly correlated with motivation for African American middle school students. Goodenow and

Grady (1993) administered questionnaires to seventh-grade African American students that measured their perceptions of teachers' encouragement and respect for them, and found a significant correlation between these perceptions of teacher support and intrinsic motivation. In some cases, the impetus for this research is the apparent struggle many African American students have in the classroom, both socially and academically. Prominent among the accounts of motivation among African American students is the view formulated by Fordham and Ogbu (1986) that these students take an oppositionist stance toward schooling due to their repeated experience with prejudice toward African Americans in society. Reacting to this prejudice, students retreat from education as an institution and expect their peers to comply with this adversarial position. This view emphasizes peer relationships and perceptions of society. However, this review is not addressing possible sources of motivation in the broader society beyond schools and homes.

In another research perspective, investigators find that the social context within classrooms and schools is related to student motivations in middle school. Wentzel et al. (2010) included African American students (22%) within a larger sample of middle school students in a study that measured multiple dimensions of teacher support. In addition to the emotionally supportive perception of teacher caring, Wentzel and colleagues measured perceptions of teacher behaviors that support competence: provision of help, communication of expectations, and creating a safe environment. Student interest was measured with the School Motivation Scale (Ford & Tisak, 1982), and was significantly correlated with both teacher emotional support and teacher competence

support. The results for the African American students in the sample were not separately reported by Wentzel and colleagues.

Tucker and colleagues' study (Tucker et. al., 2002) examined self-system variables and their effect on teacher contexts and the student engagement of 117 African American students in grades 1 through 12. The majority of the students came from low-income backgrounds and all of them were receiving grades below "B" in one or more academic courses. The student self-system was defined by the authors as having the components of perceived competence, autonomy, and relatedness to peers and teachers. The teacher contexts included autonomy support, involvement, and structure. Student engagement was comprised of emotional engagement, attention, effort, and commitment. Based on the Connell, Halpern-Felsher, Clifford, Crinchlow, and Usinger (1995) model of motivation, where teacher context impacts academic achievement through student engagement, Tucker et al. (2002) proposed that self-system variables would mediate the relationship between teacher context variables and student engagement.

Perceived competence, autonomy, and relatedness to peers and teachers were assessed in relation to student engagement, using the Rochester Assessment Package for Schools-Student Self-Report (RAPS-S) (Institute for Research and Reform in Education, 1998). Perceived competence was rated by the students based on questions about effort, ability, "powerful others," and luck. Perceived autonomy was measured through questions about students' reasons for completing homework, including enjoyment, interest, fear of punishment, and guilt. Perceived relatedness was assessed through six subscales: relatedness to self, self-satisfaction, teacher emotional security, teacher psychological proximity seeking, peer emotional security, and peer psychological

proximity seeking. Perceived teacher support was measured using student ratings. Students rated their teachers based on autonomy support, meaning teachers' support for students' independent thinking; involvement, which included teacher caring and interest in the student; and structure, which was defined as teachers' fair expectations and feedback. Student engagement was self-reported from 16 items that comprised 5 subscales of engagement. Emotional engagement was characterized as feeling happy in school. Centrality of school referred to the extent to which students felt they had to do their best in school. Students rated their level of effort and attention in the classroom, and whether they went above and beyond the basic academic requirements.

Findings were that perceived teacher support for relatedness and autonomy both had direct effects on student academic engagement. Perceived competence support did not directly affect academic engagement levels, although it did act indirectly through perceived relatedness. This study illustrates the role that teacher support plays in African American student motivation. In both of these studies, African American students responded positively to instructional practices that emphasized individuality, autonomy, creativity, responsibility, cultural validation, and teacher involvement. This shows that teacher support variables are substantially associated with motivational differences within the African American population. Highly motivated African American students perceive stronger teacher support than less motivated African Americans. It is important to note that differences between African American and European American students in perceived support have not been shown to explain differences between African Americans and European Americans in motivation or achievement (Tucker et al., 2002).

Research suggests that for African American students, teacher support influences performance in the classroom. In studies of teachers viewed through the parenting framework, motivation has been found to be influenced by style of teaching (Walker, 2008). In a school of 92% African American students Wentzel (2002) assessed student motivation in relation to teacher support. She hypothesized that models of effective parenting are generalizable to contexts outside the home and can be used to identify dimensions of effective teaching. Wentzel used Baumrind's dimensions of parenting (1971), including rule setting, high expectations, negative feedback, and fairness. These dimensions were part of a survey of the students' perceptions of rule setting, teacher expectations, fairness, negative feedback, and lack of encouragement.

Major findings were that prosocial goal pursuit, responsibility goal pursuit, interest in class, and mastery orientation were positively related to teacher motivation, fairness, rule setting, and high expectations. These variables were negatively related to negative feedback. It was also found that student perceptions of the teachers were consistent within the classrooms, and race did not appear to be a factor in how students perceived teacher behavior. The teacher dimension of high expectations for students consistently had an effect on students' goals and interests, and negative feedback was a consistent predictor of negative classroom performance.

The literature on instruction to support motivation (Guthrie & Humenick, 2004) remains largely confined to studies of European American students. In addition to Wentzel's 2002 study, a notable exception is the research conducted by Teel et al. (1998). The authors conducted a qualitative study of two student cohorts, consisting of 52 low income, inner city seventh-grade students in order to gain insight into successful teaching

for these students. The instructional strategies measured were effort-based grading, multiple performance opportunities, increased student responsibility and choice, and validation of cultural heritage.

Effort-based grading was non-competitive, and individual effort and group cooperation were emphasized. Students were given the option of revising their work once it was turned in and they had received feedback on it. Time was not a factor in the assessment of student work; a student was graded based on effort and quality of work, not how long it took to complete. This sends a message to students that quality of work is important, and perseverance is valued, not mere speed. Multiple performance opportunities were given to students to allow them to express their interest, strengths, and talents, in addition to their basic skills. This allowed for creativity and freedom to be somewhat autonomous when selecting the format in which an assignment could be completed. Examples of assignments were oral narratives, skits, book talks, and art projects. Students were able to make choices and were given leadership roles in the classroom. This increased their feelings of ownership and self-worth, and made them responsible for their own learning. Making the classroom student centered is an important factor in helping students to feel successful based on their own determination. Some examples of choices the students made were which culture to study, and whether to volunteer for classroom officer duties (such as setting up video equipment and managing classroom materials).

Validation of cultural heritage, meaning teachers' support for and encouragement of student ethnic backgrounds, included weekly book talks, where students shared what they had learned from self-selected books. The teacher created a library of books within



the classroom that included biographies and histories reflecting the ethnic backgrounds of the students in the class. These included African American, Asian, European American, Latino, and Native American centered books. There was also a weekly discussion session focusing on current events and topics in the community that directly affected the students and their families, such as racism and drive-by shootings. This inclusion of culturally relevant instruction is theorized to make students feel that their respective backgrounds and feelings are respected and honored (Ladson-Billings, 1994). They are more likely to find interest in topics that are personally relevant and connected to their own lives. This also allows for students of different backgrounds to gain an appreciation for each other and engage in meaningful dialogue that may heighten their sense of empathy and solidarity with their classmates.

Teel et al. (1998) found several consistent indicators that the strategies were successful. Based on the qualitative methods used to analyze the journals, observations, questionnaires, and interviews, several findings emerged. Overall, negative motivation decreased and student enthusiasm increased over the course of the study. As a result of the effort-based grading, the majority of students indicated that they were participating more frequently in class discussions. Most of the students also became more persevering on class assignments than they had been earlier in the year, including on tests. Students received increasingly higher grades in the class, and when multiple performance opportunities were presented, students exhibited heightened interest in the lessons and willingness to reveal previously unrecognized talents and strengths. Increased student responsibility and choice resulted in an increase in students' willingness to assist in the classroom, and willingness to cooperate and work harder. Validation of cultural heritage

strengthened students' sense of identity; in addition, students indicated the experience of choosing books related to their culture was enjoyable. Finally, the authors concluded that students responded positively to discussion and indicated an appreciation for a teacher of a different race who was willing to "listen and accept their feelings."

As with the exploratory and theoretical studies described earlier, the intervention studies in this section reveal a significant relationship between general teacher support, student motivation, and achievement. These studies have confirmed that when teachers exhibit caring behaviors, provide formative and positive feedback, establish appropriate and positive expectations, or some combination of these, the motivation and achievement outcomes for both European American and African American students are consistently significant and positive (see Tables 1,2,3, and 4). Comparative studies examining possible differences between the nature of the association between teacher competence support, motivation, and achievement for African American and European American students have not been conducted.

For African American students, the perspective of the student on teacher-student interaction can be linked to their general perception of school. In a study of 61 African American elementary school students, self-report questionnaires were administered to determine the students' perceptions of the teacher-student relationship (Baker, 1999). These questionnaires measured social support at school and classroom social climate. Student perception of support at school was measured using a subscale of the Things That Happen in School Scale (Grannis, 1992). The students rated the frequency of help or emotional support they perceived in the classroom. Social climate as perceived by the students included the perception of the teacher as being caring, respectful, encouraging,

and accepting. The researchers also interviewed students about their favorite activities at school, how they got along with others, and the nature of their relationships with peers and teachers, among other things. The interviews were then coded to determine student satisfaction with school and the perceived stresses and supports in the school environment.

The results of the investigation were that students who were satisfied with school received less teacher encouragement than their dissatisfied peers, but also received fewer teacher reprimands for behavior. Baker (1999) proposed that this may reflect teachers' higher expectations for the students who appear to be more competent, meaning they will perform without the necessity for frequent praise, and require less redirection. Students who were satisfied with school reported greater social support and a positive and caring classroom environment, compared to the students dissatisfied with school. The interviews showed significant differences between the satisfied and dissatisfied students' perceptions of the teacher's role in the classroom. Most of the students in both groups said that they knew the teacher cared about them, citing emotional support and assistance in the classroom, but the satisfied students were more likely to say that the teacher was the reason for a "nice" classroom environment (Baker, 1999).

Of particular concern is the ultimate goal teachers have of helping their students succeed in school. It is therefore necessary to examine dimensions of motivation independently, just as teacher support must be examined in specific terms. In the following section, research on teacher competence support and its relationship with the self-efficacy of African American students is reviewed.

**Effects of teacher competence support on the association of self-efficacy and achievement.** An important distinction between African American and European American students' self-efficacy is that the correlation between self-efficacy and achievement is not as high or as frequently reported for African American students as it is for European American students (Baker & Wigfield, 1999; Graham, 1994a; Stevenson et al., 1990). This finding is even more pronounced when the association of intrinsic motivation with achievement is controlled. According to at least two studies with African American samples, when measures of reading achievement including test scores and grades are used as the dependent variable, self-efficacy has no significant association with achievement when the association of intrinsic motivation or interest and achievement are statistically controlled; this suggests that self-efficacy has little unique association with reading achievement for African American students (Guthrie et al., 2009; Long et al., 2007).

One possible explanation for this finding is that the relationship of self-efficacy to achievement is similar to the relationship of identity and achievement for African American students. When African American students consistently encounter low evaluations of performance in school, they disidentify with school, according to Osborne (1997) and Mickelson (1990). This disidentification refers to students' disconnecting their sense of self from their school participation, which is evidenced by a precipitous decrease in the correlation of self-esteem and achievement among middle school African American students (especially males). This disidentification is interpreted to be attributable to African American students' need to protect their ego from continued

negative evaluations of school performance (for a review see Guthrie, Rueda, Gambrell, & Morrison, 2009).

It is possible that a similar process occurs for self-efficacy. As students encounter low evaluations of their reading competence, they may disconnect their self-efficacy from their achievement in the form of test scores or grades. For example, some students may believe they are adequate readers despite low evaluations of reading from teachers. It is plausible that for African American students, negative feedback from teachers (Weinstein & Stambler, 2010) and negative communications, such as criticism or sarcasm (Patrick, Anderman, Ryan, Edelin, & Midgley, 2001), will decrease the connection of self-efficacy with achievement more than for European American students who receive less negative feedback from teachers. This possibility was confirmed by Usher (2009), whose interviews with African American students revealed that their levels of self-efficacy were sensitive to the lack of positive feedback from the teacher. To explain this dissociation of self-efficacy and achievement among African American students, it is possible that the correlation is moderated by level of perceived teacher competence support. More specifically, it seems likely that students who perceive high teacher competence support will show higher correlation of self-efficacy and achievement than students who perceive low competence support. The extent that this moderation of the effect of self-efficacy on achievement by level of perceived teacher competence support is stronger for African American students than European American students is an empirical question.

When self-efficacy is not connected to achievement, students are likely to benefit more from teacher encouragement to persevere in school tasks. High resilience and preference for challenge are known to be associated with self-efficacy (Schunk &

Pajares, 2009). However, teacher support may influence these correlates of self-efficacy more for African American than European American students. Consequently, it is plausible that African American students will perceive teachers' negative communications more keenly and act on them more strongly than European American students. If this occurs, African American students in the face of low competence support will decrease in task participation and task success more rapidly than European American students. Consequently, teacher competence support may provide a vital link between self-efficacy and achievement for African American students. O'Connor (2010) found that fifth-grade African American students in low emotionally supportive classrooms reported lower quality relationships than their European American peers. However, African American students in high emotionally supportive classrooms reported similar quality relationships when compared to their European American peers. African American students who had teachers with low self-efficacy also perceived lower quality relationships than European American students, but when teachers had high self-efficacy, both ethnic groups reported similar quality of relationships.

Sixth-grade African American students in Usher and Pajares' (2006) study of self-efficacy also differed in the way they were affected by teacher support. For African American students, teacher support predicted self-efficacy, but there was no significant prediction for the European American students. This does not tell us definitively that African American students systematically perceive lower support from their teachers, but the evidence suggests that teacher competence support interacts differently with components of motivation depending on the motivational construct and on the ethnicity of the student.

## **Summary of African American Students in Research on Support**

Studies have found significant correlations between positive teacher-student relationships and achievement for African American students, often including aspects of parent-child relationships as theoretically parallel to teacher-student relationships (Elias & Hayes, 2008). To a lesser extent, there is support for the significant correlation of teacher support and motivation for these students (Baker, 1999; Teel et al., 1998; Wentzel, 2002). Unfortunately, there are few studies that differentiate dimensions of teacher support, such as teacher competence support (Gutman, 2006; Tucker et al., 2002; Wentzel, 2002, 2010). The distinction of self-efficacy as the motivation variable, rather than general motivation, is also lacking in many of these studies of African American students (Gutman & Midgley, 2000; Schunk & Swartz, 1993). As evidenced in the following section, refining this topic to the level of middle school results in an even smaller body of knowledge regarding African American student motivation and its relationship to teacher competence support.

### **Middle School as a Neglected Group in Research on Teacher Competence Support for African American Students**

Although there are a few studies investigating teacher competence support for African American students (see Table 1 and Table 3), this body of work does not include any significant amount of research at the middle school level, with few exceptions (Gutman & Midgley, 2000; Tucker et al., 2002; Wentzel, 2002, 2010). This section will address this perspective, and tables illustrating the existing literature on teacher support will be presented, in order to exemplify the gap in our knowledge of African American students in terms of their perceptions of teacher competence support and self-efficacy in middle school, and the ways in which these variables are related.

## **African American Students as They Transition from Elementary to Middle School**

Changes in parent and teacher expectations, physical growth, cognitive development, and shifts in perceptions of social relationships all impact children as they move from elementary school to middle school. The developmental trajectory of reading achievement motivation also enters a period of change in adolescence. Once students transition to middle school, the significant decline of intrinsic motivation, self-efficacy, and reading achievement, along with the increase of extrinsic motivation, perceived difficulty, and reading avoidance have been well documented (Anderman & Midgley, 1997; Eccles & Midgley, 1989; Unrau & Schlackman, 2006; Wigfield & Eccles, 2002; Wigfield et al., 1991). Care must be taken, therefore, in the measurement and interpretation of middle school studies with regard to these factors.

Middle school students' perceptions of their academic environment also affect reading achievement and motivation. When students observe positive teacher behaviors and a supportive classroom structure, reading performance, motivation, and achievement are augmented (Aber, Brown, & Jones, 2003; Certo et al., 2003; Roeser & Eccles, 1998). Conversely, low teacher support may lead to low motivation in middle school reading as it does in elementary school. The transition to middle school results in a decline in achievement and motivation, when compared to elementary school, and teacher support is also perceived as diminished once students transition to middle school (Eccles et al., 1993; Feldlaufer, Midgley, & Eccles, 1988). It is not known whether possible shifts in the relationships of teacher support and motivation explain the declines in motivation from elementary to middle school.



When African American students' self-efficacy is supported by both teachers and parents during the transition to middle school, their grade point averages are higher than when they do not receive such support, although their achievement tends to decline during this time (Gutman & Midgley, 2000). African Americans experience the same decline in motivation as European Americans in middle school (Shim, Ryan, & Anderson, 2008). It is not known whether the self-efficacy of African American students may be affected more than European Americans' self-efficacy by perceived lack of support from teachers; if there is a decline in teacher support that is happening at a faster and greater rate for African American students, the decrease in motivation for these students may be partially explained.

The research outlined in Tables 1, 2, 3, and 4 of this review includes key studies of general teacher support and teacher competence support, and their association with motivation for elementary, middle, and high school students. There has been research conducted on teacher support at the preschool and university levels; however, as the focus of my study is middle school, I have limited this review to K through 12 students, with a concentration on the upper elementary and middle school grades. Studies that either loosely defined motivation, or measured multiple motivation constructs (mastery goal orientation, autonomy, prosocial goals, or intrinsic motivation) are categorized as representing studies of "other motivations." When teacher support was characterized as emotionally supportive, as providing general praise, or when it was loosely defined, "teacher general support" is the label applied to these studies in the tables. The studies that measured teacher support as perceived teacher behaviors such as formative feedback, specific encouragement for academic tasks, instrumental help, teacher expectations, or

(the lack of) negative or critical feedback, fit with the definition of teacher competence support and are categorized as such.

Table 1

*Key Studies Representing the Correlation of Teacher Competence Support and Self-efficacy*

Study	Sample	Age group	Type of teacher support
		Middle school	Competence support
Beghetto, 2007	Hispanic/Latino		
Chan & Lam, 2010	Asian American		
		Elementary school; Middle school	
Gutman & Midgley, 2000	African American		
		Elementary school	
Schunk & Swartz, 1993	African American; European American		
Beghetto, 2009	European American		
Pintrich & Blumenfeld, 1985	European American		
Weinstein, Marshall, Sharp, & Botkin, 1987	Hispanic/Latino		

Table 2

*Key Studies Representing the Correlation of Teacher General Support and Self-efficacy*

Study	Sample	Age group	Type of teacher support
Murdock & Miller, 2003	African American; European American	Middle school	Other forms of support
Roeser, Midgley, & Urdan, 1996	African American; European American		
Usher & Pajares, 2006	African American; European American		
		Elementary school	
Graham, 1984	African American; European American		
Patrick, Ryan, & Kaplan, 2007	European American		
		High school	
Certo, Cauley, & Chafin, 2003	European American		
Ibañez, Kuperminc, Jurkovic, & Perilla, 2004	Hispanic/Latino		
Newman et al., 2000	African American		
Sánchez, Colón, & Esparza, 2005	Hispanic/Latino		
Thijs & Verkuyten, 2009	Asian		

Table 3

*Key Studies Representing the Correlation of Teacher Competence Support and Other Motivations*

Study	Sample	Age group	Teacher support
Murray, 2009	Hispanic/Latino	Middle school	Competence support
Schweinle, Meyer, & Turner, 2006	European American		
Wentzel, 1998	European American		
Wentzel, 2002	African American; European American		
Wentzel et al., 2010	African American; European American		
Tucker et al., 2002	African American	Elementary school; Middle school; High school	
Chouinard, Karsenti, & Roy, 2007	European American	Middle school; High school	
Marshall, 1987	African American; European American	Elementary school; High school	
Gutman, 2006	African American		

Table 4

*Key Studies Representing the Correlation of Teacher General Support and Other Motivations*

Study	Sample	Age group	Teacher support
Danielsen, Wiium, Wilhelmsen, & Wold, 2010	European American	Middle school	Other forms of support
Stornes, Bru, & Idsoe, 2008	European American		
Story & Sullivan, 1986	Not reported		
Teel, Debruin-Parecki, & Covington, 1998	African American		
Wentzel, 1997	European American		
Furrer & Skinner, 2003	European American	Elementary school; Middle school	
Skinner, Furrer, Marchand, & Kindermann, 2008	European American		
Ciani, Middleton, Summers, & Sheldon, 2010	African American; European American	Middle school; High school	
Plunkett et al., 2008	African American; European American		
Baker, 1999	African American	Elementary school	
Cooper, 1977	Hispanic/Latino		
Midgley, Feldlaufer, & Eccles, 1989	European American		
Skinner & Belmont, 1993	European American		

## **Need for Research on Teacher Competence Support and Self-Efficacy for African American Students in Middle School**

As displayed in Tables 1, 2, 3, and 4, studies have found that teacher competence support is correlated with motivation for African American elementary school students (Marshall, 1987; Tucker et al., 2002), and the self-efficacy of these students has been correlated to teacher competence support (Gutman & Midgley, 2000; Schunk & Swartz, 1993). The relationship of teacher competence support and self-efficacy has also been documented extensively in studies of European American children (Table 1 and Table 2).

As students transition to middle school, teacher competence support continues to influence self-efficacy (Beghetto, 2007; Chan & Lam, 2010) for European American students. Furthermore, the existing research provides evidence for the association of teacher competence support with motivation in general for African American middle school (Tucker et al., 2002; Wentzel 2002, 2010) and high school (Tucker et al., 2002) students. However, research on teacher competence support specifically influencing the self-efficacy of African American middle school students is extremely limited, with one notable exception of the Gutman and Midgley (2000) study of low- income African American students. The purpose of the study was to examine, among other factors, the combined effect of teacher competence support and self-efficacy on achievement. The authors did not find a significant relationship between teacher competence support and self-efficacy in relation to achievement, but did report a significant correlation between teacher competence support and self-efficacy at  $p \leq .05$ . The relative dearth of research on teacher competence support and self-efficacy that includes African American students justifies the need for further investigation.

Teachers distinguished as exceptional by their peers, and who demonstrate effective instruction that results in high achievement, generally also have positive interactions with their students (Wharton-McDonald et al., 1998). Supportive teachers may also encourage help-seeking behaviors in students and facilitate the students' comfort in approaching teachers (Newman & Schwager, 1992). It is important to note that teacher support that is positively correlated to motivation is characterized as being contingent, specific, genuine, and related to challenging tasks (Brophy & Kher, 1986).

Students are more likely to invest attention and effort in their classwork when they feel that the teacher is investing attention and effort in them. Effective teachers communicate that they care about their students (Pintrich, 2003; Wentzel & Looney, 2007; Wigfield et al., 2006). In other words, when teachers are nurturing and positive in their verbal communication, students are more likely to be motivated (Tucker et al., 2002). Teacher support may also be represented in the form of high expectations for students' work (Weinstein et al., 1987). These high expectations, and the general beliefs teachers hold about students, are communicated and sometimes transferred to students to help form their own goals and beliefs (Wentzel, 2009; Wigfield & Harold, 1992). The studies of supportive and undermining behaviors reviewed have shown the significant relationship between teacher-student relationships and student motivation. When there is a positive relationship between the teacher and student, as evidenced by teacher competence or emotional support, student motivation is positively affected. For example, longitudinal studies have shown that when students perceive that teachers provide support, students' self-efficacy increases (Murdock & Miller, 2003; Skinner et al., 2008).



Educators and community members often try innovative approaches when attempting to bridge the achievement gap. These instructional programs may include components that target the teacher-student relationship, either to better understand its inner workings, or to improve upon it. Interventions in low-achieving schools may provide particularly strong implications for teacher-student interactions. Murray and Malmgren (2005) conducted a study of an intervention targeting at-risk adolescents living in high poverty urban neighborhoods. The 48 student participants in the intervention were all African American, 75% male, and all categorized as low SES. About half of the students in the study were in ninth grade, and the remaining students were distributed among 10th through 12th grades. The Classroom Engagement scale (Connell & Wellborn, 1991) was used by teachers to rate their students, and measures were also obtained for social competence, school adjustment, internalizing and externalizing symptomology, achievement, and school absences. During the course of the intervention, teachers met with students assigned to them regularly and discussed their progress. Teachers also rated the amount of praise they verbally gave students and kept charts tracking positive statements they made to each of their assigned students. They were asked to praise the students whenever an opportunity naturally presented itself, and were encouraged to keep notes of students' positive attributes. There was a positive effect on student achievement in the form of increased grade point averages for students who participated in the intervention. This conclusion may need to be qualified in the future because in most cases, the studies did not report the teacher demographics. Teacher ethnicity is not the focus of this study; however, in studies of teacher-student relationships, the ethnicity of the teachers may be relevant to the findings, especially if

the student sample is diverse. Despite these limitations, this review has revealed evidence that general teacher support is positively and significantly related to motivation for African American, as well as European American, students. The more specific construct of teacher support for student competence has not been widely investigated. However, its counterpart in the socialization perspective, consisting of parental competence support, does appear to positively influence African American students' motivation; therefore, it is reasonable to examine teacher competence support and its possible association with motivation for this group of students. As perceived teacher competence support may be associated with students' beliefs with respect to perceived competence, the motivational construct that will be investigated is students' self-efficacy, which refers to belief in competence to perform tasks successfully (Bandura, 1997).

Although it is expected that there would be a significant relationship between teacher support and motivation for African American students, just as there is one for European American students, the nature of the relationship may diverge to a certain degree. The correlation of self-efficacy and achievement for African American middle school students is frequently found to be lower than the correlation for European American middle school students (Baker & Wigfield, 1999; Guthrie et al., 2009; Long et al., 2007; Usher & Pajares, 2006; Wigfield et al., 2012). By examining this correlation, this dissertation fills a gap in existing achievement motivation theory. I suggest that the effect of teacher competence support may be apparent through its influence on the association of self-efficacy and achievement. That is, the correlation of self-efficacy and achievement may be increased by teacher competence support. It is conceivable that in the presence of low levels of perceived competence support, students dissociate their self-

efficacy from achievement in a manner similar to the disidentification process, which is particularly relevant for African American students (Osborne, 1997). If so, the correlation of self-efficacy and achievement may be higher for students with higher perceived teacher competence support and lower for students with lower competence support. The possible extent that this relationship is stronger for African American than European American students is worthy of investigation. Although these suggestions seem plausible, there is insufficient empirical evidence to warrant explicit hypotheses, and therefore I pose the following questions to guide the study.

### **Research Questions**

1. To what extent do African American and European American students experience significantly different levels of:
  - a. perceived teacher competence support?
  - b. self-efficacy for reading?
  - c. reading achievement?
2. To what extent is perceived teacher competence support associated with self-efficacy differently for African American and European American students?
3. To what extent is perceived teacher competence support associated with reading achievement differently for African American and European American students?
- 4a. To what extent is self-efficacy associated with reading achievement differently for African American and European American students?
- 4b. To what extent is the association of self-efficacy and reading achievement moderated by ethnicity differently for students perceiving high and low levels of teacher competence support?

## CHAPTER 3: METHOD

### Design

This dissertation examines the relationships between teachers and students in the reading classroom, and how these relationships relate to student motivation and achievement in reading. The design of the study is correlational, allowing for the exploration of possible connections between perceived teacher competence support, self-efficacy for reading, and reading achievement. Each student completed a questionnaire on teacher competence support, a self-efficacy questionnaire, and an assessment of reading, at one time point. Data was then analyzed for comparisons between students.

### Participants

An NICHD-funded experimental study of reading motivation and comprehension, entitled *Identification, Prediction, and Intervention in Adolescent Reading (IPIAR)*, was conducted with a sample of approximately 1,200 students (Guthrie, Principal Investigator). Students were assessed in the areas of reading fluency, reading comprehension, and reading motivation, which included intrinsic motivation, self-efficacy, autonomy, and dedication, among others. Students were asked about their perceptions of teacher behaviors such as competence support, and the provision of choice and opportunities to collaborate with peers. Social studies knowledge was also assessed. The goal of IPIAR was to examine the relationships between multiple motivation constructs and reading achievement, and is beyond the scope of this study's research questions. The focus of the dissertation presented here is teacher competence support, self-efficacy, and reading achievement; therefore, only the measures relative to these variables will be discussed. In addition, due to the emphasis on African American

students in this study, a sub-sample of 366 students was selected for analyses based on the necessity for equal numbers of African American and European American students.

### **Sample Characteristics**

The participants in this study came from 54 seventh-grade Reading/Language Arts classes, who were taught by a total of 18 lead teachers, in a mid-Atlantic public school district. The demographics of the district are diverse in socio-economic status and ethnicity, with approximately 29% students receiving free or reduced lunch, and enrollment of about 70% European American and 19% African American students. Within the larger community, 79% of the residents are European American, and 14% are African American, with 7% of the community's population living at or below the poverty line. Parents were given consent forms, and students were excluded from analyses if parental consent was denied.

The participants included 183 African American and 183 European American students, for a total of 366 students. I conducted a power analysis, and based on recommendations made by Cohen (1992) regarding sample size, in order to achieve power = .80, at least 67 participants are necessary. This is with an estimated medium effect size. In order to detect a significant difference in variables at  $\alpha = .05$  between the African American and European American groups, each group must have at least 177 participants (Cohen, 1992). According to Hair, Black, Babin, Anderson, and Tatham (2006), the sample size necessary when conducting factor analysis is ideally 10 times the number of variables to be analyzed. The questionnaires measuring teacher competence support and self-efficacy each have 12 items, and I have conducted a factor analysis for

each of these measures. The recommended sample size is therefore 120, which was met in this study.

### **Measures**

Three measures were administered to students for this study. Questionnaires were used to measure students' perceptions of teacher competence support for reading and reading self-efficacy, and an assessment of reading comprehension measured student reading achievement. The teacher competence support questionnaire measured student perceptions of teacher encouraging feedback, expectations, and instrumental help, and the motivation questionnaire measured student perceptions of their self-efficacy. As the measures were administered within the context of IPIAR, some of the sample items contained negative wording, in order to familiarize the students with negatively worded items that were components of the measurements used in IPIAR. The items used in this dissertation were all positively worded. The assessment of reading comprehension consisted of five passages of text, with each text followed by five multiple choice questions. The measures were administered concurrently in seventh-grade classrooms within a public school district. The design of this study facilitated comparisons of these students on the measures of perceived teacher competence support, self-efficacy, and achievement, and on the influence of perceived teacher competence support on the relationship between self-efficacy and achievement.

### **Socioeconomic Status**

Socioeconomic status (SES) was represented by the prevalence of free and reduced meals (FARMS) provided to students. Government subsidy of school meals may be used

as an indicator of SES when family income of individual students is not available and access to parent education and occupation is not provided by the school system, as was the case here (Entwisle & Astone, 1994). However, an interview study of a small sample of the school district population revealed a statistically significant correlation between FARMS and parent occupation ( $r = .29, p \leq .01$ ) (Guthrie et al., 2009). Eligibility for FARMS is based in part on family size and income; for example, a family of four with a yearly income below \$41,348 may qualify for FARMS (United States Department of Agriculture Food and Nutrition Service, 2012). Students within this sample who qualified for FARMS were therefore presumed to be from lower income families, compared to students who did not qualify for FARMS.

Studies of academic achievement, particularly if the sample is economically diverse, are stronger when they take into account students' varying levels of SES (Jeynes, 2002). Previous studies of African American students have illustrated the importance of separating the effects of SES on achievement variables (Chapelle & Overton, 2002; Entwisle & Alexander, 1992; Lubienski, 2002; Mooney & Thornton, 1999); as African American students are a population of interest in this study, SES will be controlled within the analyses. For the sample of students in this study, SES and ethnicity were highly correlated,  $r = .40, p = .00$ , as well as SES and reading achievement,  $r = .19, p = .00$ . It is possible that without controlling for SES, any relationship between achievement and other variables could be attributed to SES. Removing this possibility allows for more precise interpretation of the analyses.

## **Teacher Competence Support Questionnaire**

Teacher competence support is defined as the provision of instrumental help and communication of expectations (Skinner & Belmont 1993), sincere praise (Brophy, 1986), and positive, or encouraging, feedback (Weinstein et al., 1982) aimed at increasing student learning in the classroom. Student questionnaires have been developed by Skinner and Belmont (1993) and Weinstein and colleagues (1982) to measure teacher support for competence, and several researchers have included and adapted items from these scales in studies of teacher support (Galand, Lecocq, & Philippot, 2007; Pintrich & Blumenfeld, 1985; Wentzel, 2002; Wentzel et al., 2010). This study adapted items from the Skinner and Belmont study (1993) and the Teacher Treatment Inventory (Weinstein et al., 1982).

The teacher competence support questionnaire is a student self-report of perceptions of teacher behaviors that support competence in reading. These behaviors include encouraging feedback, expectations, and instrumental help. In order to help students feel comfortable about answering questions about their teacher, they were informed that this questionnaire was confidential and would not be shared with parents, teachers, or the principal. Teachers told students to think about their Reading/Language Arts teacher during the preceding four weeks while answering the questions about their perceptions of instruction. This was meant to help the students focus on teacher behaviors that they perceived only in this class, and only during this semester. The teacher read a sample item such as, “In the last four weeks in Reading/Language Arts class my teacher asked us to write a paragraph,” and reviewed the response choices, “strongly disagree,” “slightly disagree,” “slightly agree,” and “strongly agree.” This



study analyzed only the questionnaire items that referred to teacher competence support. Students had about 7 minutes to complete the questionnaire, and at the end of this time, the teacher placed the questionnaires in an envelope and sealed it. This was meant to help reassure students and the teacher that only the research staff would be reviewing student responses about their teacher's instruction.

The 12 teacher competence support items have been adapted from the Teacher Treatment Inventory (TTI) (Weinstein et al., 1982) and a teacher support questionnaire developed by Skinner and Belmont (1993). The Teacher Treatment Inventory consists of items that measure supportive (instrumental) help ( $\alpha = .75$ ), negative feedback ( $\alpha = .77$ ), and high expectations ( $\alpha = .80$ ). This measure was used in Weinstein and colleagues' (1982) study of 234 fourth, fifth, and sixth graders in urban schools with diverse ethnicity and SES populations. In their study, student perceptions of teacher treatment were related significantly to student perceptions of high- or low-achieving students, where low achievers were perceived as receiving higher levels of negative feedback, and high achievers were perceived as receiving higher expectations from teachers.

Skinner and Belmont (1993) developed a scale of "structure" ( $\alpha = .84$ ), which they define as the "amount of information in the context about how to effectively achieve desired outcomes" (p.572). This scale includes items measuring student perceptions of teacher instrumental help, responses (feedback), and expectations. Student perceptions of teacher "structure" were significantly correlated with their self-reports of engagement, at  $p < .001$ , based on a sample of 144 third through fifth graders in a rural, suburban school district.

Six of the items used in the proposed study are literal adaptations of the original items, with only minor changes to tense or pronouns. For example, the TTI item “The teacher expects that he/she will finish the work” was adapted to “My teacher expected me to finish my work,” and “The teacher goes out of his or her way to help me” was adapted to “My teacher went out of his or her way to help me as often as possible” (Weinstein et al., 1982). Six of the items were adapted conceptually, where the wording changed, but the underlying concept of the question remained the same. For example, Skinner and Belmont’s (1993) item “My teacher shows me how to solve problems for myself” was changed to “My teacher helped me meet challenges in reading.” “My teacher makes it clear what he/she expects of me in school” was changed to “My teacher told me exactly what was expected of me in class.” These changes are more apparent than the literal adaptations, but the conceptual meaning of the items is retained.

Teachers are supporting student competence when they provide academic feedback that is positive and encouraging in nature (see Brophy, 1986 for a review). For this study, encouraging feedback was measured with three items, for example, “My teacher almost always let me know when I did something right in class.” Research has established an association between teacher clear, consistent, positive expectations for their students and student motivation (Jussim & Eccles, 1992; Raudenbush, 1984; Rubie-Davies, 2006; Tenenbaum & Ruck, 2007; Wentzel et al., 2010). Student perceptions of teacher expectations were measured with three items, for example, “My teacher expected me to stick with what I was working on.” Students who receive help from their teachers in the classroom are more likely to feel competent, and experience high self-efficacy (Newman, 2000; Ryan, Gheen, & Midgley, 1998; Wentzel, 2009; Wentzel et al., 2010).

Instrumental help was measured with six items, for example, “My teacher went out of his or her way to help me as often as possible.” These adapted items and the items from the original measures can be found in Tables 5 and 6.

A pilot study was conducted, where 16 items (Appendix A) were adapted from Skinner and Belmont’s (1993) and Weinstein and colleagues’ (1982) questionnaires, and administered to 54 seventh graders in a Reading/Language Arts class. Seven of the items from my pilot study are included in the teacher competence support questionnaire in this proposed study. The 16 items in the pilot study proved to be reliable at  $\alpha = .76$ , and although there was not a significant correlation with the self-efficacy or achievement measures that were administered, there was near significance for the correlation of the negatively worded teacher competence support items with perceived difficulty at  $p = .07$ , and negatively worded teacher competence support items correlating significantly with previous reading achievement at  $p < .01$ ; all other correlations, while not significant, were near significance and appropriate in direction (i.e., low levels of teacher support correlated negatively with achievement). This evidence was sufficient to warrant further investigation of perceived teacher competence support and its association with self-efficacy and reading achievement with a larger sample of students. A more detailed description of the pilot study is found at the end of this chapter.

Due to a constraint on time allotted for the assessments, the questionnaire items for the dissertation had to be limited to 12 items. The eight negatively worded items were removed based on feedback from a school liaison who felt the wording may be problematic, as the questionnaires were to be administered by the teachers. Four positively worded items were adapted from the Skinner and Belmont (1993) and

Weinstein et al. (1982) questionnaires and were then added to the teacher competence support questionnaire, resulting in a total of 12 items (Appendix B).

Table 5

*Theoretical Grounding for Teacher Competence Support Questionnaire Adaptations from Skinner & Belmont, 1993*

Original item	Literal adaptation	Conceptual adaptation
My teacher shows me how to solve problems for myself. (structure/instrumental help)	--	My teacher helped me meet challenges in reading. (instrumental help)
When I do something right, my teacher always lets me know.(structure/contingency)	My teacher almost always let me know when I did something right in class. (encouraging feedback)	--
My teacher makes it clear what he/she expects of me in school. (expectations)	--	My teacher told me exactly what was expected of me in class. (expectations)
My teacher doesn't seem to know when I need help. (structure/instrumental help)	--	My teacher usually knew when I needed help.
My teacher doesn't help me, even when I need it. (structure/instrumental help)	My teacher went out of his or her way to help me as often as possible. (instrumental help)	--

Table 6

*Theoretical Grounding for Teacher Competence Support Questionnaire Adaptations from Weinstein, Marshall, Brattesani, & Middlestadt, 1982*

Original item	Literal adaptation	Conceptual adaptation
The teacher makes him/her feel he/she did very well when he/she reads or gives the right answer. (supportive help)	--	My teacher said I did well when I read aloud. (encouragement)
The teacher expects or thinks that he/she will stick with what he/she is working on. (work orientation)	My teacher expected me to stick with what I was working on. (high expectations[for work orientation])	--
When he/she gives the wrong answer, the teacher tells him/her how to make the answer better. (work orientation)	--	My teacher showed me how to improve in reading. (instrumental help)
The teacher expects that he/she will finish the work. (high expectations)	My teacher expected me to finish my work. (high expectations [for successful completion of tasks])	--
The teacher makes him/her feel bad when he/she does not have the right answer. (negative feedback)	My teacher encouraged me by telling me that I'm a good reader. (encouraging feedback)	--

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When I do not know the answer, the teacher gives me a hint or clue. (supportive help)	My teacher usually gave me a hint or clue when I did not know the answer. (instrumental help)	--
The teacher goes out of his or her way to help me. (supportive help)	My teacher went out of his or her way to help me as often as possible. (instrumental help)	--
The teacher gives me a long time to answer before calling on someone else. (supportive help)	--	My teacher gave me enough time to finish my work well. (instrumental help)

---

## Self-efficacy Questionnaire

Self-efficacy is defined as the perceived capacity for successful performance one has in completing a task or learning a skill, and the individual's belief that he is competent to complete the task successfully (Bandura, 1997; Schunk, 1991). The motivation questions that were administered are from the Motivations for Reading Information Books School Questionnaire (MRIB-S), developed by Wigfield et al. (2012). In their study, 1,085 seventh-grade students completed the self-efficacy ( $\alpha = .82$ ) and perceived difficulty ( $\alpha = .85$ ) measures, and these motivations were significantly correlated with reading achievement at  $p < .05$ . For this study, this measure included items that reflect students' beliefs about their capacity to perform well in Language Arts class such as, "I could correctly answer questions about the readings," and "The main ideas of the readings were easy to find." The full list of items on the self-efficacy questionnaire can be found in Appendix C.

Teachers told students to think about their Reading/Language Arts class during the preceding four weeks while answering the questions about their self-efficacy. This was meant to help the students focus on their self-efficacy only for reading, and only during the current semester. Two sample questions were completed by the students with the teacher's guidance, and the teacher checked for questions before instructing students to begin. Students had about 7 minutes to complete this questionnaire. Students responded to six statements about their reading self-efficacy by circling one of the following responses: "very true of me," "somewhat true of me," "not very true of me," or "not at all true of me."



## **Reading Achievement**

Reading comprehension is defined as “interaction with text cognitively and affectively to build a structured network of knowledge representing the information in the text fused with the reader’s prior knowledge and experiences related to the text topic” (Klauda & Guthrie, 2011). An assessment of information text comprehension (ITC) served as the measure of reading achievement (Appendix D). The ITC assessment was comprised of five passages of non-fiction text, at reading levels ranging from about a fifth-grade level, increasing in difficulty up to text that is on or above a twelfth-grade reading level. For each of the passages, five multiple choice questions represent literal and conceptual understanding of the text; systematic guidelines were used for creating questions at these varying levels (Appendix E). Teachers directed students to read each passage carefully, and then chose the best answer to each question based on what they read in the passage. The students next completed a sample item, guided by the teacher, and once the teacher checked for any student questions, the assessment began. Students had 25 minutes to complete the assessment, and were reminded throughout the assessment of time remaining.

The ITC assessment was adapted from a similar reading comprehension assessment developed by Klauda and Guthrie (2012), where their measure was significantly correlated with the Gates-MacGinitie Reading Comprehension test (MacGinitie, MacGinitie, Maria, & Dreyer, 2000) at  $.71, p < .01$ . The measure included informational science text for seventh graders. The adapted ITC assessment for the current study contains informational social studies text, and is similar in structure, in terms of both the passages and questions. The ITC assessment was reviewed in full by a

professor of American History at the University of Maryland, and was found to meet requirements for content validity. The passages were determined to be historically accurate, and the multiple choice items and answer choices were found to be historically accurate as well. The scores from this assessment will be used as the reading achievement variable in this study.

## **Procedures**

All of the measures were administered by classroom teachers, due to the large sample size. Middle school students in 53 seventh-grade Reading/Language Arts classes participated in the study, and 366 students completed each of the three measures. Letters of consent were sent home prior to the day of data collection in order to obtain parent permission for students to participate in the study. Students were told that their participation was voluntary, and that their parents, teachers, and principals would not have access to their answers. Teachers received instructions regarding administration of the measures during a professional development meeting. They were given samples of the measures in advance, as well as the directions that they read to the students. In order to ensure confidentiality for the teacher competence support questionnaire, each teacher placed the completed questionnaires in an envelope once they were collected, and sealed the envelope. This was meant to help minimize the possible social desirability experienced by students to answer questions about their teacher based on what they think would please the teacher. This also reassured the teachers that school administrators would not have access to these questionnaires, and that only research staff would see student responses.

During administration, research staff members were in the classrooms with the teachers to ensure procedures were being followed consistently, and to answer any questions that may have arisen from teachers or students. The students completed the Teacher Competence Support Questionnaire (12 items) first, followed by the ITC assessment (25 items), and the Motivation Questionnaire (12 items) was taken last. Students were given about 7 minutes to complete each questionnaire and 25 minutes to complete the reading comprehension assessment. The entire assessment took place during their Language Arts class time. Students who were unable to complete some or all of the measures due to absence were able to complete the measures during a make-up time the following day during their Reading/Language Arts class period. The measures were administered by research staff on the make-up day in the school library, using the same directions and procedures the teachers employed, to ensure consistency.

Teachers read the directions for each measure to the students, explaining that students should be honest with their answers on the questionnaires, and that they should try their best on the ITC assessment. For all three measures, sample items were presented to students in order to familiarize them with the format of the questions and the response choices. The teacher competence support questionnaire had one sample item and a rating scale ranging from “strongly disagree” to “strongly agree.” The reading motivation questionnaire also had a sample item, with a rating scale ranging from “very true of me” to “not at all true of me.” The sample for the ITC assessment consisted of two sentences followed by a question with four possible answer choices. For all of the measures, students circled their answer, and were told that they could change their answers if necessary, but to clearly mark the correct answer. Teachers were allowed to read items to

students only if existing accommodations were in place as part of the students' daily instruction. Once all of the measures were complete, the materials were collected by research staff and secured at the research office.

## **Data Analyses**

**Data entry plan and coding.** Data from the student measures was coded and entered into an SPSS data set. This data set included student names, student identification number, ethnicity, SES level (provided by the school district), confirmation of informed consent, special education designation (if applicable), and the responses from the questionnaires and scores from the reading comprehension assessment. The teacher competence support items were coded as 1 = strongly disagree, 2 = slightly disagree, 3 = slightly agree, 4 = strongly agree. The teacher competence support scores were then combined to form a composite score. The items from the motivation questionnaire were coded as 1 = not at all true of me, 2 = not very true of me, 3 = somewhat true of me, 4 = very true of me. The motivation items were then combined to form a composite score, representing self-efficacy. The ITC assessment responses were entered and scored based on an answer key. Missing data for the reading comprehension assessment was entered as "9." Using single imputation in order to resolve missing data is recommended for cases of moderate amounts of missing data, but this technique may result in complications if interaction between variables is expected (Widaman, 2006). As the total amount of missing data did not exceed 10% of the total data, imputation measures were not taken (Hair et al., 2006). A data entry check was conducted in order to identify possible keystroke errors and outliers. Once the questionnaire responses and reading

comprehension assessment scores were entered into the SPSS database, the preliminary analyses were conducted.

**Factor structure and reliability.** Factor analyses and reliability analyses were conducted to establish constructs and to exclude unreliable items. A Varimax rotation was used to seek independent factors, with the expectation that the variables from the teacher competence support questionnaire would form one factor, and the variables from the motivation questionnaire would also form one factor, in this case, self-efficacy. Eigenvalues larger than 1 were accepted, and the first major factor was used in this study. Cronbach's alpha was also calculated for competence support and also for the self-efficacy items; unreliable items were removed from the scale, and the remaining items were used to form the scales. A thorough discussion of the scale construction will be presented in Chapter 4.

## **Pilot Study**

### **Overview**

The purpose of this exploratory study was to ascertain the roles that teachers play in adolescent students' reading self-efficacy and achievement. Seventh-grade students were asked about their perceptions of teacher support for their reading competence, and they rated their self-efficacy for information books. Reading comprehension was assessed, and these variables of teacher competence support, self-efficacy, and reading achievement were examined for significant associations. Directions for future research are discussed.

## Literature Review

Research on teacher-student relationships is extensive, and incorporates student outcomes such as motivation and achievement. In general, positive relationships between teachers and students lead to high levels of motivation in school, as well as high scores on achievement measures (Martin & Dowson, 2009; Wentzel, 2009). Using a socialization perspective (Wentzel, 2009), student motivation and achievement is framed in the context of interrelationships with important others, in this case, teachers. Within the socialization context, the development of children's behaviors is dependent on the guidance of members of their families and communities, with a goal of developing behaviors within children that are conducive to the values and objectives of the larger society (Maccoby, 1992). Teachers' relationships with students are an important part of the students' development within the classroom (Marshall & Weinstein, 1984) and specifically, the way in which teachers interact with students has an effect on the way students approach academic tasks (Skinner & Belmont, 1993; Turner, Meyer, Midgley, & Patrick, 2003; Waxman & Eash, 1983).

Socio-cognitive theory posits a reciprocal relationship between environment, cognition, and behavior (Bandura, 1986; Schunk & Pajares, 2005), and self-efficacy is one artifact of this premise (Bandura, 1997; Schunk, 1991). The socializers in students' lives, according to socio-cognitive theory, can be positive as well as negative influences on self-efficacy. Within an academic context, when students attempt a challenging task, the perception of the difficulty of that task, and the expectation for successfully completing the task are measurements of the self-efficacy of that student (Graham &

Weiner, 1996; Schunk & Pajares, 2005), and these perceptions can be shaped by teachers' support for student competence.

Students with teachers who tend to be overly critical are not as motivated as students who are criticized sparingly (Cooper, 1977; Wharton-McDonald et al., 1998). Conversely, when teachers are nurturing and positive in their communication, students are more likely to be motivated (Tucker et al., 2002). This positive feedback may be an indication of the high expectations the teacher has for her students (Weinstein et al., 1987). These high expectations, and the general beliefs teachers hold about students, are communicated and sometimes transferred to students to help form their own beliefs (see Wigfield & Harold, 1992).

Students are also more satisfied with their school experience when teachers are caring and supportive, which would mean that teachers who are more positive in their approach to instruction have students who are less alienated from the school experience, and therefore, invested in their own academic achievement (Baker, 1999). The way in which a teacher addresses her students contributes to both how students feel about their effort and achievement, as well as the larger classroom environment, and therefore will have an effect on how students fare in school (Marshall & Weinstein, 1984).

The way in which teachers communicate their expectations and the nature of their feedback to students can be very influential in shaping student perceptions of themselves, as well as their feelings of competence in the given subject matter (Marshall & Weinstein, 1986; Skinner & Belmont, 1993; Wentzel, 1997). It is therefore important to study not only teacher behaviors, but student perceptions of those behaviors as well.

In a study conducted by Skinner and Belmont (1993), the reciprocal social relationship between teacher and student, and its impact on the level of student participation and enjoyment in classroom activities (engagement), was analyzed. The results showed that there is indeed a reciprocal relationship between teacher behavior and student engagement. Student perception of teacher behavior was found to be influential in student classroom engagement, and teacher perception of student engagement also predicted teacher behaviors.

In another study by Wentzel (2002), one significant finding was that teacher behaviors toward students in the classroom affect the amount of effort students put into academic pursuits. Correlations revealed that the student motivation outcomes, namely mastery orientation, interest in class, prosocial behavior, and social responsibility, were significantly related to teacher motivation, fairness, rule setting, and high expectations.

In addition to affecting student motivation, student perception of teacher feedback has an impact on student achievement (Waxman & Eash, 2001). When teachers criticize students, especially if the criticism is frequent, the reading achievement of those students is significantly lower than students who receive less criticism and more praise from the teacher. The nature of this teacher behavior (low criticism, high praise) is a characteristic of teachers who are distinguished as exceptional by their peers and demonstrate effective instruction that results in high achievement for their students (Wharton-McDonald et al., 1998). This style of instruction may also encourage help-seeking behaviors in students and facilitate the students' comfort in approaching the teacher (Newman & Schwager, 1992).



## Research Questions

The research questions for this pilot study were as follows:

1. What is the association between teacher competence support and motivation?
  - a. *What is the association between positive perceptions of teacher competence support and self-efficacy?*
  - b. *What is the association between positive perceptions of teacher competence support and perceived difficulty?*
  - c. *What is the association between negative perceptions of teacher competence support and self-efficacy?*
  - d. *What is the association between negative perceptions of teacher competence support and perceived difficulty?*
  
2. What is the association between teacher competence support and reading achievement?
  - a. *What is the association between positive perceptions of teacher competence support and reading achievement?*
  - b. *What is the association between negative perceptions of teacher competence support and reading achievement?*

## Method

**Participants.** The participants in the pilot study were from three classrooms, all with the same teacher, in a school district located in the rural community of a mid-Atlantic state. The sample consisted of 47 seventh graders with a distribution of 60%

male and 50% African American students, 45% European American students, and 5% of either Hispanic, Asian, or unknown ethnic background. Approximately 55% of the students in this sample were middle-income, with the remainder receiving free or reduced meals (FARMS) through the school.

**Measures.** Students completed three measures for this study: the Reading Support Questionnaire, the School Reading Questionnaire, and a reading comprehension assessment. Each of these measures was administered by the teacher in the Reading/Language Arts classroom. Descriptions of each measure follow.

**Reading support questionnaire.** The Reading Support Questionnaire (RSQ) was comprised of items describing teacher support for reading competence. This questionnaire was developed based on teacher support measures created by Skinner and Belmont (1993), and Weinstein and colleagues (1982) (Appendix F). The original items were adapted to include references to the domain of reading, and minor changes were made for the sake of clarity. The teacher behaviors of encouraging feedback, expectations, and instrumental help were described in the items. The adaptations remained consistent with the conceptual and theoretical nature of the original measures. A 4-point Likert-type scale was used to rate each item: very true of me (4), somewhat true of me (3), not very true of me (2), and not at all true of me (1).

The items measuring teacher competence support were divided into two subscales and tested for reliability; both the eight positively worded ( $\alpha = .64$ ) and the eight negatively worded ( $\alpha = .76$ ) composites were found to be reliable. The positively worded items included statements such as, “My teacher listens to my ideas about what I have read,” and “My teacher says I have done well when I read aloud.” The negatively worded

items included, “My teacher doesn’t check to see if I understand before we move on,” and “My teacher doesn’t help me, even when I need it.” The complete list of questionnaire items can be found in Appendix A.

**School reading questionnaire.** The School Reading Questionnaire (SRQ) was used to measure self-efficacy and perceived difficulty (Appendix G). This questionnaire was developed by Guthrie and colleagues (2009) for the measurement of adolescent reading motivation. For the pilot study, there were seven items each for self-efficacy ( $\alpha = .83$ ) and perceived difficulty ( $\alpha = .80$ ). The self-efficacy items were statements pertaining to students’ perceptions about their reading abilities, such as, “I can understand what the author is trying to tell me when I read information books for school.” The perceived difficulty items like “I think the information books I read for school are really confusing,” were statements about students’ potential struggle with classroom text.

**Reading comprehension assessment.** Reading achievement was measured using a reading comprehension assessment (Klauda & Guthrie, 2012). This assessment consisted of five science information passages, each followed by multiple choice questions that tested students’ literal and conceptual understanding of the texts (Appendix H). This assessment has been found to be statistically significantly correlated,  $r = .71$ ,  $p < .01$ , with an established standardized reading assessment, the Gates-MacGinitie Reading Comprehension test (MacGinitie et al., 2000).

**Procedures.** Students completed questionnaires in their Language Arts classroom during the course of a grade-wide reading assessment. The classroom teacher administered the questionnaires, giving students the direction to answer honestly and informing them that their teachers and parents would not be reading their answers. A

researcher was in the classroom during the administration, collected the questionnaires and removed them from the classroom at the completion of the assessment. The students completed one questionnaire that included items measuring teacher support for reading, and another questionnaire with items that measured self-efficacy and perceived difficulty in relation to reading. Students were given approximately 9 minutes to complete each questionnaire. The reading comprehension assessment was also administered by the classroom teacher, who read directions aloud to the students and collected the assessments at the end of the testing period. Students had approximately 25 minutes to complete the reading comprehension assessment. Students who were absent on the day of testing were allowed to complete the measures the following day in the school's media center. A researcher administered the measures on this make-up day, in order to minimize disruption to the teacher's scheduled instruction. All questionnaires and testing materials were then removed from the school and secured in the research lab for data entry and analysis.

## Results

The means and standard deviations of the variables are presented in Table 7.

Table 7

*Descriptive Statistics for Teacher Competence Support, Self-efficacy, and Reading Achievement*

	<i>M</i>	<i>SD</i>
Positive perceptions of teacher competence support	25.09	3.44
Negative perceptions of teacher competence support	14.55	4.79
Self-efficacy	3.19	.57
Perceived difficulty	1.78	.56
Reading achievement	15.32	4.72

The ratings of the positively worded items measuring teacher competence support were combined to form the variable “positive perceptions of teacher competence support.” The ratings of negatively worded items from the teacher competence support questionnaire formed the composite “negative perceptions of teacher competence support.” The self-efficacy and perceived difficulty ratings from the motivation questionnaire were included as variables, and the reading comprehension assessment was scored to provide a reading achievement variable for the correlation matrix. These variables were entered for a correlational analysis, in order to address the research questions regarding the associations of perceptions of teacher competence support,

motivation, and achievement. Positive perceptions of teacher competence support were significantly correlated with negative perceptions of teacher competence support,  $r = -.25, p = .09$ . Negative perceptions of teacher competence support were correlated significantly with perceived difficulty,  $r = .27, p = .07$ . Although positive perceptions of teacher competence support were not correlated significantly with self-efficacy or perceived difficulty, the result of the correlation with self-efficacy was positive, and the correlation with perceived difficulty was negative, as expected. It is possible that the correlations between these variables could reach significance with a larger sample. The correlation matrix is presented in Table 8.

Table 8

*Intercorrelations Between Teacher Competence Support, Motivation, and Reading Achievement*

	Pos. TCS	Neg. TCS	Self-efficacy	Perceived difficulty
Neg. TCS	-.25*			.
Self-efficacy	.11	-.14		
Perceived difficulty	-.13	.27*	-.80***	
Reading achievement	-.18	.02	.38***	-.20

*Note.* \*  $p < .10$ ; \*\*  $p < .05$ ; \*\*\*  $p < .01$ ; TCS = Teacher competence support

## **Discussion**

This pilot study was an exploratory study that examined the relationships between perceived teacher competence support, reading motivation, and achievement in reading. A teacher competence support questionnaire was developed based on previously established measures of teacher support (Skinner & Belmont, 1993; Weinstein et al., 1982). Reading motivation questionnaires and reading achievement assessments were also administered. The first research question asked whether there is an association between perceived teacher competence support and reading motivation. Based on this study of seventh-grade students, there is affirmative evidence of a statistically significant relationship between teacher competence support and reading motivation. A composite of the teacher competence support items that were negatively worded was significantly correlated with perceived difficulty in reading for these students. This means that students who perceived their teachers as overly critical or unwilling to help also perceived that the books and reading activities in class were hard for them to read or successfully complete. In general, students who do not feel that their competence is supported by their teacher will find daily reading tasks overwhelming and perhaps impossible to accomplish.

The second question posed for this pilot study was whether perceived teacher competence support is associated with reading achievement. There were no statistically significant correlations between the teacher competence support variables and reading achievement, regardless of positive or negative wording. As previous research has established a statistically significant relationship between various forms of teacher support and academic achievement (e.g., Hamre & Pianta, 2005; Wharton-McDonald et

al., 1998), it is reasonable to presume that with a larger sample, perceptions of teacher competence support would be found to be significantly correlated with reading achievement. This possibility will be addressed in the following section.

### **Limitations and Future Directions**

The pilot study had limitations. The sample size was limited and therefore restrictive in terms of possible statistical analyses. For example, separate analyses could not be conducted for African American and European American students, given the number of variables and the number of students. At least 177 students in each group would be necessary in order to detect a significant difference between groups at  $\alpha = .05$ , according to Cohen (1992). With a larger sample, it would be possible to test for differences between African American and European American students in their perceptions of teacher competence support, and possible differences between these groups in the strength of the association between perceived teacher competence support and reading self-efficacy and achievement. A larger sample may also increase the possibility of seeing significant correlations. For example, in another exploratory study of teacher support for 95 fifth graders, positive and negative perceptions of teacher support were statistically significantly correlated with reading achievement (McRae & Guthrie, 2007). This result lends support to the further investigation of teacher competence support with a larger sample size.

Another limitation of the study was that the teacher competence support questionnaire was administered by the classroom teacher. This may have resulted in social desirability when students rated statements on the questionnaire. Some teachers may also have felt uncomfortable with the negative wording of some of the items.



Ideally, someone other than the classroom teacher would administer these questionnaires. In reality, this is often difficult to achieve. An alternate approach would be to use positively worded items exclusively, increasing the likelihood of cooperation from the administering teacher. If teachers were given directions to read that included additional assurance to students that the questionnaires would remain confidential, the possibility of social desirability in student responses may have decreased.

### **Conclusion**

An extensive review of the literature revealed that the field of motivation can be examined using a socialization perspective, where people important to children, such as parents and teachers, play an important role in the development of academic motivation (Maccoby, 1992; Wentzel, 2009). Researchers have used the knowledge gained from studies of parent-child relationships to inform the investigation of teacher-student relationships, and have found significant parallels between these socializers and their impact on children (Wentzel, 2002). Just as parents play an instrumental role in supporting academic motivation and achievement (Aunola et al., 2003; Grolnick, Ryan, & Deci, 1991; Grusec & Goodnow, 1994), teachers can effectively support students' academic motivation and achievement in reading (Martin & Dowson, 2009; Wharton-McDonald et al., 1998), and school in general (Martin & Dowson, 2009; Wentzel, 2009).

There is a gap in the motivation literature that few researchers have sought to fill; while there are existing studies of teacher competence support and its association with motivation, the number of studies including self-efficacy is limited (see Tables 1, 2, 3, and 4). This is significant, as self-efficacy theoretically includes competence as a predominant element, i.e., belief in competence is associated with belief in successfully

completing tasks (Bandura, 1997; Schunk, 1991). I therefore included self-efficacy as the motivation construct of interest in my study, in order to examine its relationship with perceived teacher competence support. The teacher support for competence and high student self-efficacy should theoretically be associated with higher levels of reading achievement (Guthrie, McRae, & Lutz, 2007; Guthrie, McRae, & Coddington, 2009), and I measured reading comprehension as a representative of reading achievement as a second student outcome variable.

Finally, with regard to the sample recruited for my study, I included a significant number of African American, as well as European American middle school students. The early adolescent age group is particularly vulnerable to declining levels of motivation (Anderman & Midgley, 1997; Eccles & Midgley, 1989; Unrau & Schlackman, 2006; Wigfield & Eccles, 2002; Wigfield, Eccles, Mac Iver, Reuman, & Midgley, 1991), and is likely in need of a great deal of support from their teachers during the middle school years, making the study of teacher competence support pertinent to this age group. Within this age group, ethnicity persists as a critical issue. African American students are at risk for school drop-out and reading achievement levels that are significantly lower than their European American peers (National Center for Education Statistics, 2010). It is therefore imperative that research on motivation and reading achievement consist of diverse samples of students.

## CHAPTER 4: RESULTS

### Summary

This dissertation examined the relationships between perceived teacher support for reading competence, students' self-efficacy for reading, and students' reading achievement in seventh grade. The Results section of this dissertation will consist of the preliminary analyses, as well as the analyses for each of the research questions listed below. I will begin with descriptions of the scale construction for the teacher competence support variable and the scale construction for the self-efficacy variable. The descriptive statistics will then be presented, followed by each of the dissertation research questions and their relevant analyses. Finally, post hoc analyses will be described. All of the research questions are addressed using quantitative analyses. The research questions were as follows:

1. To what extent do African American and European American students experience significantly different levels of:
  - a. perceived teacher competence support?
  - b. self-efficacy for reading?
  - c. reading achievement?
2. To what extent is perceived teacher competence support associated with self-efficacy differently for African American and European American students?
3. To what extent is perceived teacher competence support associated with reading achievement differently for African American and European American students?
- 4a. To what extent is self-efficacy associated with reading achievement differently for

African American and European American students?

- 4b. To what extent is the association of self-efficacy and reading achievement moderated by ethnicity differently for students perceiving high and low levels of teacher competence support?

### **Scale Construction of the Teacher Competence Support Questionnaire**

The students' perceptions of teacher competence support for reading were measured using the 12 item Teacher Competence Support Questionnaire (TCSQ). The response format was a Likert-type scale, with four possible ratings: "4 - strongly agree," "3 - slightly agree," "2 - slightly disagree," and "1 - strongly disagree." A high score would therefore indicate a high level of agreement with the statement of perceived teacher competence support. A 4-point scale was implemented to ensure either agreement or disagreement with the statement, and to avoid a neutral response. The teacher competence support questionnaire items are listed in Appendix B.

In order to determine whether the teacher competence support and self-efficacy questionnaire items were suitable for a factor analysis, Bartlett's test of sphericity was conducted for each of the constructs. The chi-square analysis was statistically significant at  $p = .00$ , confirming that the variables within each construct are significantly correlated to each other. These results are displayed in Table 9.

I also conducted the Kaiser-Meyer-Olkin Test (KMO) in order to ensure that the strength of the relationship between the items on the teacher competence support questionnaire was appropriate for a factor analysis. The KMO value for the items was .87; as it is greater than .80, the result is interpreted as "meritorious" (Kaiser, 1974). The

KMO test was also conducted for the items on the Self-efficacy questionnaire, with a result of .83, also considered “meritorious.” These results may be viewed in Table 9.

Table 9

*Bartlett’s Test of Sphericity and KMO Results for Items from Teacher Competence Support and Self-efficacy Questionnaires*

	<i>Approximate X<sup>2</sup></i>	<i>df</i>	<i>Significance</i>	<i>KMO</i>	<i>Interpretation</i>
Teacher Competence Support	835.50	36	.00	.87	Meritorious
Self-efficacy	473.26	15	.00	.83	Meritorious

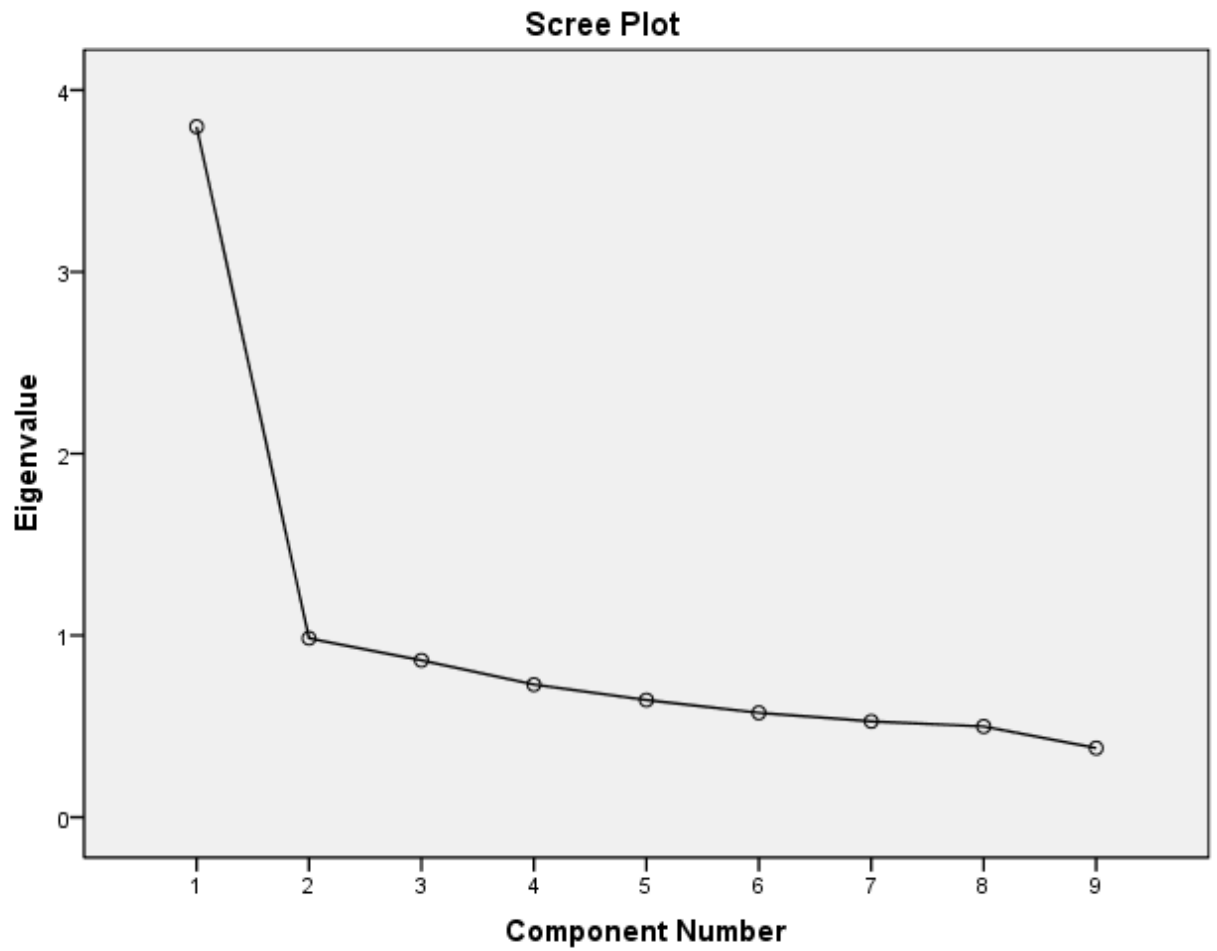
Although the questionnaire items were adapted from existing measures, a questionnaire with this particular combination of items has not previously been administered. Therefore, the questionnaire data was analyzed using a principle components analysis with a Varimax rotation, which was selected in order to maximize interpretability of the resulting factors. Loadings resulting from a Varimax rotation tend to be either very large or very small, simplifying the construction of scales; without rotation, it is more likely that items could load onto multiple factors. The number of factors was determined, in part, based on eigenvalues greater than one, item loadings of .40 or higher, consistency with the theoretical framework, and a final Cronbach’s alpha of at least .70 (Hair et al., 2006). The factor loadings are presented in Table 10, and the Scree Plot (Figure 1) indicates one significant factor.

The teacher competence support items were first combined into three separate composites: expectations, encouragement, and instrumental help. The reliability for the

expectations composite was quite low, at  $\alpha = .51$ . When examined separately, the constructs of ‘encouragement’ ( $\alpha = .68$ ) and ‘instrumental help’ ( $\alpha = .76$ ) were found to be reliable, and a significant correlation between these two sets of items was present ( $r = .64, p < .00$ ). When all of the encouragement and instrumental help items were combined into one ‘teacher competence support’ construct, the reliability increased to  $\alpha = .83$  for the entire group,  $\alpha = .76$  for African American students, and  $\alpha = .87$  for European American students.

The correlations between ‘encouragement’, ‘help’, self-efficacy, and reading achievement were examined. The ‘encouragement’ and ‘help’ composites correlated with self-efficacy and reading achievement in the same direction and with the same strength as the ‘teacher competence support’ composite that was comprised of all of the encouragement and help items. In addition, the teacher competence support composite that consisted of just encouragement and instrumental help items was more strongly correlated with other variables in the study, compared to a composite that included encouragement, instrumental help, and expectations. The combination of encouragement and instrumental help also remains consistent with the theoretical division of teacher behaviors that support student emotional development, and teacher behaviors that support the development of student competence. For example, Skinner and Belmont (1993) include both instrumental help and teacher feedback in a composite they refer to as ‘structure’. The three ‘expectations’ items were deleted from the final factor based on low reliability, and in one case, an item loading in the factor analysis that was below .40. The rotated components solution shows that the first factor, composed of the encouragement and instrumental help items, accounts for 42% of the total variance. The final factor was

labeled Teacher Competence Support (TCS), with a total of 9 items ( $\alpha=.83$ ); these final items are listed in Table 11.



*Figure 1.*

Scree plot of teacher competence support.

Table 10

*Initial Eigenvalues for PCA of Teacher Competence Support Items (Unrotated)*

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative Variance
1	3.80	42.21	42.21
2	.98	10.94	53.14
3	.86	9.59	62.73
4	.73	8.11	70.84
5	.65	7.16	78.00
6	.57	6.38	84.38
7	.53	5.86	90.24
8	.50	5.54	95.78
9	.38	4.22	100.00



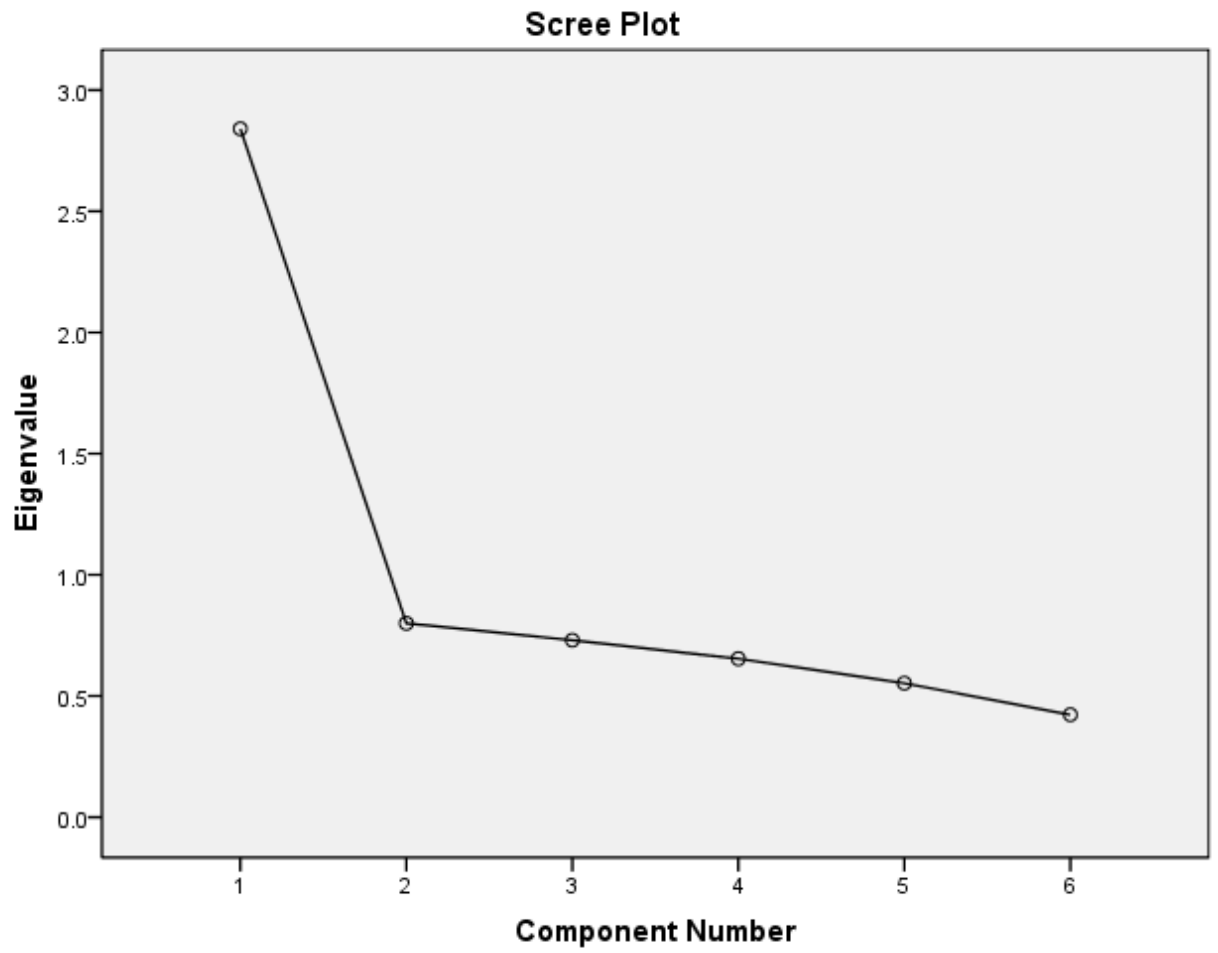
Table 11

*Teacher Competence Support Item Loadings – PCA with VARIMAX Rotation*

		Factors
		1
1.	My teacher said I did well when I read aloud.	.62
2.	My teacher encouraged me by telling me that I'm a good reader.	.69
3.	My teacher usually knew when I needed help.	.70
4.	My teacher showed me how to improve in reading.	.67
5.	My teacher almost always let me know when I did something right in class.	.68
6.	My teacher gave me enough time to finish my work well.	.55
7.	My teacher helped me meet challenges in reading.	.71
8.	My teacher usually gave me a hint or clue when I did not know the answer.	.48
9.	My teacher went out of his or her way to help me as often as possible.	.71

### **Scale Construction of the Self-efficacy Questionnaire**

Students' perceptions of their self-efficacy for reading were measured using the Self-efficacy Questionnaire (SEQ). This questionnaire consisted of six items, which are listed in Appendix C. The self-efficacy scale was created based on a factor analysis with a Varimax rotation. The items were expected to load together onto one factor based on previous analyses of this measure (Guthrie et al., 2009), so the confirmatory factor analysis was conducted with an extraction of one factor. The items loaded onto one factor, 47% of the total variance was explained by this first factor (see Table 12), and the Scree Plot also indicated one significant factor (Figure 2). The final factor was labeled Self-efficacy (SE), with six items;  $\alpha = .77$  for the entire sample,  $\alpha = .74$  for African American students, and  $\alpha = .80$  for European American students. The item loadings are displayed in Table 13.



*Figure 2.*

Scree plot of self-efficacy.

Table 12

*Initial Eigenvalues for PCA of Self-efficacy Items (Unrotated)*

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative Variance
1	2.84	47.34	47.34
2	.80	13.33	60.68
3	.73	12.17	72.85
4	.65	10.90	83.75
5	.55	9.21	92.96
6	.42	7.04	100.00

Table 13

*Self-efficacy Item Loadings – PCA with VARIMAX Rotation*

	Factors
	1
1. I could understand all the readings.	.55
2. I could correctly answer questions about the readings.	.70
3. The key points in the text were clear to me.	.81
4. The main ideas of the readings were easy to find.	.73
5. I could figure out what unfamiliar words meant.	.64
6. I figured out how different chapters fit together in the readings.	.67

### **Scale Construction of Information Text Comprehension Assessment**

The reliability of the Information Text Comprehension Assessment (ITC) is  $\alpha = .76$ , which exceeded the criteria of .75 as a minimum value. In addition, content validity was confirmed by an external expert in American history. Items from this measure of reading achievement were removed, if necessary, based on the criteria of .10 as the cut-off for point biserial correlation values, and scale formation was based primarily on reliability analyses. Items with low point biserial values and items with low percent correct values were examined for the possibility of multiple correct answers. The point biserial correlations for three of these items increased when they were recoded. The items that were deleted from the reading achievement scale are included in Appendix I. As three forms were given to students, forms A, B, and C were equated due to difficulty differences. Once percent correct scores were calculated, linear equating was used to equate the final scores (Crocker & Algina, 1986, p. 458-461). These calculations were conducted and provided by an IPIAR researcher for inclusion in this dissertation.

### **Descriptive Statistics**

The measures were administered to a sample of 366 students, where 183 were African American and 183 were European American. The data was checked for missing values; the percent missing for self-efficacy was 3.8%, and for teacher competence support, 3.3%. According to (Hair et al., 2006), measures such as replacing missing values via estimation are not necessary if the missing data remains below 10%. The means and standard deviations for the measures of teacher competence support, self-efficacy, and reading achievement are presented in Table 14 (see Appendix J for additional descriptive statistics). In order to remove the confounding variable of reading achievement and ethnicity, the groups were matched based on their scores on the test of

information text comprehension (ITC). First, the African American sample's ITC scores were divided into deciles, and the number of students within each decile was noted. The European American student sample was then similarly divided into deciles based on ITC scores. Based on the number of students within each of the African American student deciles, European American students were selected from within each decile so as to have an equal number of African American and European American students within each decile. Each of the European American students was assigned a number based on the alphabetical order of their names, and then numbers were selected based on a random number generator. This matching technique resulted in a final sample size of 183 African American students and 183 European American students. The means for teacher competence support and self-efficacy were not significantly different for males and females when the entire sample was analyzed. European American students performed significantly better than African American students on the reading achievement measure, based on an independent samples two-tailed t-test using the entire sample  $t(1,032) = -7.76, p = .00$ . As several of the analyses to follow will be based on comparisons of means for these two ethnic groups, it was necessary to select a subsample of students from the European American group in order to have equal numbers for both groups. The means and standard deviations of the variables for these groups are presented in Table 14; these means were not centered for the analyses to follow.

Table 14

*Descriptive Statistics for Socioeconomic Status, Teacher Competence Support, Self-efficacy, and Reading Achievement - All Students in Matched Sample*

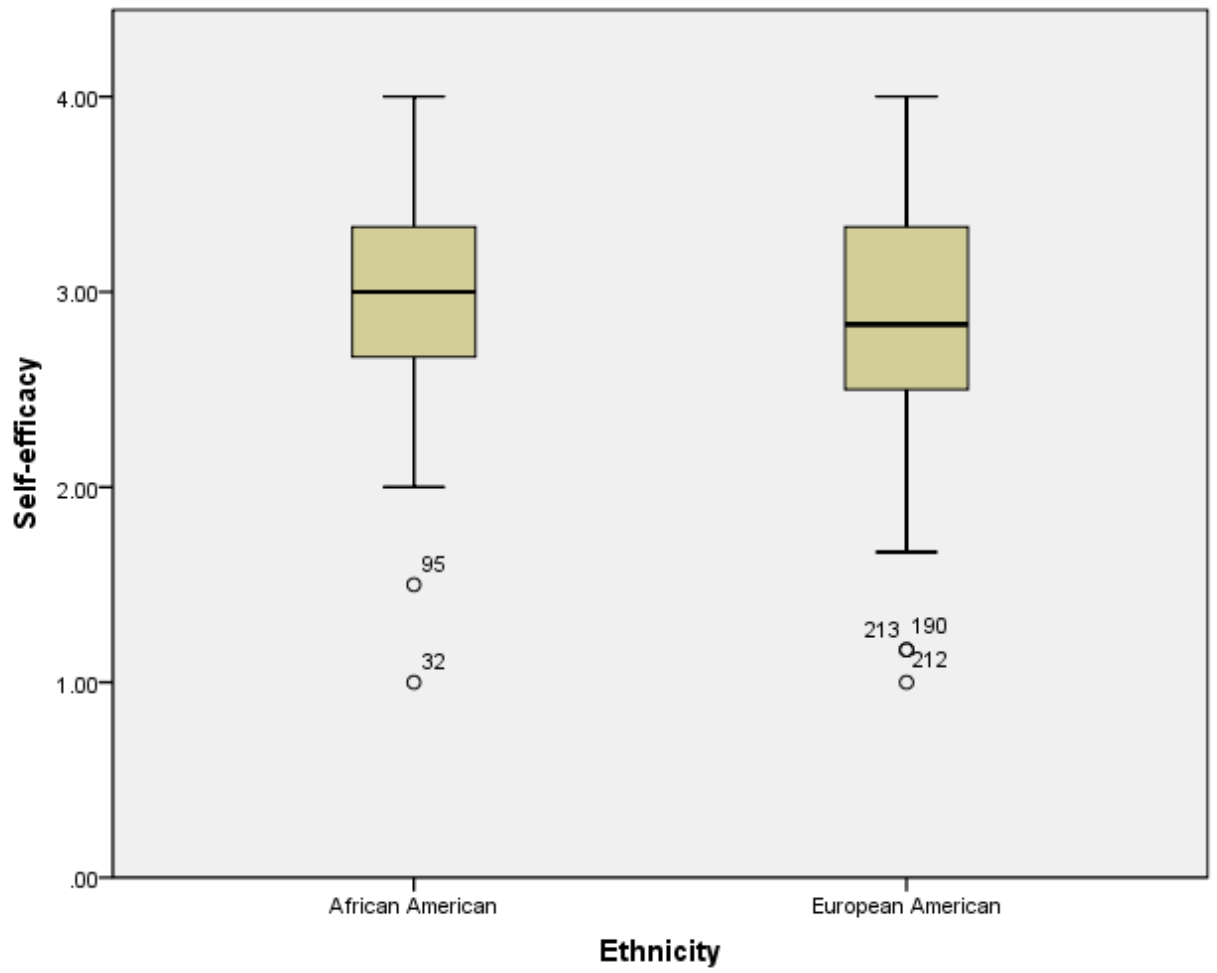
Measure		<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
SES	All students	366	1.00	3.00	2.24	.94
	African Americans	183	1.00	3.00	1.86	.95
	European Americans	183	1.00	3.00	2.62	.76
Teacher competence support	All students	347	1.00	4.00	2.82	.65
	African Americans	170	1.11	3.89	2.89	.58
	European Americans	177	1.00	4.00	2.74	.70
Self-efficacy	All students	343	1.00	4.00	2.94	.58
	African Americans	167	1.00	4.00	2.98	.56
	European Americans	176	1.00	4.00	2.91	.60
Reading achievement	All students	366	.00	95.45	41.58	19.12
	African Americans	183	.00	95.45	41.43	19.01
	European Americans	183	.00	94.31	41.73	19.28

*Note.* SES = Socioeconomic Status.



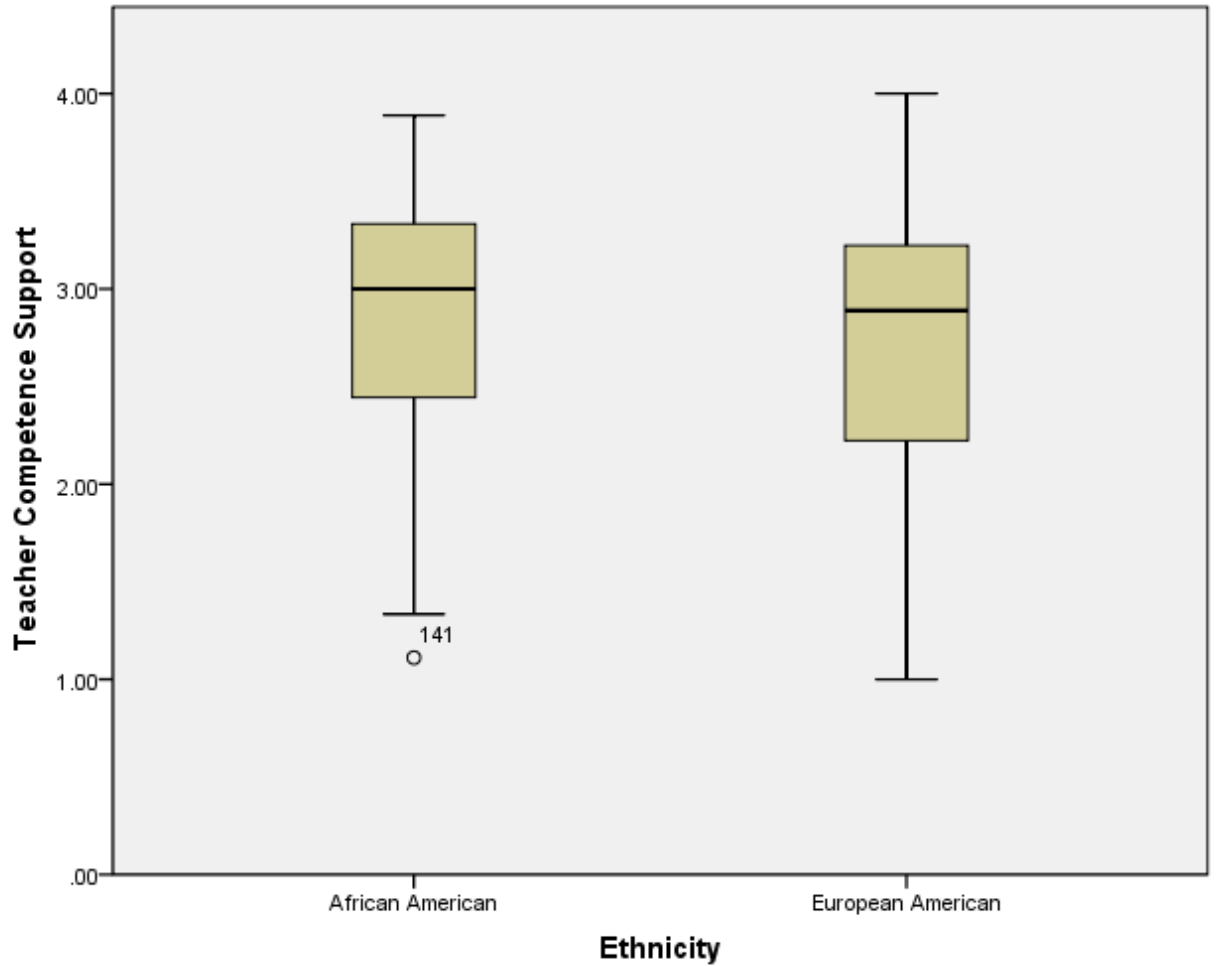
## Research Question 1

The first research question to be addressed involved comparing the ethnicity groups' means on the teacher competence support questionnaire (TCSQ), the self-efficacy questionnaire (SEQ), and the information text comprehension assessment (ITC). The means and standard deviations for TCSQ, SEQ, and ITC are displayed in Table 14. Bartlett's test of sphericity indicated significant correlation between the variables at  $p < .00$ , indicating that I could proceed with the MANOVA. The decision to use MANOVA was based on the ability to compare means while taking other variables into account, which is not taken into consideration when conducting t-tests. Another advantage of using MANOVA is that it decreases the likelihood of Type I error. The Box-M test was significant at  $p < .02$ , violating the assumption of homoscedasticity necessary for a MANOVA due to the significant difference of the ethnic groups on the collective variances of the TCSQ and the SEQ. Pillai's criterion was therefore most appropriate due to its robust nature in view of assumption violations (Hair et al., 2006). Boxplots were created for the TCSQ and the SEQ and revealed a total of six outliers. There were no instances of a student being an outlier on more than one measure, and for both the African American and European American students, the outliers were all below the mean. The total number of outliers did not exceed .01% of the sample; therefore these six observations were not eliminated from the subsequent analyses (See Figure 3 and Figure 4).



*Figure 3.*

Box plot of self-efficacy.



*Figure 4.*

Box plot of teacher competence support.

A MANOVA was conducted, where ethnicity was entered as the independent variable, and teacher competence support (TCS), self-efficacy (SE), and reading achievement (RA) were entered as dependent variables. Socioeconomic Status (SES) scores were also entered as an independent variable, in order to control for socioeconomic status. SES was entered first in the MANOVA, followed by the TCS, SE, and RA. African American students perceived significantly higher levels of teacher

competence support than European American students Pillai's trace = .16,  $F(1, 326) = 3.95$ ;  $p < .05$ ; with an effect size of .23 (See Appendix K). European American and African American students reported levels of self-efficacy for reading that were not significantly different. As I stated previously, European American students scored significantly higher than African American students in reading achievement, with an effect size of .57; however, as the ethnic groups were matched based on achievement level, the MANOVA showed no significant difference of reading achievement scores between European American and African American students (see Table 15).

Table 15

*MANOVA of SES, Teacher Competence Support, Self-efficacy, and Reading Achievement*

	<i>Dependent variables</i>	<i>df</i>	<i>Wilks' <math>\Lambda</math></i>	<i>F</i>	<i>Sig.</i>
Main Effects		4, 323	.85	14.85	.00
Between-subjects	SES	1		55.66	.00
	TCS	1		3.95	.05
	SE	1		.81	.37
	Achievement	1		.08	.78

*Note.* SES = Socioeconomic Status. TCS = Teacher Competence Support. SE = Self-efficacy.

## Research Question 2

The second research question examined the relationship between teacher competence support and self-efficacy for African American and European American students. First, I will present the correlation results for the entire sample of students; the correlation matrix is presented in Table 16. For the entire sample, Teacher Competence Support (TCS) was significantly and positively correlated with self-efficacy at  $r = .26, p < .00$ . TCS was significantly and negatively correlated with reading achievement at  $r = -.12, p \leq .02$ . Self-efficacy and reading achievement were significantly and positively correlated at  $r = .29, p < .00$ . The correlation matrix for the African American student group ( $n = 183$ ) is presented in Table 17. For African American students, TCS was significantly and positively correlated with self-efficacy at  $r = .29, p < .00$ . TCS was significantly and negatively correlated with reading achievement at  $r = -.22, p < .00$ . Self-efficacy and reading achievement were significantly and positively correlated at  $r = .19, p \leq .02$ . The correlation matrix for the European American group ( $n = 183$ ) is presented in Table 17. For European American students, TCS was significantly and positively correlated with self-efficacy at  $r = .23, p < .00$ . Self-efficacy and reading achievement were significantly and positively correlated at  $r = .37, p < .00$ . TCS was not significantly correlated with reading achievement for European American students.

Table 16

*Correlations for All Measures for Entire Sample*

	1	2	3
1. Teacher competence support	--	.26***	-.12*
2. Self-efficacy	.26***	--	.29***
3. Reading achievement	-.12*	.29***	--

*Note.* \* Correlation is significant at the 0.05 level (2-tailed); \*\*Correlation is significant at the 0.01 level (2-tailed); \*\*\* Correlation is significant at the 0.001 level (2-tailed).

Table 17

*Correlations for All Measures by Ethnicity*

	1	2	3
1. Teacher competence support	–	.23***	-.05
2. Self-efficacy	.29***	–	.37***
3. Reading achievement	-.22***	.19*	–

*Note.* Correlations for European Americans are above the diagonal. Correlations for African Americans are below the diagonal. \* Correlation is significant at the 0.05 level (2-tailed). \*\*Correlation is significant at the 0.01 level (2-tailed); \*\*\* Correlation is significant at the 0.001 level (2-tailed).

A hierarchical multiple regression was conducted, with self-efficacy entered as the dependent variable. Using hierarchical multiple regression allows for multiple variables to be examined while holding others constant. SES was entered in the first block as an independent variable, in order to control for socioeconomic status. Teacher

competence support was entered in the second block, and ethnicity was entered in the third block. An interaction term was created by multiplying Teacher Competence Support and ethnicity, and this variable, TCS x Eth, was entered in the fourth block. The results of the hierarchical multiple regression are presented in Table 18. The association between teacher competence support and self-efficacy was not found to be different based on ethnic grouping, as evidenced by the absence of a significant interaction.

Table 18

*Hierarchical Regressions of Teacher Competence Support and Ethnicity predicting Self-efficacy*

Final $\beta$ 's									
Model	IVs	SES	TCS	Eth	TCS x Eth	$R^2$	$\Delta R^2$	$\Delta F$	dfs
4-block model (DV = SE) Controlling for SES									
1	SES	-.01	-	-	-	.00	.00	.04	1, 326
2	SES + TCS	.05	.27***	-	-	.07	.07	23.79***	1, 325
3	SES + TCS + Eth	.07	.27***	-.05	-	.07	.00	.64	1, 324
4	SES + TCS + Eth + TCS x Eth	.07	.37***	.18	-.24	.07	.00	.88	1, 323

*Note.* IVs = Independent Variables. TCS = Teacher Competence Support. Eth = Ethnicity. TCS x Eth = Teacher Competence Support x Ethnicity interaction term. DV = Dependent Variable. SE = Self-efficacy. SES = Socioeconomic Status. \* $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Research Question 3**

The third research question addressed was: To what extent is teacher competence support associated with reading achievement differently for African American and European American students? To analyze the relationship between teacher competence support and reading achievement for African American and European American students,



I conducted a hierarchical multiple regression analysis, where reading achievement was the dependent variable. SES was entered in the first block as an independent variable in order to control for SES, then teacher competence support was entered in the second block, ethnicity was entered in the third block, and the interaction term teacher competence support x ethnicity was entered in the fourth block. A significant interaction between teacher competence support and ethnicity for reading achievement was not present at the  $p < .05$  level; the interaction term teacher competence support x ethnicity was not statistically significant. The results of the hierarchical multiple regression are presented in Table 19. As shown in Table 17, the correlation between teacher competence support and reading achievement was negative and significant for African American students, but there was no significant relationship between teacher competence support and reading achievement for European American students.

Table 19

*Hierarchical Regressions of Teacher Competence Support and Ethnicity Predicting Reading Achievement*

Final $\beta$ 's									
Model	IVs	SES	TCS	Eth	TCS x Eth	$R^2$	$\Delta R^2$	$\Delta F$	dfs
4-block model (DV = RA) Controlling for SES									
1	SES	.20***	-	-	-	.04	.04	13.58***	1, 345
2	SES + TCS	.18**	-.08	-	-	.04	.01	2.25	1, 344
3	SES + TCS + Eth	.21***	-.08	-.10	-	.05	.01	2.80	1, 343
4	SES + TCS + Eth + TCS x Eth	.21***	-.25*	-.49*	.42	.06	.01	2.78	1, 342

*Note.* IVs = Independent Variables. TCS = Teacher Competence Support. Eth = Ethnicity. TCS x Eth = Teacher Competence Support x Ethnicity interaction term. DV = Dependent Variable. RA = Reading Achievement. SES = Socioeconomic Status. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

#### Research Question 4

The first part of the fourth research question was: To what extent is self-efficacy associated with reading achievement differently for African American and European American students? In order to analyze the relationship between self-efficacy and reading achievement for African American and European American students, I conducted

a hierarchical multiple regression with reading achievement as the dependent variable. SES was entered as the first independent variable in order to control for SES. In the second block, I entered self-efficacy, followed by ethnicity in the third block, and the interaction term self-efficacy x ethnicity as the final independent variable in the fourth block. The results of the hierarchical multiple regression are presented in Table 20. The association between reading achievement and self-efficacy was not found to be different based on ethnic grouping, as evidenced by the absence of a significant interaction. As evidenced in Table 17, self-efficacy was found to be positively and significantly correlated with reading achievement for both African American and European American students. However, the correlation between self-efficacy and reading achievement was significantly higher for European American students compared to African American students, based on a post hoc Fisher's  $r$  to  $z$  transformation that determined a significant difference between correlations,  $z = 1.8, p = .04$ .

Table 20

*Hierarchical Regressions of Self-efficacy and Ethnicity Predicting Reading Achievement*

Final $\beta$ 's									
Model	IVs	SES	SE	Eth	SE x Eth	$R^2$	$\Delta R^2$	$\Delta F$	<i>dfs</i>
4-block model (DV = RA) Controlling for SES									
1	SES	.20***	-	-	-	.04	.04	13.55***	1, 341
2	SES + SE	.20***	.29***	-	-	.12	.09	31.92***	1, 340
3	SES + SE + Eth	.23***	.28***	-.08	-	.13	.01	2.01	1, 339
4	SES + SE + Eth + SE x Eth	.23***	.13	-.51	.46	.13	.01	2.75	1, 338

*Note.* IVs = Independent variables. SE = Self-efficacy. Eth = Ethnicity. TCS x Eth = Teacher competence support x ethnicity interaction term. DV = Dependent variable. SES = Socioeconomic status. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

The second part of the final research question was: To what extent is the association of self-efficacy and reading achievement moderated by ethnicity for students with high versus low levels of perceived teacher competence support? In order to analyze whether ethnicity is moderating the relationship between self-efficacy and reading achievement differently for students perceiving low teacher competence support versus students perceiving high levels of teacher competence support, I conducted a

hierarchical multiple regression where reading achievement was the dependent variable (Table 21). I entered SES and an independent variable in the first block to control for SES. Self-efficacy was entered in the second block, teacher competence support was entered in the third block, ethnicity was entered in the fourth block. The 3-way interaction term self-efficacy x teacher competence support x ethnicity was entered in the fifth block of the hierarchical multiple regression. The presence of a 3-way interaction would indicate that the relationship between two variables is dependent upon a third variable. There was a significant 3-way interaction between self-efficacy, teacher competence support, and ethnicity on reading achievement, with ethnicity moderating the relationship between self-efficacy and achievement for students perceiving low teacher competence support, but not for students perceiving high teacher competence support. This means that the statistical relationship between self-efficacy and achievement was different for African American and European American students when these groups perceived low levels of teacher competence support, but the relationship between self-efficacy and achievement was not statistically significantly different between the ethnic groups when these students perceived high levels of teacher competence support (see Figure 5 and Figure 6).

Table 21

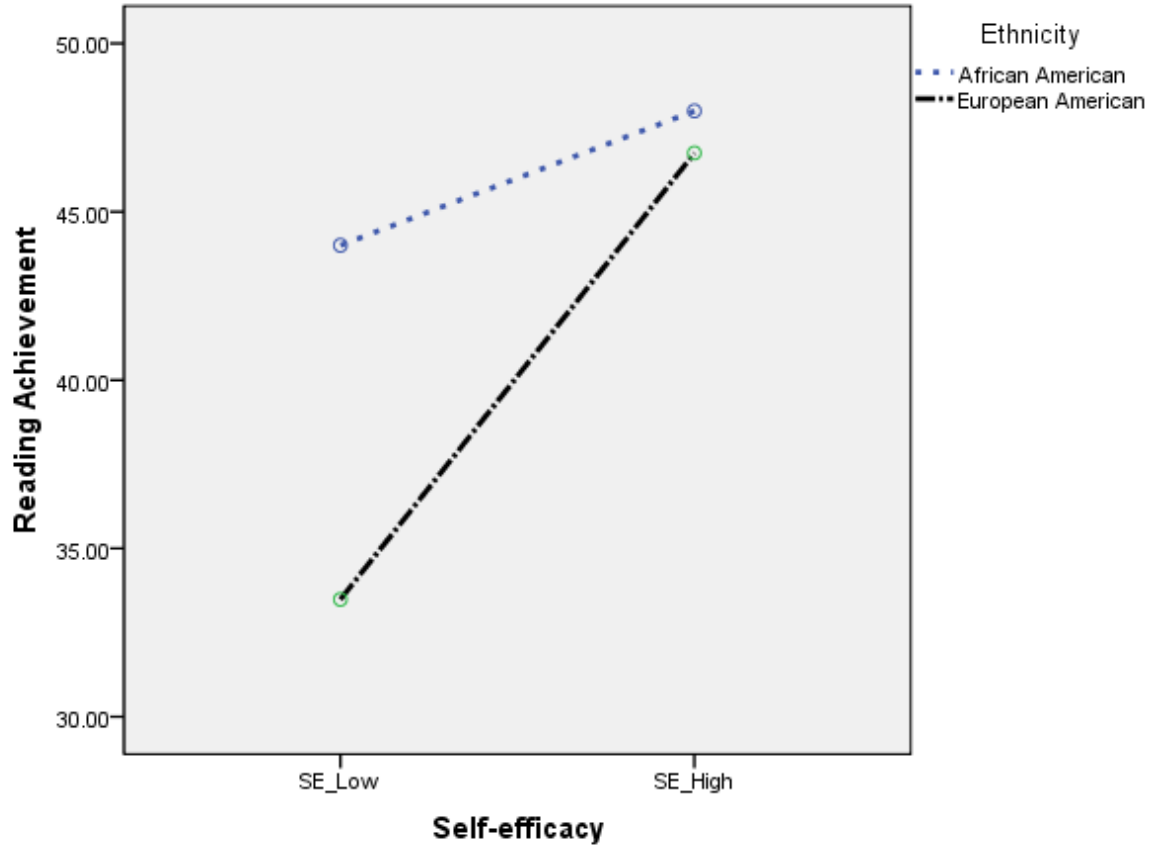
*Hierarchical Regression of Teacher Competence Support, Self-efficacy, and Ethnicity Predicting Reading Achievement*

Final $\beta$ 's											
Model	IVs	SES	SE	TCS	Eth	SE x TCS	SE x TCS x Eth	$R^2$	$\Delta R^2$	$\Delta F$	dfs
6-block model (DV = RA) Controlling for SES											
1	SES	.20***	-		-	-	-	.04	.04	13.11***	1, 326
2	SES + SE	.20***	.29***		-	-	-	.12	.08	31.06***	1, 325
3	SES + SE + TCS	.17***	.33***	-.15**	-	-	-	.14	.02	7.93**	1, 324
4	SES + SE + TCS + Eth	.20***	.33***	-.16**	-.09	-	-	.15	.01	2.79	1, 323
5	SES + SE + TCS + Eth + SE x TCS	.20***	.67***	.24	-.10	-.59	-	.16	.01	2.96	1, 322

6	SES + SE + TCS + Eth + SE x TCS x Eth	.19***	.61***	.16	-.44**	-.69*	.41*	.17	.01	5.11*	1,321
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*Note.* IVs = Independent variables. TCS = Teacher competence support. SE= Self-efficacy. Eth = Ethnicity. TCS x Eth = Teacher competence support x Ethnicity interaction term. RA = Reading achievement. DV = Dependent variable. SES = Socioeconomic status.  
\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .



*Figure 5.*

Three-way interaction of reading achievement, self-efficacy, and ethnicity for students perceiving low levels of teacher competence support.



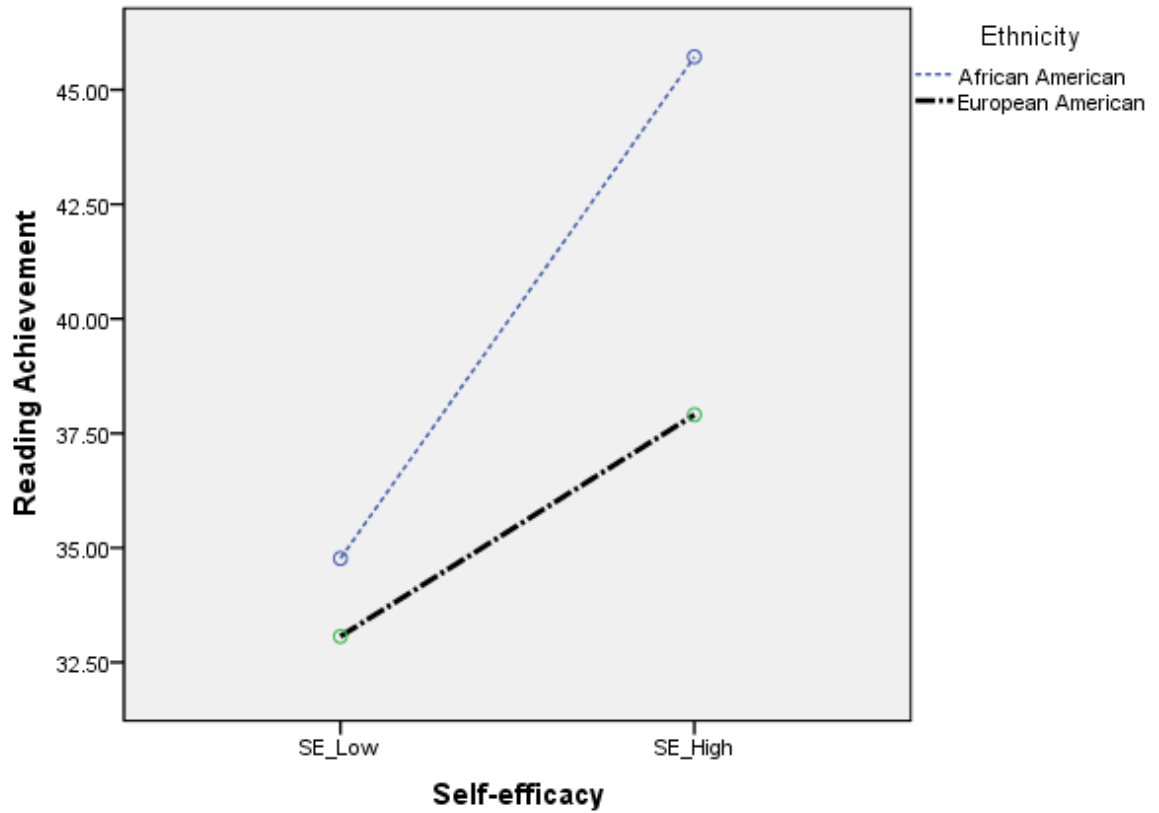
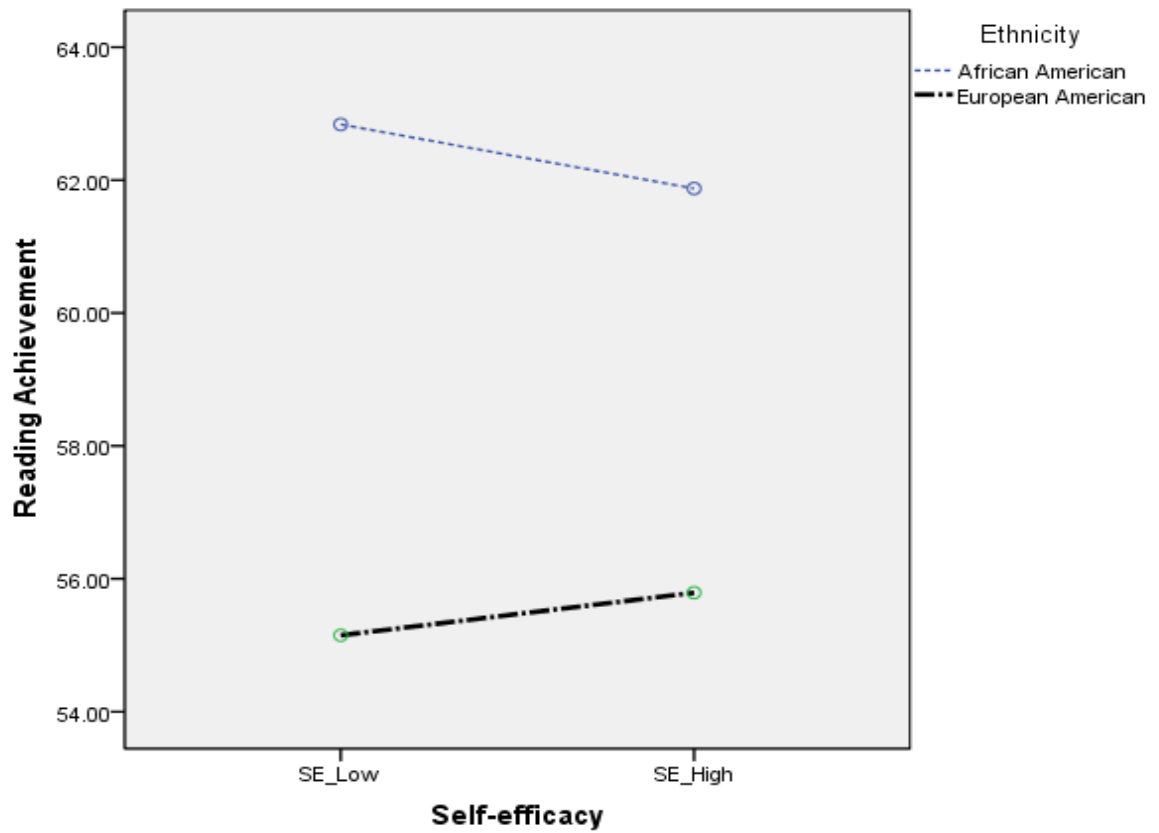


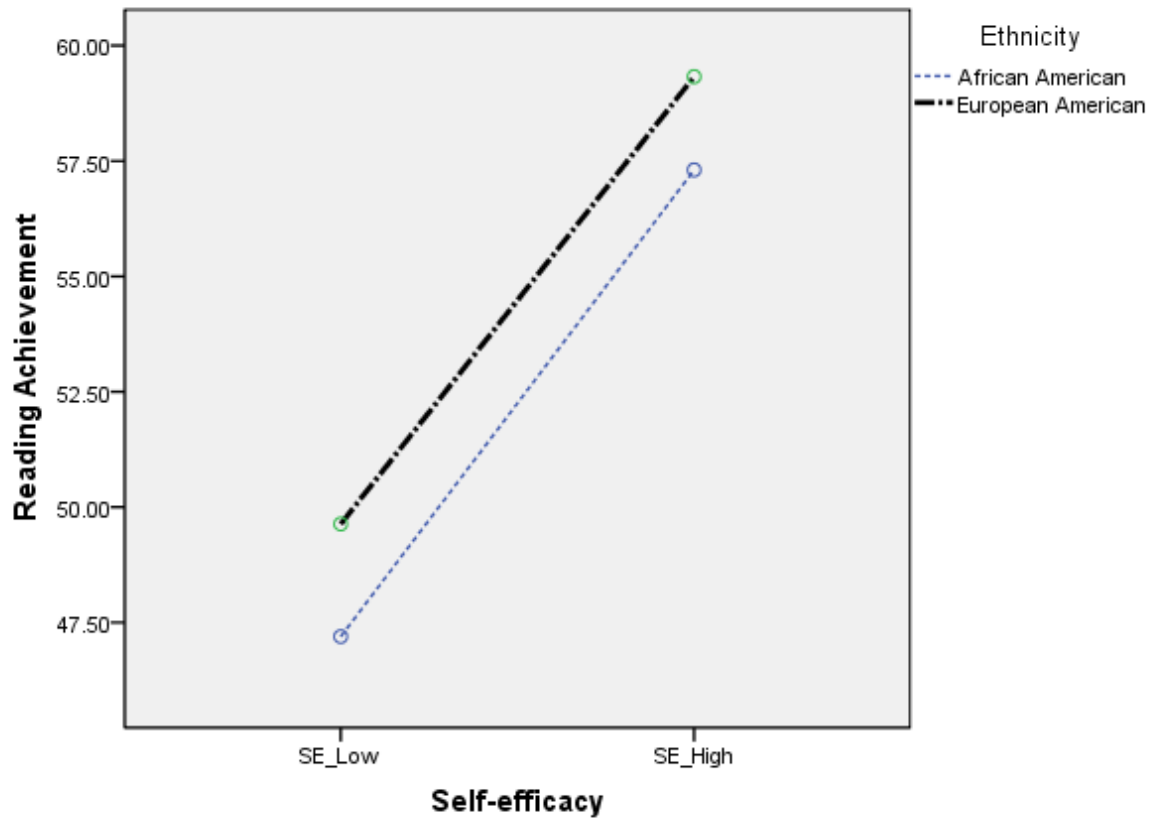
Figure 6.

Three-way interaction of reading achievement, self-efficacy, and ethnicity for students perceiving high levels of teacher competence support.



*Figure 7.*

Three-way interaction of reading achievement, self-efficacy, and ethnicity for high-achieving students perceiving low levels of teacher competence support.



*Figure 8.*

Three-way interaction of reading achievement, self-efficacy, and ethnicity for high achieving students perceiving high levels of teacher competence support.

### Post Hoc Analyses

The sample was divided into four groups; African American students perceiving high levels of teacher competence support, African American students perceiving low levels of teacher competence support, European American students perceiving high levels of teacher competence support, and European American students perceiving low levels of teacher competence support. Descriptive statistics for these groups are presented in Table 22. The means for self-efficacy and reading achievement for African American students perceiving high levels of teacher competence support were compared to those of African American students perceiving low levels of teacher competence support, and these comparisons were also made for the European American students. T-tests were conducted with a Bonferonni correction where the significance level of .05 is divided by the number of comparisons, in this case, 4. The critical significance level of .01 was therefore used to determine if a significant difference in means was present. For European American students, self-efficacy means were not significantly different based on perceived level of teacher competence support. Means for reading achievement were not significantly different for European American students perceiving different levels of teacher competence support either. African American students, on the other hand, had significantly different levels of self-efficacy based on perceived level of teacher competence support  $t(1, 155) = 2.29, p < .01$ ; with an effect size of .54, and reading achievement means were statistically different at the  $p < .05$  level. Of these groups, only African American students perceiving low levels of teacher competence support had a nonsignificant correlation of self-efficacy and achievement (see Appendix L).

Table 22

*Means and Standard Deviations for Teacher Competence Support, Self-efficacy, and Reading Achievement by Ethnicity and Perceived Level of Teacher Competence Support*

TCS level	Ethnicity	TCS			SE			Ach		
		<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
High	African American	92	3.33	.26	84	3.12	.57	92	38.80	18.01
	European American	81	3.33	.29	78	3.01	.58	81	40.53	19.52
Low	African American	78	2.38	.41	73	2.82	.53	78	45.53	20.29
	European American	96	2.25	.53	93	2.85	.59	96	42.93	19.25

*Note.* TCS = Teacher competence support. SE = Self-efficacy. Ach = Reading achievement.

The ethnic groups were split at the median into high and low achievement groups, and these groups were then split at the median into high and low teacher competence support groups, and the correlation between self-efficacy and competence support was calculated for each group. For the high achievement group, self-efficacy was significantly correlated with reading achievement for European American students perceiving high teacher competence support. Self-efficacy was significantly correlated with reading achievement for European American students perceiving low teacher competence support. Self-efficacy was significantly correlated with reading achievement for African American students perceiving high teacher competence support, and self-efficacy was not significantly correlated with ach for African American students

perceiving low teacher competence support. For the low achievement group, self-efficacy was not significantly correlated with reading achievement. These results are displayed in Table 23, Figure 7, and Figure 8. The European American students who perceived high levels of teacher competence support showed a significantly stronger correlation between self-efficacy and reading achievement when compared to European American and African American students who perceived low levels of teacher competence support. For high achieving students, there were no significant differences in the correlation of self-efficacy and achievement between ethnic groups or between students perceiving high or low teacher competence support (see Appendix L).

Table 23

*Self-efficacy and Reading Achievement Means, Standard Deviations, and Correlations by Achievement Level, Ethnic Group, and Perceived Level of Teacher Competence Support*

Achievement level	Ethnic group	Perceived level of TCS	n	Self-efficacy		Reading achievement		Correlation of self-efficacy/achievement
				<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
High	African American	High	39	2.92	.50	59.85	14.17	<b>.37*</b>
		Low	42	3.18	.50	54.87	11.53	.22
	European American	High	35	3.10	.52	57.80	11.28	<b>.44**</b>
		Low	49	3.05	.59	57.34	14.48	<b>.29*</b>
Low	African American	High	49	2.67	.54	27.51	10.14	.02
		Low	34	3.05	.62	25.18	9.67	.24
	European American	High	43	2.55	.53	25.68	10.19	.14
		Low	44	2.98	.59	26.34	10.12	.16

*Note.* \* =  $p \leq .05$ ; \*\* =  $p \leq .01$ . TCS = teacher competence support

## CHAPTER 5: DISCUSSION

### Summary and Interpretations of Findings

#### Overview

The relationship between teacher competence support, self-efficacy, and reading achievement for African American and European American students was examined in this dissertation. As evidenced in the review of literature for this dissertation, previous research has found significant relationships between these variables, but few studies have looked at students' perceptions of teacher competence support as it relates to the correlation of self-efficacy and reading achievement for African American students. The results of this study are consistent with other research that has found a significant correlation between self-efficacy and reading achievement ( Guthrie et al., 2007; Taboada et al., 2009; Wigfield et al., 2008), studies that have found significant correlations between social supports and reading achievement (Martin & Dowson, 2009; Murphy & Alexander, 2000; Pintrich & DeGroot, 1990; Wentzel, 2009), and studies that have found significant correlations between teacher competence support and self-efficacy in middle school (Beghetto, 2007; Chan & Lam, 2010; Gutman & Midgley, 2000). These relationships are examined for African American and European American students in this dissertation and my interpretation of the results of the study are presented in this chapter.

#### **Teacher Competence Support, Self-efficacy, and Reading Achievement Levels and Relationships**

**Comparing levels.** The first major finding was that the African American students in the study perceived higher levels of teacher competence support compared to European American students. This was the only significant difference in means found for



the matched sample when teacher competence support and self-efficacy for reading were examined. For this sample of students, European American students scored significantly higher than the African American students on the reading achievement measure before matching the groups. These findings were expected, based on national data that consistently shows European American students outperforming African Americans on reading assessments (National Center for Education Statistics, 2010). Previous research has reported that African American students rate their self-efficacy higher than do European Americans (Baker & Wigfield, 1999; Roeser et al., 1996; Wigfield et al., 2012), however, once the European American students in the present study were sampled and matched with African American students based on achievement scores, the ethnic groups did not have significantly different levels of self-efficacy.

An interesting finding of this study was that African American students perceived higher levels of teacher competence support when compared to European American students. Although some studies of teacher competence support in the form of encouragement and instrumental help have reported that African American students received less competence support than European American students (Casteel, 1998; Tennenbaum & Ruck, 2007) and higher levels of negative criticism (Marcus et al., 1991), Witty and DeBaryshe (1994) did not detect ethnic differences in teacher support for African American and European American students. Elias and Haynes (2008) found that African American students in their study perceived higher levels of teacher support than European American students; however, this occurred within a school where the majority of the students were African American. The African American students in this study perceived significantly higher levels of teacher competence support compared to

European American students' perceptions; this could be attributed in part to the negative correlation of teacher competence support with achievement, which will be discussed in the following section when Research Question 3 is addressed.

**Comparing relationships between teacher competence support, self-efficacy, and reading achievement.** The second major finding of this study was that for both African American and European American students, perceptions of teacher competence support were significantly associated with self-efficacy for reading when socioeconomic status was controlled. This means that students felt confident in their reading abilities when they were encouraged and helped by their teachers. This finding is consistent with several studies of teacher support, where researchers found that students who perceived high levels of encouragement (Gaskill & Hoy, 2002; Graham, 1984b; Graham, 1990; Graham 1994b; Weiner et al., 1983), provision of instrumental help (Newman, 2000; Ryan et al., 1998; Wentzel, 2009) and other forms of teacher support (Murdock & Miller, 2003; Roeser et al., 1996; Usher & Pajares, 2006) also reported high levels of self-efficacy. Conversely, this also indicates the possibility that students who do not receive competence support from their teachers suffer in the area of self-perception, specifically, perceptions of their reading abilities. Based on the data collected for this study, the relationship between teacher competence support and self-efficacy is similar for both European American and African American students, so that regardless of ethnicity, students' self-efficacy for reading is closely tied to their perceptions of teacher competence support. This is a particularly important finding, as it provides evidence of a close connection between teacher competence support and self-efficacy for African

American adolescents, a population often neglected in studies that look at relationships between these variables (see literature review in Chapter 2 of this dissertation).

The third major finding in this study was that the relationship between teacher competence support and reading achievement varied based on the ethnicity of the students, but was significant even when socioeconomic status was controlled. When looking at the entire matched sample, it appeared that teacher competence support was significantly and negatively related to reading achievement. However, when ethnic groups were analyzed separately, this negative relationship remained significant for African American students, while disappearing for European American students. African American students in this sample therefore perceived higher levels of teacher competence support when they were struggling with reading, and lower levels of teacher competence support when they were doing well. As previously stated, African American students also reported higher levels of teacher competence support than European American students. Although certain previous studies have reported that European American students are perceived as receiving higher levels of teacher support (Casteel, 1998; Tennenbaum & Ruck, 2007), it is possible that the teachers are providing higher levels of competence support to African Americans in this sample due to the significant achievement gap present in their classrooms. Given the fact that the groups were matched by achievement level, this result indicates that teachers may not discriminate their instruction as much for European American students, compared to African American students. Providing competence support to European American students regardless of achievement level would possibly result in a nonsignificant correlation between teacher competence support and reading achievement for these students. For African American

students, on the other hand, teachers may be more deliberately providing competence support to struggling students, and not to high achieving students. Further study of the causal nature of this relationship is needed to explore these possibilities.

This study did not measure teacher competence support through observation by a third party; however, teacher and student reports of support in the classroom have been found to be significantly correlated (Witty & DeBaryshe, 1994). We can therefore infer that the students' perceptions of teacher competence support were reasonably close to the actual actions of teachers in the classroom. The finding that teacher competence support was significantly related to reading achievement for African American students, but not for European American students, could therefore be interpreted in the context of a teacher's decisions in the classroom. The results may reflect the teacher's decision to allocate more resources to the African American students perceived to be doing poorly in reading, and to withhold this support from the African American students who were doing well. This was not the case for the European American students. The absence of a significant correlation could indicate that teachers are less discerning when making decisions about providing reading competence support to European American students. African American students were, as a group, lower in reading achievement than their European American peers, and the African American students perceived higher levels of teacher competence support. An alternate interpretation of the finding that the correlation between teacher competence support and reading achievement was significant only for the African American students is that the African American students who perform well in class may be ignored by the teacher, while the high-performing European American students may be more likely to receive encouragement.

The fourth research question in this study was: To what extent is self-efficacy associated with reading achievement differently for African American and European American students? For both groups of students, self-efficacy was positively and significantly correlated with reading achievement. This means that students with high levels of self-efficacy for reading also performed well in reading achievement, and students with low levels of self-efficacy performed poorly in reading achievement. These findings are consistent with several studies that have found a strong link between self-efficacy and achievement (Guthrie et al., 2007; Taboada et al., 2009; Wigfield et al., 2008).

While a hierarchical multiple regression did not result in a significant interaction of self-efficacy and ethnicity with reading achievement, the correlations of self-efficacy and reading achievement were, in fact, significantly different for the two ethnic groups based on post hoc testing, when the ethnic groups were split by achievement level. As with studies by Guthrie et al. (2009), Long et al. (2007), and Winston et al. (1997), the correlation between self-efficacy and reading achievement was significantly higher for European American students than it was for African American students. Long et al. (2007) interpreted this finding as African American students having the confidence to complete tasks, but lacking either the resources or the desire to perform. While these are plausible factors in the discrepancy between the strength of correlation between self-efficacy and achievement for African American and European American students, an alternate interpretation is that the European American students have more exposure to school success, and therefore can more easily connect their perceived abilities with their actual performance.

Although extensive study of this phenomenon is required for a thorough explanation, there are some implications that could be made based on the findings of this study. Findings are: 1) African American students are being outperformed by European American students in reading. 2) In general, African American students feel just as efficacious at reading as do European American students do. 3) African American students do not link their self-efficacy for reading to their actual reading achievement as strongly as European Americans do. 4) African American students who perform well perceive low levels of teacher competence support. Based on these results, it is possible that there is a significant interaction between the variables of teacher competence support, self-efficacy, and ethnicity as they influence reading achievement. This will be addressed in the following section.

**Ethnicity as a moderator for the relationship between teacher competence support, self-efficacy, and reading achievement.** The fifth and final finding of this study was a significant 3-way interaction between teacher competence support, self-efficacy, and ethnicity on reading achievement (see Figure 5 and Figure 6). One interpretation of this finding is that the correlation between self-efficacy and reading achievement is different in strength for African American and European American students based on their perceptions of teacher competence support. I conducted post hoc analyses in order to investigate this possibility.

First, I divided the sample into students perceiving high and low levels of teacher competence support, and then divided each of those groups by ethnicity. While European American students did not have significantly different levels of self-efficacy or reading achievement based on their perceived level of teacher competence support, African

American students who perceived high levels of teacher support had significantly higher levels of self-efficacy than African American students with low levels of teacher competence support. I then divided the ethnic groups by achievement level in order to examine differences in the strength of the self-efficacy/reading achievement relationship for high- and low-achieving African American and European American students. The correlation between self-efficacy and reading achievement was not significant for either ethnic group within the low-achieving students. High-achieving European American students did have a significant correlation between self-efficacy and reading achievement. For the high-achieving European American students, this correlation was significant, regardless of the level of teacher competence support reported by the student, and there was not a significant difference in the strength of this correlation based on level of teacher competence support.

A different pattern emerged for the African American students. When the correlation between self-efficacy and reading achievement was examined for high-achieving African American students, a significant correlation occurred for these students if they perceived high levels of teacher competence support. If the high-achieving African American students perceived low levels of teacher competence support, the correlation between self-efficacy and reading achievement was *not* significant. In addition, for African American and European American students, the strength of the correlation between self-efficacy and reading achievement was not significantly different when they perceived high levels of teacher competence support. Ethnicity therefore moderated the relationship between self-efficacy and reading achievement, and the

pattern of this moderation was different based on perceived level of teacher competence support.

Teacher competence support, therefore, may have had a greater effect on the salience of the self-efficacy/reading achievement relationship for African American students than it did for European American students. One possible explanation for this lies in the importance of the teacher-student relationship for African American students; it may even be possible that high levels of teacher support may have a greater impact on the achievement of African American students than they do on the achievement of European American students. An alternate interpretation could be that African American students rely on teachers more heavily in making the connection between their perceived abilities and their actual achievement when compared to European American students. In fact, a study by Kesner (2000) found that teachers perceived African American students as being more dependent on them for guidance compared to their European American students.

Historically, African American students have not experienced the academic success with achievement tasks that their European American classmates experience (NCES, 2010). Perhaps European American children are primed for success in school and therefore easily connect school success to perceptions of their own abilities, and African American students, having less experience with school success, need additional support in making that connection. While this support should ideally come from the home environment as well, teachers can be just as influential, and in some cases, their competence support may provide a mitigating effect when parents are not offering support for the child's academic competence. It is also possible that for African



American students, other motivational factors, such as valuing school, could have more predictive power than self-efficacy does for reading achievement. Avoidance of, or dedication to, reading behaviors may also have a substantial effect on reading achievement for African American students (Guthrie & McRae, 2011; Guthrie & McRae, 2012). These claims would need to be further investigated for statistical significance.

The evidence from my study suggests that African American students may be more dependent on teacher competence support for forming accurate interpretations of their reading performance. African American students perceiving low teacher competence support were not as likely to perceive low self-efficacy when they struggled or high self-efficacy when successful and they were more likely to make these connections in the presence of high teacher competence support. This was not the case for European American students, who showed a very strong connection between their self-efficacy and achievement even when teacher competence support was low. This is an important contribution to the research on teacher support, as many previous studies have emphasized the emotional support that teachers provide (Davis & Lease, 2007; Pintrich, 2003; Wentzel et al., 2010; Wigfield et al., 2006), and fewer studies have included measures of competence support (Midgley et al., 1989; Patrick et al., 2007; Wentzel, 1998, 2002, 2010). While all of these previous studies have established the significant relationship between teacher support of any kind and academic achievement, the present study makes explicit the connection between competence support, self-efficacy, and reading achievement for African American students and European American students.

## **Theoretical Implications**

The findings of this study have important implications for the fields of teacher support, reading motivation, and African American academic achievement. Extensive research has been conducted on self-efficacy in the domain of reading (Guthrie et al., 2007; Guthrie et al., 2009; Guthrie et al., 2007; Taboada et al., 2009; Wigfield et al., 2008), however, the study of self-efficacy and reading achievement in relation to teacher competence support has been neglected. The current study highlights the significance of teacher competence support as an entity separate from emotional or autonomy support. While emotional and autonomy support have been found to be positively associated with achievement (Martin & Dowson, 2009; Wentzel, 2009), perceived teacher competence support was shown in this study to be negatively associated with reading achievement. Rather than a depreciative effect, the perception of high levels of teacher competence support by low achievers is likely an indication of differentiated instruction that focuses competence support on students who are struggling in reading.

The findings of this study also have developmental implications, and provide evidence for the continued importance of the teacher-student relationship for middle school aged students, both for the development of self-efficacy during adolescence and for the cognitive aspect of reading. Socio-cognitive theory posits that social relationships are instrumental in the development of self-efficacy, and the field of research that examines the pathways for this influence can benefit from the findings of this study. Continued research that examines the function of teacher competence support in socio-cognitive development will ideally be broadened with the contribution of the current study, where a robust and positive relationship between teacher competence support and self-efficacy was substantiated.

The work of Wentzel (1997, 1998, 2002, 2010) has played a distinct role in establishing a framework for researching teacher support in the classroom, and the current study has sought to build upon the work of Wentzel and others (Skinner & Belmont, 1993; Weinstein et al., 1982) by contributing an application of their findings to African American students in the domain of reading. Although it may be assumed that the findings in previous studies of teacher competence support could generalize to an African American population, empirical research is needed to substantiate such claims. In addition to findings that concur with those of Wentzel (2002, 2010) as well as Weinstein and colleagues (1987), the current study examined the relationship of self-efficacy and reading achievement as it relates to ethnicity, and found possible links to perceptions of teacher competence support. As seen in this dissertation, the relationships between teacher competence support, self-efficacy, and reading achievement were in fact different for African American and European American students. Previous studies that linked teacher competence support to self-efficacy for African American students (Gutman & Midgley, 2000; Murdock & Miller, 2003; Roeser et al., 1996; Usher, 2006), did not control for socioeconomic status. Providing this control within the current study helps to extend the generalization of the findings without the constraint of socioeconomic status as a confounding variable.

As previously stated, the research on African American students' self-efficacy and perceptions of teacher competence support is severely limited. The current study has provided evidence for the nuanced role that teacher competence support plays in self-efficacy and achievement for African American students. Whether teacher competence support functions in a unique way for these students compared to their European

American peers needs to be investigated further, but this study presents an extension of previous work in socio-cognitive theory that speaks directly to African American students' relationships with their teachers.

### **Limitations**

This dissertation was limited by the size of the sample, the lack of multiple reporters, and teacher homogeneity. Due to the disproportionate number of European American to African American students in the data set, a subsample of European American students was selected for analysis. This resulted in equal numbers for the two ethnic groups; however, the final sample size of this study dictated limits on the number of possible analyses. The entire sample was divided into two groups based on ethnicity, but could not be further divided by gender or by teacher due to the potential loss of power with smaller numbers. With a larger sample size, possible differences between African American boys and girls could have been analyzed, for example. It would also have been informative to be able to check for significant differences between low- and high-achieving African American boys' and girls' perceptions of teacher competence support, compared to low- and high-achieving European American boys and girls.

Another limitation of the study was that the measures were all administered solely to the students. As the current study was centered on the student, the analyses are based on student observations. With additional resources, teachers could have completed questionnaires in order to determine their perceptions of each student's self-efficacy for reading and the teachers' perceptions of their own provision of competence support. These ratings could have been compared to the student reports for further validation of the student measures. An additional reporter, such as an impartial observer in the

classroom, could have added valuable insight as far as an objective view of teacher competence support taking place in the classroom. Obtaining data from a single source (the students), while appropriate for this study, was limiting. In addition, the student questionnaires were administered by teachers. Although extraordinary measures were taken to minimize any possible effect this may have on the data (see Methods section of this dissertation), it remains a limitation of the study. In the future, perceptions of teacher competence support would ideally be administered by an impartial researcher.

A final limitation of the study was the demographic homogeneity of the teachers. Each of the teachers included in the study were European American females. While this served as a control for consistency in teacher ethnicity and gender, it also limited the possible exploration of the effects of teacher ethnicity. With a sample of African American, as well as European American teachers, differences could have been examined between the relationships of teachers and students who share the same ethnicity versus teachers and students of differing ethnicities. It is possible that the results of this study would have varied based on differences in teacher ethnicity or gender, and having the ability to analyze these differences would have been illuminating.

### **Practical Implications**

In order to ensure success for African American students, we must develop and support instructional practices that are tailored for positive perception of teachers, increased motivation and engagement, and high achievement. This should be explored in terms of teacher development and the creation of guidelines for closing the achievement gap between minority and majority students through the support for competence in reading and other subject areas. The instructional practices that have the potential to be

effective include encouraging statements specific to student academic performance and instrumental academic help. In addition to these practices, culturally relevant instruction is possibly another component of successful implementation of teacher practices that support African American students' learning (Baden & Maehr, 1986). Ladson-Billings (1994) made several suggestions for the direction of teacher preparation, such as the recruitment of teacher candidates who have expressed interest and desire to work with African American students, educational experiences that help teachers understand the central role of culture, and allowing opportunities to critique the system in ways that will encourage teachers to choose to become agents of change. While these are valid suggestions, the present study provides quantitative evidence for the strong relationship between perceptions of teacher competence support and the correlation of self-efficacy and achievement for African American students. Practices relevant to teacher competence support that could be investigated in instructional research include professional development that focuses on competence support, and the evaluation of teachers' provision of competence support in the classroom.

While strategy instruction is vital in the reading classroom, teachers cannot ensure that their students remain engaged enough to learn these strategies if attention is not paid to the classroom environment (Guthrie, McRae, & Kluda, 2007). The findings in this study support the addition of professional development in competence support to programs that currently focus solely on strategy instruction or classroom behavior management. Teachers may underestimate the importance of encouragement that is specific to students' academic performance, or of providing individual assistance to students. Urging teachers to develop their lesson plans to include not only academic

strategies, but also support for student competence in these strategies, could help reinforce the positive impact that teachers can have on student engagement.

Another practical implication of this study is the inclusion of teacher competence support in the evaluation of teacher effectiveness. Rather than relying solely on test scores to determine teacher success, the relationship that the teacher has established with the student could be taken into account. While the ultimate goal of administrators may be to increase academic performance in their schools, test scores need not be the solitary measure of teachers' capabilities. Along with the extensive research that confirms the influence of engagement on achievement (Guthrie et al., 2009; Guthrie et al., 2007; Taboada et al., 2009; Wigfield et al., 2008), the current study provides specific teacher behaviors that are associated with self-efficacy in reading. The measurement of these behaviors should therefore provide school administrators with additional information regarding the skill of the teacher in engaging students in reading, which translates to higher reading achievement.

### **Future Directions**

There are several possibilities for future research as a result of the findings presented in this study. These include the investigation of teacher expectations and their impact on the self-efficacy – reading achievement relationship, the inclusion of parent competence support in studies of the self-efficacy – reading achievement relationship, and the inclusion of a diverse sample of teachers, parents, and observers in these studies. An intervention study that includes the training of teachers in teacher competence support could be conducted in order to determine the malleability of teacher behaviors that

support competence. Each of these possibilities will be explored and elaborated in this section.

The current study originally sought to include teacher expectations as a component of teacher competence support; however, due to measurement challenges, the teacher expectation items were withdrawn from this study. The impact of teacher expectations on student self-efficacy and academic achievement remains an important consideration, and has been examined in previous studies (McKown & Weinstein, 2003; Patrick et al., 2001; Rubie-Davies, 2006; Wentzel, 2010). The research in this area could be extended with a study that includes teacher expectations with a larger representation of measurement items, and then determining whether this variable could be included in the teacher competence support composite along with teacher encouragement and instrumental help, or if teacher expectations would form a distinct and separate factor. The resulting composite or composites could subsequently be analyzed for their impact on self-efficacy and achievement, with the inclusion of teacher expectations potentially providing additional theoretical significance to the relationships examined. A longitudinal study could help determine causality, if perceived levels of teacher competence support, self-efficacy, and reading achievement are measured at multiple time points. Changes in strength of the relationship between self-efficacy and reading achievement could be analyzed along with levels of perceived teacher competence support, in order to explore a potential positive relationship between perceptions of high teacher competence support and the increase of self-efficacy, reading achievement, and the strength of their correlation.



An intervention study investigating the training of teachers in competence support would contribute greatly to the field of educational research. Just as teachers are trained in classroom management, instructional strategies, and giving assessments, teachers could benefit from training in competence support. Ideally, this study would include both African American and European American teachers, in order to examine possible differences based on teachers with students of the same ethnicity, versus teachers with students of different ethnicities. As in this dissertation, students would be given questionnaires to measure their perceptions of teacher competence support, but to extend this research, teachers would complete self-report measures of their competence support as well. An impartial observer would serve as a third point of reference, and would complete an observation of the classroom teacher that would later be coded for provision of competence support. Collecting data from students, teachers, and an observer is beneficial in that the perception of competence support, as well as actual observed competence support, may be analyzed (Teel et al., 1998). It could then be determined whether or not these are three theoretically separate constructs.

Once this information is collected, a randomized sample of teachers would take part in a professional development training focusing on teacher competence support. A second set of teachers would not receive the training until the intervention is completed, in order to serve as a control group. After the training is complete, teachers would have several weeks to implement what they have learned, followed by another assessment of student perceptions of teacher competence support, teachers' self-reports, and another classroom observation. Changes in the actual level, as well as changes in the perceived

level, of teacher competence support would be examined and the results of the teachers in the treatment group would be compared to the results of the teachers in the control group.

A follow-up study could repeat the process, this time adding measures of self-efficacy and reading achievement. In addition to testing the effectiveness of training teachers in competence support, the role that teacher competence support plays in students' self-efficacy, reading achievement, and the relation of these variables to each other could be examined. These studies, along with this dissertation, would contribute greatly to our understanding of teacher competence support and the role it plays in student achievement and motivation.

## APPENDIX A: Teacher Reading Questionnaire

This questionnaire asks about how your Language Arts teacher works with you in class. Please think about the things your teacher says to you during class and the ways that your teacher works with you on your reading assignments. As you respond to each statement, think about the last 6 months of school and what generally happens during class time.

Read each of the sentences and then circle your answer choice. The answer choices are: Very true of me, Somewhat true of me, Not very true of me, or Not at all true of me. There are no right or wrong answers. It is very important to be honest in your answers.

This information will not be given to your parents or teachers. It will be used by the University of Maryland research team to help them understand more about students' reading. You will have enough time to think about each of these items.

### Sample Questions:

A. My teacher asks me if I did my homework.

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me

B. I don't talk with my teacher about my handwriting.

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me

1. My teacher listens to my ideas about what I have read.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
2. My teacher helps me meet challenges in reading.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
3. My teacher says that I am not improving in language arts class.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
4. When I do something right in language arts, my teacher always lets me know.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
5. My teacher doesn't check to see if I understand before we move on.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
6. My teacher makes me feel bad when I don't have the right answer in language arts class.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me

7. My teacher says that I'm doing well in my language arts homework.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
8. My teacher makes me feel that I have not done my language arts work well.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
9. My teacher thinks I can't explain nonfiction books well.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
10. My teacher says I have done well when I read aloud.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
11. In language arts class, the teacher expects me to stick with what I'm working on.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
12. My teacher doesn't help me, even when I need it.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
13. My teacher does not reward me for good work in language arts class.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|

14. My teacher shows me how to improve at finding the main idea of a passage.

Very true of me	Somewhat true of me	Not very true of me	Not at all true of me
--------------------	------------------------	------------------------	--------------------------

15. My teacher doesn't think I am good at figuring out difficult words.

Very true of me	Somewhat true of me	Not very true of me	Not at all true of me
--------------------	------------------------	------------------------	--------------------------

16. My teacher calls on me to explain things to the class.

Very true of me	Somewhat true of me	Not very true of me	Not at all true of me
--------------------	------------------------	------------------------	--------------------------

## APPENDIX B: Teacher Competence Support Questionnaire

This questionnaire asks about your instruction during the **last four weeks of Reading Language Arts class**. Please only answer the questions based on the last four weeks.

This information will NOT be given to your parents, teachers, principal, or any other school personnel. It will be used ONLY by the University of Maryland research team to help them understand more about students' reading. To ensure confidentiality of your answers, your teacher will seal them in an envelope once everyone in the class has finished. You will have enough time to think about each of the items.

You will read each of the sentences and then circle ONE answer choice. The answer choices are: Strongly Agree, Slightly Agree, Slightly Disagree, or Strongly Disagree. It is very important to be honest in your answers.

Sample Questions:

**In the last four weeks in Reading/Language Arts class my teacher...**

A. Asked us to write a paragraph.

Strongly Disagree   Slightly Disagree   Slightly Agree   Strongly Agree

Disagree   Disagree   Agree   Agree

B. Did not ask us to spell long words.

Strongly Disagree   Slightly Disagree   Slightly Agree   Strongly Agree

Disagree   Disagree   Agree   Agree

**In the last four weeks in Reading/Language Arts class my teacher...**

1. Expected me to finish my work.  
Strongly Slightly Slightly Strongly  
Disagree Disagree Agree Agree
  
2. Said I did well when I read aloud.  
Strongly Slightly Slightly Strongly  
Disagree Disagree Agree Agree
  
3. Told me exactly what was expected of me in class.  
Strongly Slightly Slightly Strongly  
Disagree Disagree Agree Agree
  
4. Encouraged me by telling me that I'm a good reader.  
Strongly Slightly Slightly Strongly  
Disagree Disagree Agree Agree
  
5. Usually knew when I needed help.  
Strongly Slightly Slightly Strongly  
Disagree Disagree Agree Agree
  
6. Showed me how to improve in reading.  
Strongly Slightly Slightly Strongly  
Disagree Disagree Agree Agree



**In the last four weeks in Reading/Language Arts class my teacher...**

7. Almost always let me know when I did something right in class.

Strongly Slightly Slightly Strongly

Disagree Disagree Agree Agree

8. Gave me enough time to finish my work well.

Strongly Slightly Slightly Strongly

Disagree Disagree Agree Agree

9. Helped me meet challenges in reading.

Strongly Slightly Slightly Strongly

Disagree Disagree Agree Agree

10. Expected me to stick with what I was working on.

Strongly Slightly Slightly Strongly

Disagree Disagree Agree Agree

11. Usually gave me a hint or clue when I did not know the answer.

Strongly Slightly Slightly Strongly

Disagree Disagree Agree Agree

12. Went out of his or her way to help me as often as possible.

Strongly Slightly Slightly Strongly

Disagree Disagree Agree Agree

## APPENDIX C: Self-efficacy Questionnaire

This questionnaire asks about your readings **in Reading/Language Arts class in the last four weeks**. Think **only** about readings that you completed in Reading/Language Arts class in the last four weeks. You did not have to do this reading in your school building. It could have been homework reading or studying too.

Read each of the sentences and then circle your answer choice. The answer choices are: Very true of me, Somewhat true of me, Not very true of me, or Not at all true of me. The best answer is the one that is most accurate for you. It is very important to be honest in your answers.

**This information will not be given to your parents or teachers.** It will be used only by the University of Maryland research team to help them understand more about students' reading. You will have enough time to think about each of the items.

Sample Questions:

**In Reading/Language Arts class in the last four weeks...**

A. I enjoyed answering the teacher's questions about the readings.

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me

B. I did not like doing the readings.

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me

**In Reading/Language Arts class in the last four weeks...**

1. I could understand all the readings.  
Very true of me      Somewhat true of me      Not very true of me      Not at all true of me
  
2. The reading materials were way too hard for me.  
Very true of me      Somewhat true of me      Not very true of me      Not at all true of me
  
3. I could correctly answer questions about the readings.  
Very true of me      Somewhat true of me      Not very true of me      Not at all true of me
  
4. The readings were really confusing to me.  
Very true of me      Somewhat true of me      Not very true of me      Not at all true of me
  
5. It was hard for me to discuss the reading materials.  
Very true of me      Somewhat true of me      Not very true of me      Not at all true of me
  
6. The key points in the text were clear to me.  
Very true of me      Somewhat true of me      Not very true of me      Not at all true of me

**In Reading/Language Arts class in the last four weeks...**

7. The main ideas of the readings were easy to find.

Very true of me	Somewhat true of me	Not very true of me	Not at all true of me
--------------------	------------------------	------------------------	--------------------------

8. I had a hard time explaining to classmates what the texts meant.

Very true of me	Somewhat true of me	Not very true of me	Not at all true of me
--------------------	------------------------	------------------------	--------------------------

9. I could figure out what unfamiliar words meant.

Very true of me	Somewhat true of me	Not very true of me	Not at all true of me
--------------------	------------------------	------------------------	--------------------------

10. I figured out how different chapters fit together in the readings.

Very true of me	Somewhat true of me	Not very true of me	Not at all true of me
--------------------	------------------------	------------------------	--------------------------

11. The teacher's questions about the readings were hard for me to answer.

Very true of me	Somewhat true of me	Not very true of me	Not at all true of me
--------------------	------------------------	------------------------	--------------------------

12. I needed help understanding some of the main ideas.

Very true of me	Somewhat true of me	Not very true of me	Not at all true of me
--------------------	------------------------	------------------------	--------------------------

## APPENDIX D: Reading Achievement Assessment

**Directions:** Carefully read each passage and the questions that follow it. Circle the *best answer* for each question *based on what the passage says*. Be sure to read *all* answer choices for each question. You may look back at the passages as you are answering the questions.

### Sample Passage

Several passages you will read are about historical figures from the 1800s.

Someone who is a historical figure has usually made an impact on society in the past.

S1) A historical figure is:

- a) Someone who likes history class.
- b) A character in a fictional story.
- c) Someone who lived long ago.
- d) A middle school history teacher.

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## FORM A

### The Battle of the Ironclads

During the Civil War, the Confederates built an ironclad ship to see if it could defeat the Union's wooden ships. In 1862, the CSS Virginia steamed into Norfolk. There, the Virginia attacked the USS Cumberland, which sank. Then the Virginia went after the USS Congress. The Congress gave up after its cannons could not damage the iron sides of the Virginia. The Union had their own ironclad named the Monitor. The Virginia was bigger and had more guns. The Monitor was faster and easier to steer. In the end, no one won the battle between the Virginia and the Monitor. Navy warfare was changed forever that day.

1. The phrase but naval warfare was changed forever suggests that the battle of the ironclads
  - a) was not an important event of the Civil War.
  - b) resulted in the use of ironclads in future naval battles.
  - c) marked a great victory for the Confederate forces.
  - d) led naval leaders to rely on wooden warships.
  
2. The CSS Virginia was able to defeat wooden ships because the Virginia
  - a) was faster and easier to steer in deep water.
  - b) could easily sink ships and had metal sides.
  - c) was manned with experienced soldiers.
  - d) carried more guns than the wooden ships.
  
3. What is the meaning of the word steamed in this passage?
  - a) carried quickly by train engine
  - b) journeyed a great distance
  - c) travelled using water vapor
  - d) moved from one city to another
  
4. In the battle between the Virginia and the Monitor, neither ship won due to
  - a) unfamiliar terrain.
  - b) unskilled soldiers.
  - c) weather conditions.
  - d) matched defenses.
  
5. The CSS Virginia chose to do battle at Norfolk in order to
  - a) Invade an area that would have many wooden ships.
  - b) Find out if the Union had any ironclad ships.
  - c) Establish a port of trade for the Confederate Army.
  - d) Show the Union that the Monitor could not protect them.

### **The Quakers**

The Quakers are a Christian religious group that was started by George Fox, an Englishman, in 1648. Equality is a very important part of the Quaker way of thinking. Because Quakers were such strong believers in equal rights for all people, they were strongly opposed to slavery. In the 1800s, many Quakers were also abolitionists. They helped slaves escape and offered their homes, stores, stables, and barns as “stations” on the Underground Railroad. They risked their own safety and freedom to help other people who were not free. There are still Quakers today. They worship in Quaker meeting

houses without ministers or priests. Instead, each member of the group is allowed to speak at the meeting.

6. Quakers risked their own safety and freedom because they
  - a) wanted to worship together freely.
  - b) thought others should be free as well.
  - c) were founded by a Christian in England.
  - d) were opposed to the abolition of slavery.
  
7. Based on the passage, many Quakers were probably
  - a) politicians.
  - b) slaves.
  - c) farmers.
  - d) ministers.
  
8. In this passage, stations refer to places where
  - a) trains deposit and collect passengers.
  - b) slaves could find jobs.
  - c) escaped slaves could hide.
  - d) Quakers were allowed to worship.
  
9. All Quaker members are allowed to speak at meetings, which is an example of the Quakers' belief in
  - a) equality.
  - b) slavery.
  - c) abolitionism.
  - d) helping people.
  
10. According to the passage above, the responsibilities of an abolitionist included
  - a) helping escaped slaves find places to stay.
  - b) worshipping in Quaker meeting houses.
  - c) preparing meals for escaped slaves.
  - d) finding escaped slaves in the North.

### **Black Volunteers**

During the Civil War, Northern communities wanted to recruit Black volunteers, but many of them had small Black populations. Posters were displayed throughout whole counties in hopes of raising a full hundred-man troop. Some prejudiced Northerners believed that Black volunteers could do heavy labor and menial tasks in the army, but

they were not sure these volunteers would fight. When given the chance, though, Black fighting men proved their bravery in combat.

As the war came to a close, thousands of escaped slaves in the North were organized into army regiments. Many of them could neither read nor write. Because of this, they were trained in an unusual way by White troopers or officers. The officers read aloud to them from military manuals and then drilled them repeatedly. In this way, the Black recruits were able to memorize substantial amounts of material, and many of them became first-rate soldiers.

In 1863, Governor John Andrew authorized the recruitment of an all-Black regiment from his state, to be named the 54<sup>th</sup> Massachusetts. He asked Robert Gould Shaw, the son of a prominent White family that was against slavery, to lead it. In July, the regiment fearlessly charged a battalion of heavily armed Confederates at Fort Wagner, outside Charleston. Colonel Shaw, with sword and pistol in hand, led the regiment's attack. He was killed at the fort wall as he shouted, "Onward, Fifty-fourth!" The attack failed and, along with Shaw, 272 Black troopers gave their lives for the Union. Intending to insult the memory of the White colonel, Confederates buried him in a mass grave along with his dead Black soldiers. The Black soldiers of the 54<sup>th</sup> and Colonel Shaw are memorialized with a sculpture in Boston's Public Gardens.

11. Since many Black volunteers weren't able to read or write,
  - a) they could not pass the military entrance exam.
  - b) training was not successful until they learned to read.
  - c) officers trained the soldiers using an unusual approach.
  - d) the 54<sup>th</sup> regiment was created for illiterate soldiers.
  
12. What is the main idea of this passage?
  - a) Many escaped slaves who became soldiers were from Massachusetts.
  - b) Despite negative stereotypes, many Black soldiers were courageous.
  - c) Robert Gould Shaw was a brave Colonel in the Union Army.
  - d) Black volunteers were not allowed to become military Colonels.
  
13. Which of the following statements best summarizes the *first paragraph* of the passage above?
  - a) It was difficult to recruit enough Black volunteers, and those who were recruited were often underestimated.
  - b) An effective way to advertise the need for Black volunteers was to put up posters around the county.
  - c) Black volunteers were eager to fight and prove that they were qualified to be soldiers in the Union Army.
  - d) In order to recruit one hundred Black volunteers, Northerners had to set aside their prejudices.



14. Which of the following statements about Robert Gould Shaw is true, based on the passage above?
- a) Colonel Shaw was selected to protect an all-Black military fort in Charleston.
  - b) Colonel Shaw was credited with leading the 54<sup>th</sup> to victory at Fort Wagner.
  - c) Colonel Shaw was instrumental in recruiting Black volunteers in Massachusetts.
  - d) Colonel Shaw's selection to lead the 54<sup>th</sup> regiment made his family proud.
15. Which of the following statements best summarizes the *entire* passage?
- a) Once Robert Gould Shaw became Colonel of the 54<sup>th</sup> Massachusetts, Black soldiers became respected and even had a statue built in their honor.
  - b) Many Black volunteers were trained and led in battle by White officers who knew the best way to teach and implement military strategies and regulations.
  - c) Late in the war, many escaped slaves overcame obstacles in order to become soldiers who fought valiantly, such as those who served in the 54<sup>th</sup> regiment.
  - d) When slaves escaped from the South, they sought refuge in the North and were quickly recruited to serve as soldiers and officers in the Union Army.

### Civil War Correspondence

Excerpt of a letter from General Hood to General Sherman, after Sherman and the Union Army won the city of Atlanta:

*I am only a general of one of the armies of the Confederate States, charged with military operations in the field, under the direction of my superior officers, and I am not called upon to discuss with you the causes of the present war, or the political questions which led to or resulted from it. These grave and important questions have been committed to far abler hands than mine, and I shall only refer to them so far as to repel any unjust conclusion which might be drawn from my silence. You charge my country with 'daring and badgering you to battle.' The truth is, we sent commissioners to you respectfully offering peaceful separation before the first gun was fired on either side. You say we insulted your flag. The truth is we fired upon it and those who fought under it when you came to our doors upon the mission of subjugation. You say that we turned loose pirates to plunder your unarmed ships. The truth is, when you robbed us of our part of the navy, we built and bought a few vessels, hoisted the flag of our country, and swept the seas, in defiance of your navy, around the whole circumference of the globe.*

*Such are your accusations, and such are the facts known of all men to be true. You say, 'let us fight it out like men.' To this my reply is, for myself, and, I believe, for all true men, aye, and women and children, in my country, we will fight you to the death.*

*Respectfully, your obedient servant,*

*J.B. Hood*  
*General*

16. Which of the following statements best summarizes the *last paragraph*?
- a) General Hood was challenging General Sherman to a duel.
  - b) General Hood was telling General Sherman the Union is outnumbered.
  - c) General Hood was saying that he does not trust General Sherman.
  - d) General Hood was responding to General Sherman's provocation.
17. What is the main idea of this passage?
- a) General Hood was challenging General Sherman to a naval battle.
  - b) General Hood wanted to establish his authority as a political pundit.
  - c) General Hood was asking permission to send commissioners for negotiations.
  - d) General Hood wanted to address what he considered to be false allegations.
18. General Hood does not wish to discuss the causes of the war because
- a) he thinks it is a trivial topic not worth discussing.
  - b) he does not feel qualified to address the topic.
  - c) he feels that fighting is more effective than discussion.
  - d) his superior officers have forbidden him from doing so.
19. Which of the following statements about the battle of Atlanta is true based on the passage above?
- a) General Sherman became offended when General Hood set the Union flag on fire.
  - b) The Union Army routinely assigned armed soldiers to guard their ships near Atlanta.
  - c) The decision to begin the battle of Atlanta was premeditated by both sides.
  - d) General Sherman intended to fight back in order to regain control of Atlanta.
20. A summary of the *entire passage* above is that it is a letter from General Hood to General Sherman:
- a) that outlines and justifies the battle of Atlanta, describing the major events of the battle from General Hood's point of view with the intent of concession.
  - b) consisting of statements that ridicule Sherman for publishing emissary reports about the Confederate troops' lack of adherence to accepted rules of combat.
  - c) that addresses points which Hood finds to be fallacious, countering each assertion with descriptions of warranted measures executed by the Confederates.

- d) indicating Hood's intention to defend himself in court regarding Sherman's accusations of 'firing upon the flag' of the Union and illegally attacking their ships.

### **Baron de Steuben and The Society of Cincinnati**

Many in Congress viewed the Society of Cincinnati as an insidious cabal "formed in Europe to overturn our happy institutions." One of them was Aedanus Burke of South Carolina. Under the pseudonym "Cassius," Burke wrote a pamphlet attacking the Society as "a race of hereditary patricians or nobility," singling out Baron de Steuben as the "creator" and "Grand Master" of the order. "I have the honor to inform Baron Steuben," he wrote, "that an order of peerage may do well under the petty princes of Germany, yet, in America, it is incompatible with our freedom."

Steuben, who joined the New York chapter of the Cincinnati in 1786 and served for several years as its president, shrugged off the ridiculous accusations. "A ca, Monsieur le Cincinnatus," he wrote in jest to Henry Knox, the real guiding hand behind the Society, in November 1783, "Your pernicious designs are thus revealed. You wish to introduce dukes and peers into our Republic. No, my Lord, no, my Grace, that will not do...Blow Ye the Trumpet in Zion!"

Laugh as he might at the carpings of the "Bostonians and gentlemen of the Holy Land" and their "modest and Presbyterian airs," the truth was that the Baron's position damaged his standing with Congress. Massachusetts delegate Rufus King jabbed at him:

*I know that he was a Soldier of Fortune and a mercenary in Europe; and notwithstanding his affected philanthropy and artificial gentleness, I hold his character the same in America; the only difference is this: in Europe he received little money and less flattery... He has from this circumstance of preference and from the adulation of sycophants, been buoyed up to the preposterous belief that his military talents are superior to those of any soldier in America.*

21. Which of the following statements about Baron de Steuben is true based on the passage above?
- a) Baron de Steuben became the first elected president of the Society of Cincinnati.
  - b) Baron de Steuben was fervently opposed to American religious institutions.
  - c) Baron de Steuben lost political prestige despite maintaining social influence.
  - d) Baron de Steuben disagreed with Henry Knox's plans for the Society of Cincinnati.

22. Which of the following statements best summarizes the *second paragraph* of the above passage?
- a) Baron de Steuben was closely involved in the Society of Cincinnati and did not place much importance on the opinion of Congress.
  - b) Henry Knox was one of the leading supporters of the Society of Cincinnati, often having to defend the Society's position before Congress.
  - c) Members of Congress wrote to Baron de Steuben, forbidding him from admitting European nobility into the Society of Cincinnati.
  - d) Baron de Steuben was the president of the Society of Cincinnati and relied heavily on the advice of Henry Knox, the previous president.
23. What is the main idea of this passage?
- a) Baron de Steuben and Henry Knox were among the Europeans who came to America and founded the Society of Cincinnati in 1786.
  - b) Congress wanted to eliminate the Society's New York chapter because they did not approve of the Society's methods.
  - c) The Society of Cincinnati provided Baron de Steuben the prestige, wealth, and power he had always strived to attain.
  - d) Baron de Steuben's political influence was weakened by his connection to The Society of Cincinnati.
24. Which of the following statements best summarizes the *entire passage*?
- a) The Society of Cincinnati was repeatedly discredited by several members of Congress as being exclusionary and elitist, even though the Society claimed that it was open to all who wished to apply, regardless of status.
  - b) Baron de Steuben was the target of many members of Congress, due to his vehement belief in the intellectual superiority of nobility and his stance against the religious practices employed by those members of Congress.
  - c) Although Congress disagreed with the patriarchal nature of the Society of Cincinnati and questioned the motives of Baron de Steuben, he mocked their position and continued to lead the New York chapter.
  - d) Congress feared that the Society of Cincinnati would bring the patriarchal views of Europe to America, and began a campaign that would ultimately tarnish the reputation of Baron de Steuben within both Congress and the military.
25. One delegate theorized that one reason for Baron de Steuben's arrogance was the Baron's
- a) leadership role in the Society of Cincinnati.
  - b) lineage of German nobility.

- c) high salary in the U.S. military.
- d) position of power within Congress.

## FORM B

### The Harpers Ferry Raid

On July 3, 1859, an old man arrived in Harpers Ferry, West Virginia. He called himself Isaac Smith and said he was a cattle buyer from New York. That man, who was actually John Brown, planned to start a revolt against supporters of slavery. First, he would steal firearms from the Harpers Ferry arsenal. On July 4th, Brown crossed the Potomac River into Maryland. He found an old farm and bought it. It was located about 5 miles from the arsenal. To keep from appearing obvious, Brown invited his daughters Annie and Martha to stay with him. The young women cooked and chatted with visitors. They also kept an eye out for pro-slavery spies who might find out about the plan.

1. Annie and Martha were on the lookout for spies who might
  - a) have strong feelings against slavery.
  - b) be from New York looking for Brown.
  - c) pose as farmers or cattle buyers.
  - d) warn someone of Brown's raid.
  
2. The phrase To keep from appearing obvious refers to John Brown's
  - a) affection for his family members.
  - b) plan to blend in with his neighbors.
  - c) bravery as the leader of the rebellion.
  - d) disguise of a beard and New York accent.
  
3. The passage makes it clear that John Brown was a careful planner by
  - a) reporting his experience with military strategy.
  - b) explaining how he came up with his disguise.
  - c) listing the steps he took to acquire the farmhouse.
  - d) describing his preparations leading up to the raid.
  
4. John Brown went into Maryland in order to
  - a) attack enemies at Harpers Ferry.
  - b) find a nice place to raise his family.
  - c) establish a secret base for his raid.
  - d) buy cattle and horses for his farm.

5. What is the meaning of the word arsenal in this passage?
- a) A building for storing weapons.
  - b) An agency that supports slavery.
  - c) A plantation run by freed slaves.
  - d) The home of the governor.

### **Libby Prison**

During the Civil War, Thomas Rose enlisted in the Union Army. In 1861 he became captain of the 77<sup>th</sup> Pennsylvania Volunteers. On the day of the Battle of Chickamauga, he and his men were captured. They were sent to Libby Prison, a Confederate jail in the southern state of Virginia. Rose immediately began making plans to escape. He later wrote of his plan to “dig straight through from the northeast corner to a yard directly across the street.” To remove the dirt he and his fellow prisoners used a wooden spittoon tied to a loop of clothesline. Then they spread the soil evenly around the floor of the prison basement. Once the escape route was complete, Rose knew it was time to begin his journey to freedom. He “slipped out, walked down the street along the canal to the first corner, then went north.”

6. Thomas Rose valued his freedom so much that he
- a) escaped after spending just one night in Libby prison.
  - b) wrote a book about his terrible experiences in prison.
  - c) hid in the basement for weeks until he could escape.
  - d) persisted through a challenging task in order to escape.
7. Thomas Rose escaped from Libby Prison by
- a) becoming a high ranking army captain.
  - b) using clothesline to tie up a guard.
  - c) creating a secret path under the prison.
  - d) stealing the master key to his cell.
8. What is the meaning of the word spittoon in this passage?
- a) clothespin
  - b) tobacco pouch
  - c) rude gesture
  - d) small bowl

9. Based on the passage, when Thomas Rose escaped, he went north because
- a) he wanted to cross into Union territory.
  - b) he wanted to find a boat on the canal.
  - c) his family was waiting for him there.
  - d) his plan was to resign from the Army.
10. In the passage, dig straight through means
- a) work through the night and day.
  - b) dig as fast as possible through rock.
  - c) tunnel from one point to another.
  - d) make a deep hole in the ground.

### **Black Volunteers (See FORM A)**

### **Committees of Safety and Vigilance**

In the years leading up to the Civil War, men in the South formed civilian groups that sought to counter the agenda of Northern abolitionists. The following excerpts illustrate the social climate created by the ‘Tennessee Committees of Safety and Vigilance’.

Excerpt from the Louisville Journal:

*June 5, 1861*

*The Vigilance Committees of Brownsville and other towns in Tennessee have given public notice to all men of Northern or foreign birth to leave the State. The Nashville Union, when questioned as to whether Union men would be suffered to give Union votes at the polls, answered the question in the negative. The Vigilance Committees of various cities and towns and counties have ordained that each ballot cast shall be an open one, whilst the disunion organizations proclaim that this will show who has the audacity to vote for the old Union – distinctly implying that whoever does so will do it at his deadly peril.*

Excerpt from a proclamation issued by the mayor of Memphis, Tennessee:

*August 24, 1861*

*To the Citizens of Memphis – Applications have repeatedly been made to me, as executive officer of the city, for protection against indiscreet parties [Vigilance Committee members] who are sent out to impress citizens into the service against their will on steamboats serving the Confederacy. Many of these men have been dragged from their beds, wives and children, but never has there been a man [of means] taken who had on a clean shirt. I hereby notify any citizens who may wish to pass within the city of Memphis to call on me, and I will furnish the request, and will see he will be protected.*

*One poor man being shot yesterday by one of these outlaws, as they may be called, causes me to give the above notice.*

*John Park, Mayor*

11. Which of the following statements best summarizes the *entire passage*?
- a) The Vigilance Committees of Tennessee were effective in instilling dread in citizens who supported the Union preceding the Civil War, prompting the intervention of a local official.
  - b) In order to defend his town's reputation, Mayor Park responded to the Louisville Journal article about the intimidating tactics of Vigilance Committees by instituting a council to monitor their activities.
  - c) Some citizens in Brownsville were forced to move to neighboring towns when the Vigilance Committees started targeting them by forcing men to enlist in the Confederate Navy.
  - d) Confederate supporters often wrote letters to the Mayor of Memphis complaining of the injustices perpetrated by Vigilance committees, such as bribing elected officials and kidnapping citizens.
12. It was decided that open balloting would be used when people voted in order to
- a) ensure the validity of the election
  - b) facilitate the counting of ballots
  - c) gain access to people's addresses
  - d) discover people's allegiances
13. Which of the following statements about the Vigilance Committee members is true based on the passage above?
- a) Members of the Vigilance Committees were able to persuade town officials to make their organization legal.
  - b) The activities of the Nashville Union were seen by members of the Vigilance Committees as favorable to their cause.
  - c) The Vigilance Committee members were discriminating when it came to selecting which men to overpower.
  - d) Peaceful measures were always attempted by Vigilance Committee members before resorting to force.
14. Which of the following statements best summarizes the *mayor's proclamation*?
- a) The mayor was announcing the creation of a committee that would protect the citizens of Memphis who feared for their safety.
  - b) As a result of many reports of local menacing and even homicide, the mayor was offering protection to the citizens and visitors in Memphis.



- c) The Vigilance Committees wanted to regulate voting in Tennessee, and the mayor of Memphis decided to alert residents to this development.
  - d) The citizens of Memphis insisted that the mayor outlaw the activities of the Vigilance Committees, and the proclamation illustrated his agreement.
15. What is the main idea of the *entire passage*?
- a) Voting for or against the Vigilance Committee became a polarizing issue in many Tennessee towns in 1861.
  - b) The Louisville Journal inaccurately provided accounts of the unjust actions of Vigilance Committees.
  - c) There were many citizens in Tennessee who were intimidated by members of the Vigilance Committees.
  - d) Brownsville and Memphis were the towns in Tennessee that experienced the most violence.

### **Troubles Within the Continental Army**

There were many deficiencies in the Continental Army that cried out for redress, all of which could use the trained eye of a professional soldier. The most pressing crises lay within the departments of the quartermaster general and commissary general, that part of the army administration charged with the procurement and distribution of supplies. The quartermaster general's department was rife with mismanagement and blatant corruption, largely the fault of Washington's nemesis Thomas Mifflin. A small, overworked staff, coupled with intolerable working conditions and little political support – both the fault of the Whig ideologues in Congress- had hobbled the Commissary. These twin failings lay behind nearly all of the army's miseries at Valley Forge.

Correspondence about irregularities in the army's conduct and about the unnecessary wastage of valuable military supplies came to Washington's desk in a veritable flood. Complaints about the need for an inspector general were widely acknowledged. The officers who had foreign military experience, being most attuned to the importance of following proper and standardized procedure, pointed out the army's failings incessantly.

The Continentals lacked the necessary discipline on the drill field, in camp, and therefore also in battle. Officers and men were too familiar with one another, breeding insubordination. Supply presented the thorniest problems, by and large due to Continental property not accounted for. "The spoil and waste of tents, arms, ammunition, accoutrements and camp equipage" was ruinous. Men whose enlistments had expired frequently took their muskets and equipment – all of it government property – home with them, while new recruits rarely had sufficient stocks of the same items.

The tribulations of the Continental Army extended to the political arena. Despite the palpable need for a trusted and adept hand, the Board of War's appointment of Thomas Conway as the army's first inspector general was actually a political move. It was an attempt to discredit George Washington – and as it turned out, Washington was not predisposed to agree with anything Conway had to suggest.

16. Which of the following statements about the Continental Army is true based on the passage above?
- a) The Board of War appointed Thomas Conway as inspector general as part of a larger strategy secretly devised by Thomas Mifflin.
  - b) One reason the Continental Army needed an inspector general was to oversee the regulations pertaining to the fraternization of enlisted men.
  - c) A prevalent problem within the Continental Army was the illegal trading of weapons by former soldiers who had taken their muskets home.
  - d) There were several complaints about the inadequate administration within the Continental Army, though most were unfounded.
17. Which of the following statements best summarizes the *entire passage*?
- a) Partly due to the absence of an inspector general, the Continental Army experienced significant difficulties, including inadequate provisions, poor deportment of combatants, and subversion.
  - b) Washington was in desperate need of an inspector general who would be wealthy enough to provide required supplies for the Continental Army and ultimately lead the Union to victory at battle sites such as Valley Forge.
  - c) The inspector general of the Continental Army had many duties and was responsible for administrative tasks such as the management of supplies, hiring qualified staff, and for overseeing the training of officers and enlisted men.
  - d) Most of the newly enlisted soldiers in the Continental Army felt discouraged about the dismal situation at Valley Forge, and they believed an inspector general would provide relief and generally improve the condition of the troops.
18. What is the main idea of this passage?
- a) Despite many setbacks, the Continental Army began functioning efficiently once a competent inspector general was appointed.
  - b) George Washington worked closely with Congress in order to locate and appoint an inspector general that would deliver the desired results.

- c) The majority of the problems found within the Continental Army were due to the actions and decisions of Thomas Mifflin.
  - d) The number of discipline and supply problems within the Continental Army substantiated the appointment of an inspector general.
19. Some of the Continental Army's difficulties were due to the
- a) mismanagement of the canteen.
  - b) declining enlistment numbers.
  - c) negligence of the inspector general.
  - d) insufficient quantity of firearms.
20. Which of the following statements best summarizes the *second paragraph*?
- a) The Continental Army required an inspector general who would be prepared to address its monetary problems.
  - b) Experienced foreign officers were unhappy with the unauthorized military appointment of Thomas Mifflin.
  - c) Criticisms of the lack of proper leadership and poor resource management of the Continental Army were expressed perpetually.
  - d) Washington decided to appoint an inspector general after receiving ceaseless complaints about the Army.

## FORM C

### The Merrimack

Before the Civil War began, the Union hoped to protect its ships in Southern ports. The most important of the Union ships was the Merrimack. It was one of the biggest ships in the Navy. It carried 40 large guns, and used engines and sails for power. The Union Navy feared that they could not defend the shipyard. The Union ordered the destruction of the Merrimack when Confederate troops tried to seize the port and all its ships. Union sailors sank the Merrimack and then set it on fire. The Confederates found what was left of the Merrimack. They used the remains to build their own warship, the CSS Virginia.

1. The Merrimack was valuable to the Union
  - a) as long as it could be sold for a profit.
  - b) since it was small and undetectable.
  - c) when it was used as housing for sailors.
  - d) because of its size and stock of weapons.

2. The phrase found what was left of refers to
  - a) searching for something near the ship.
  - b) looking for the entrance to the shipyard.
  - c) putting together weapons for the warship.
  - d) locating the pieces of the warship.
  
3. Based on the passage, in order to guarantee victory, military leaders were sometimes forced to
  - a) make some tough sacrifices.
  - b) bribe other military officials.
  - c) leave their men behind.
  - d) disguise themselves as spies.
  
4. The Union ordered the destruction of the Merrimack because
  - a) the Confederate side convinced them to surrender.
  - b) the shipyard was under attack by the Confederates.
  - c) the Merrimack was not functioning properly.
  - d) steam engines were no longer needed for warships.
  
5. What is the meaning of the word seize in this passage?
  - a) burn
  - b) steal
  - c) capture
  - d) close

### **Thomas Elwood Rose and the Flag**

Thomas Elwood Rose was an Army officer from 1861 until 1894. He fought for the Union as the captain of the 77<sup>th</sup> Pennsylvania Volunteers for the first two of those years. Late on the day of the Battle of Chickamauga, rebel forces captured Rose and his men, along with the regimental flag. The loss of the flag enraged Rose. He viewed losing the flag, which he himself had picked up from its maker in Philadelphia, as the ultimate disgrace. In April 1864, Rose was set free. He returned to his troop and fought for the war's duration. The 77<sup>th</sup> Pennsylvania Volunteers' captured flag was returned to the regiment after the war. Today it is part of the battle flag collection of the Pennsylvania State Archives.

6. Losing the regimental flag made Rose feel
  - a) relieved.
  - b) confused.
  - c) angry.
  - d) proud.
  
7. The flag at the Pennsylvania State Archives is
  - a) a copy of the original flag.
  - b) the recovered regimental flag.
  - c) the state flag of Pennsylvania.
  - d) a donation from Rose's estate.
  
8. What is the meaning of the word duration in this passage?
  - a) difficulty
  - b) toughness
  - c) length
  - d) ending
  
9. Based on the passage, we know Rose took pride in his regiment's flag because he
  - a) spoke highly of the flag to his superior officers.
  - b) picked out the flag for the Union Army in 1861.
  - c) wrote a book about military flags and banners.
  - d) took a personal interest in the delivery of the flag.
  
10. The phrase the ultimate disgrace refers to the
  - a) worst insult.
  - b) best possible outcome.
  - c) last resort.
  - d) sad event.

### **Black Volunteers (See FORM C)**

#### **The Evacuation of Atlanta**

Excerpt of a letter from Union General Sherman to Confederate General Hood proposing the procedure for relocating civilians after a Civil War battle:

*September 7, 1864*

*General:*

*I have deemed it to the interest of the United States that the citizens now residing in Atlanta should move, those who prefer to go south and the rest north. For the latter I can provide food and transportation to points of their election in Tennessee, Kentucky, or*

*farther north. For the former I can provide transportation by cars and wagons as far as Rough and Ready; but that their removal may be made with as little discomfort as possible it will be necessary for you to help the families once they reach Rough and Ready. If you consent I will undertake to remove all families in Atlanta who prefer to go South to Rough and Ready, with all their movable effects, clothing, trunks, reasonable furniture, and bedding. And, with their servants, White and Black, with the proviso that no force shall be used toward the Blacks one way or the other. If they want to go with their masters or mistresses they may do so. Otherwise they will be sent away, unless they be men, when they may be employed by our quartermaster. Atlanta is no place for families or non-combatants, and I have no desire to send them North if you will assist in conveying them South. **If this proposition meets your views I will consent to a truce in the neighborhood of Rough and Ready, stipulating that any wagons, horses, or animals, or persons sent there for the purposes herein shall in no manner be harmed or molested, you in your turn agreeing that any cars, wagons, carriages, persons, or animals sent to the same point shall not be interfered with.***

*I have the honor to be, your obedient servant,  
W.T. Sherman*

11. Which of the following statements best summarizes the *entire* passage?
- a) All families in Atlanta were granted safe passage while moving to neighboring areas after the Union army defeated General Hood.
  - b) General Sherman wrote a letter to General Hood asking for special consideration for Atlanta residents who preferred to move to northern cities.
  - c) Atlanta became the new base for the Union army, so General Sherman wanted to ensure that Confederate soldiers would leave the city without incident.
  - d) The families in Atlanta that wanted to move to Tennessee were promised that they could take all of their belongings and their servants with them.
12. Some men did not leave Atlanta with the other citizens because
- a) General Sherman intended to recruit some of the male Black citizens for the Union Army.
  - b) anyone who supported the Confederacy would be imprisoned for the duration of the war.
  - c) servants of the citizens leaving Atlanta would stay and become slaves for the new residents.
  - d) there was only enough space in Rough and Ready to lodge the women and the children.

13. Which of the following statements about the citizens of Atlanta (in 1864) is true, based on the passage above?
- a) They had minimal provisions stored in their homes to sustain them for the remaining years of the war.
  - b) They did not want to leave their city, and were willing to fight to the death in order to stay.
  - c) They supported the Union troops and secretly provided shelter for the soldiers during the war.
  - d) They wanted to take as many possessions as possible with them when leaving Atlanta.
14. Which of the following statements best summarizes the **bolded portion of the letter** above?
- a) General Sherman guaranteed the safety of citizens and their property by assigning a soldier to each family travelling to Rough and Ready.
  - b) Horses and other animals were permitted to leave the city of Atlanta only if accompanied by their owners along with proof of ownership.
  - c) General Sherman accepted General Hood's truce, as long as the citizens of Atlanta and their property could be moved without interference.
  - d) Rough and Ready was designated as the town from which people and property from Atlanta could depart for either the Northern or Southern states.
15. What is the main idea of this passage?
- a) Most of the correspondence during the Civil War was written by high ranking military officials.
  - b) Atlanta was a politically divided city where supporters of both the North and South could be found.
  - c) General Sherman wanted to evacuate Atlanta in order to have a base for his attack on Tennessee.
  - d) The citizens of Atlanta who evacuated their homes would be protected during their travels north or south.

### **The Continental Army Drill**

In order to perfect the Continental Army's method of deployment, Baron de Steuben incorporated the most important things about the way the Prussians fought – emphasizing firepower and speed of maneuver – and ideas from other tactical manuals into a cogent whole, while stripping it of all unnecessary ephemera, so it could be taught quickly and painlessly to amateur soldiers. “I have rejected every thing which tended

only to parade,” he explained to Congress, “and confined myself to what alone appeared to me absolutely necessary.”

Steuben steadfastly refused to be constrained by the narrow horizons of his Prussian experience. In the Prussian infantry, columns deployed into line, and shifted back into column, through a process of wheeling: individual smaller units, like platoons within a battalion, would wheel ninety degrees in the same direction to form a line from a column, or vice versa. It worked well enough with highly trained troops, but even then it was cumbersome and time-consuming.

A brilliant French tactician, the Comte de Guibert, proposed a much improved mechanism in the early 1770s. In Guibert’s system, individual subunits arranged in a column would simply face to the right or left without wheeling, and march obliquely, one behind the other, in order to make the line. The method was far more efficient and expeditious than wheeling, and more flexible, too. An army trained in Guibert’s method of deployment could also – with relatively little training – change formation in the midst of battle as required, and not just into lines or marching columns. It could form assault columns, called “columns closed in mass,” which were broader and shallower than marching columns but deeper than lines of battle, and commodious for short-range, rapid bayonet charges. In 1779, Steuben adopted this very same stratagem for the Continental Army.

16. Which of the following statements about the Continental drill is true, based on the passage above?
- a) Marching columns, assault columns, and columns closed in mass were configured for long-range battle.
  - b) Changing formation during battle called for adaptable methods of forming lines and columns.
  - c) Wheeling was a central component of the Continental drill, as it allowed for quick formation of columns.
  - d) Speed was more important to the success of the battalion than firepower, as it permitted rapid shifting of columns.
17. Which of the following statements best summarizes the *entire* passage?
- a) The Continental drill, which was devised as a way to train soldiers who did not have basic military skills, began using Prussian tactics, which were later replaced with French strategies.
  - b) Baron de Steuben underwent extensive training under the Comte de Guibert in France, in order to learn military drills that were more effective than those he practiced as a Prussian soldier.



- c) The Prussians paved the way for the Continental Army when it came to military strategy and weaponry, although de Steuben thought French tactics and equipment were far superior.
- d) The most efficient way of organizing soldiers and moving from one formation to another during battle was developed by de Steuben as a fusion of Prussian and French military strategy.

18. What is the main idea of this passage?

- a) The origin of the Continental army drill was uncovered by de Steuben in Prussia.
- b) The infantry deployment historically consisted of wheeling and marching columns.
- c) The complexity of deployment was burdensome and thus de Steuben sought to revamp it.
- d) The Prussian army's policies were documented and instituted by Congress in 1779.

19. One reason Baron de Steuben preferred his new method of deployment was that

- a) newly enlisted and less experienced troops would easily acclimate.
- b) Congress, after his speech, gave their full approval of the new method.
- c) the Comte de Guibert was well known in France as a brilliant tactician.
- d) he was able to implement strategies that were elaborate and novel.

20. Which of the following statements best summarizes the *first paragraph* of the passage?

- a) de Steuben synthesized military strategies from a variety of sources in order to develop a drill that would be terse and free from extraneous elements.
- b) de Steuben wanted to perfect the Continental Army deployment, so he employed the services of several Prussians who could advise him in military strategy.
- c) de Steuben did not agree with the current method of deployment, so he ran for Congress in order to gain the authority to make modifications and appointments.
- d) de Steuben admired the firepower and speed of the Prussian army so he wrote a military guide for those who wanted to duplicate the Prussian system.

## APPENDIX E: Question Types for Reading Achievement Assessment

### *Very Easy & Easy Passages*

Type 1 - literal comprehension: paraphrase sentence; may involve making a straightforward inference based on information in two consecutive sentences

Type 2 - vocabulary: determine meaning of **word** in context by integrating background knowledge (i.e., word familiarity) with text proposition; may involve making a straightforward inference based on information in two consecutive sentences

Type 3 – phrase understanding: determine meaning, purpose, or implication of **phrase**; generally involves connecting focal phrase to consecutive (previous or following) phrase

Type 4 – conceptual understanding: discern either (a) an example of a concept or (b) which concept is illustrated by given example; involves integrating multiple text propositions, from connected or disconnected text segments, with each other and possibly with basic background knowledge; question/answer choices avoid unknown vocabulary by paraphrasing possibly unfamiliar terms

### *Medium, Hard, & Very Hard Passages*

Type 5 – main concept: discern implicit main concept/main idea of full passage; involves integrating multiple text propositions, from connected or disconnected text segments, and general background knowledge

Type 6 – subconcept: discern accurate statement of passage subconcept; involves integrating multiple text propositions, from connected or disconnected text segments, and general background knowledge (subconcept = key idea in segment of full passage)

Type 7 – relational understanding: make straightforward inference that identifies *how* or *why* two passage components are related, such as in a cause-effect or problem-solution manner. (Components often a subconcept and supporting fact)

Type 8 – partial synopsis: identify best summary of a multi-sentence text segment (e.g., paragraph); involves integrating multiple text propositions, as well as recognizing inaccurate and improperly connected text propositions (best summary = fullest, most accurate representation)

Type 9 – full synopsis: identify best summary of full, multi-paragraph passage; involves integrating multiple text propositions, as well as recognizing inaccurate and/or improperly connected text propositions (best summary = fullest, most accurate representation)

## **APPENDIX F: Teacher Competence Support Measures: Source Material**

### Student Report of Teacher Context

Skinner & Belmont, 1993

Teacher Provision of Structure (21 items, alpha=.89)

Contingency (6 items, alpha=.65)

When I do something right, my teacher always lets me know.

My teacher treats me fairly.

When my teacher tells me he/she will do something I know

he/she will do it.

My teacher doesn't treat me like everyone else when I break the rules.

Every time I do something wrong, my teacher acts differently.

My teacher keeps changing how he/she acts towards me.

Expectations (5 items, alpha=.68)

My teacher makes it clear what he/she expects of me in school.

I know what my teacher expects of me in class.

My teacher keeps changing the rules in our class.

My teacher doesn't make it clear what he/she expects of me in class.

My teacher doesn't tell me what he/she expects of me in school.

Help/Support (5 items, alpha=.70)

My teacher shows me how to solve problems for myself.

If I can't solve a problem, my teacher shows me different way to try to.

My teacher doesn't help me, even when I need it.

Even when I run into problems, my teacher doesn't help me.

My teacher doesn't seem to know when I need help.

Adjustment/Monitoring (5 items,  $\alpha=.73$ )

My teacher makes sure I understand before he/she goes on.

My teacher checks to see if I'm ready before he/she starts a new topic.

My teacher doesn't check to see if I'm keeping up with him/her.

My teacher doesn't know when I'm ready to go on.

My teacher doesn't check to see if I understand before he/she goes on.

### Teacher Treatment Inventory Scales

Weinstein, Marshall, Sharp, & Botkin, 1987

Scale 1: Negative Feedback and Teacher Direction

- The teacher decides how he/she spends time in class.
- He/she has to do homework every day.
- The teacher makes him/her feel bad when he/she does not have the right answer.
- When he/she has to work with another student, the teacher tells him/her who to work with.
- The teacher scolds him/her for not trying.
- The teacher scolds him/her for not listening.
- The teacher chooses the books he/she will read in class.
- The teacher makes him/her feel that he/she has not done the work well.
- The teacher collects work before he/she has a chance to finish.
- The teacher watches him/her closely when he/she is working.

Scale 2: Work and Rule Orientation

- When he/she is working on a project or assignment, the teacher tells him/her what to do.
- The teacher asks him/her if he/she understands the work.

- When he/she gives the wrong answer, the teacher tells him/her how to make the answer better.
- The teacher expects or thinks that he/she will stick with what he/she is working on.
- The teacher thinks that it is more important for him/her to learn than to have fun.
- The teacher explains the rules to him/her.
- The teacher asks other students to help him/her.
- If he/she breaks the rules, he/she is punished.
- When he/she gives the wrong answer, the teacher calls on someone else.
- The teacher spends time working with him/her.

Scale 3 : High Expectations, Opportunity, and Choice

- The teacher calls on him/her to answer questions.
- The teacher asks him/her to lead activities.
- The teacher makes him/her feel good about how hard he/she tries.
- The teacher calls on him/her to explain things to the class.
- The teacher trusts him/her.
- The teacher lets him/her make up his/her own projects.
- The teacher is interested in him/her.
- The teacher lets him/her do as he/she likes as long as he/she finishes the work.
- The teacher makes him/her feel he/she did very well when he/she reads or gives the right answer.
- He/she is given special privileges.
- He/she gets to do special things in class.

## APPENDIX G: School Reading Questionnaire

This questionnaire asks about your reading of information books **in the unit we just finished in this class**. We started this unit in mid-April. This unit was all about animal and plant survival. Think **only** about the information books that you read for this unit. These information books told you real facts and knowledge about survival of animals and plants. You did not have to do this reading in your school building. It could have been homework reading or studying too.

Read each of the sentences and then circle your answer choice. The answer choices are: Very true of me, Somewhat true of me, Not very true of me, or Not at all true of me. There are no right or wrong answers and it is very important to be honest in your answers.

This information will not be given to your parents or teachers. It will be used only by the University of Maryland research team to help them understand more about students' reading. You will have enough time to think about each of the items.

### Sample Questions:

A. I like popular music.  
Very            Somewhat            Not very            Not at all  
true of me    true of me            true of me            true of me

B. I don't like ice cream.  
Very            Somewhat            Not very            Not at all  
true of me    true of me            true of me            true of me

1. I could find the main idea of a section in an information book for this unit.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
2. I didn't understand some topics in the information books that I read for this unit.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
3. The information books I read for this unit were way too hard.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
4. I think the information books that I read for this unit were really confusing.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
5. I could figure out what unfamiliar words meant in the information books for this unit.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me
  
6. It was hard for me to answer the teacher's questions about the information books that I read in this unit.  

Very	Somewhat	Not very	Not at all
true of me	true of me	true of me	true of me



7. I could correctly answer questions based on an information book that I read for this unit.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
8. I could figure out how different chapters fit together when I read information books for this unit.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
9. I had a hard time explaining to my teacher what the information books in this unit were about.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
10. It was hard for me to discuss the information books that I read for this unit.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
11. I needed help understanding the main ideas of some information books for this unit.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|
12. I understood all the information books that I read in this unit.
- |                 |                     |                     |                       |
|-----------------|---------------------|---------------------|-----------------------|
| Very true of me | Somewhat true of me | Not very true of me | Not at all true of me |
|-----------------|---------------------|---------------------|-----------------------|

## APPENDIX H: Reading Comprehension Assessment

**Directions:** Carefully read each passage and the questions that follow it. Circle the *best answer* for each question *based on what the passage says*. Be sure to read *all* answer choices for each question. You may look back at the passages as you are answering the questions.

### Sample Passage

Several passages you will read are about the American prairie. A prairie is a huge open space filled with grass.

- S1) The American prairie:
- a) Has little grass
  - b) Is a small piece of land
  - c) Has a lot of trees
  - d) Contains much grass

## Plant Life of the Prairie

Grasses are the most obvious plants of the prairie, the vast, dry land that covers much of North America between the Rocky Mountains and eastern forests. Shortgrasses grow up to 2 feet, while tallgrasses can reach more than 5 feet. Both kinds of grasses are specially adapted for dry environments. Their long, slender leaves have little surface area for losing water. Grasses develop a thick mat of roots that reach twice as deeply into the ground as their leaves stretch upward, gathering water within the soil. The roots also store energy to help the grass grow after it has been burned, grazed, or mowed.

Many other kinds of plants besides grasses grow on the prairie. Perennials are flowering plants that can live anywhere from a few years to decades. They develop a strong root system that, along with a few leaves, survives the winter. Most perennials have one fat branched root called a taproot that reaches deep within the soil. The leaves of perennials are usually tough and leathery, to protect them from drying out.

Trees also grow on some parts of the prairie. One type of tree, the bur oak, is especially adapted to life in a dry climate. Its wide, spreading crown of leaves shades its roots, helping keep the ground under the tree from drying out. When a bur oak seed sprouts, it sends a taproot as long as four feet in its very first year, giving it a source of water even during dry spells. Its corky bark protects the trunk and branches from fire, and its leathery leaves reduce water loss.



- 1) Taproots help prairie plants and trees because:
  - a) They allow leaves to hold water.
  - b) They have many branches that spread across the surface of the ground.
  - c) They reach water far underground.
  - d) New plants and trees sprout quickly from their moist centers.
  
- 2) What is the main idea of this passage?
  - a) Tallgrasses and shortgrasses are the most common plants of the prairie.
  - b) Prairie plants and trees have special features that help them survive.
  - c) The prairie environment makes it easy for a variety of plants to grow.
  - d) There is much plant life on the prairie, but very little animal life.
  
- 3) Which of the following statements best summarizes the *first paragraph* of the passage?
  - a) North American prairie grasses, including 2-foot high shortgrasses and 5-foot high tallgrasses, are often destroyed by fires and grazing animals.
  - b) Only shortgrass grows on the prairie, the large area of North America between the Rocky Mountains and eastern forests, because the land gets little rain.
  - c) Grasses grow well on the dry prairie because they have leaves shaped to prevent water loss and very long roots that provide water and hold energy.

- d) Most prairie grasses grow between 2 and 5 feet tall because they are able to get a large amount of water through the soil.
- 4) Which of the following statements about perennials is true based on the passage?
- a) Perennials only grow in very dry climates.
  - b) Perennials have the same type of root system as grasses.
  - c) The flowers of perennials survive even in the coldest weather.
  - d) Special features help perennials live for a long time.
- 5) Which of the following statements best summarizes the *full* passage?
- a) Shortgrasses, tallgrasses, perennials, and bur oak trees grow in different areas of the prairie because they have different kinds of leaves and root systems.
  - b) Several types of adaptive structures, such as taproots and leathery leaves, protect the grasses, perennials, and trees from the dry climate of the prairie.
  - c) The prairie has few flowering plants or trees because the dryness makes it almost impossible for them to survive; in contrast, grasses thrive on the prairie.
  - d) Due to their broad variety of adaptations, most types of prairie grass, plants, and trees are green and flowering throughout each season of the year.

**APPENDIX I: Reading Achievement Assessment Scaling**

<b>Form</b>	<b>Cronbach's alpha</b>	<b>Items included</b>	<b>Items deleted</b>
A	.76	Literal subscale items + higher-order subscale items (22 items total, inc. 2 recoded items*)	#3 – Vocab (.06 point biserial correlation) #14 – Subconcept (.06 point biserial correlation) #24 – Full synopsis (.04 point biserial correlation with total scale)  <i>Note. Item deletions and recodings increased alpha from .72 to .76.</i>
B	.75	Literal subscale items + higher-order subscale items (24 items total)	<i>no items deleted</i>
C	.76	Literal subscale items + higher-order subscale items  (24 items total, inc. 1 recoded item**)	#14 – M/Subconcept deleted  (.11 point biserial correlation)

## APPENDIX J: Descriptive Statistics

### Descriptive Statistics for Entire Sample before Matching Ethnic Groups

	Teacher Competence Support						Self-efficacy						Reading Achievement					
	African American			European American			African American			European American			African American			European American		
	n	M	SD	n	M	SD	n	M	SD	n	M	SD	n	M	SD	n	M	SD
All Students	195	2.87	.59	795	2.62	.64	192	2.99	.55	798	2.99	.55	211	41.46	18.34	823	52.09	17.58
Low SES	114	2.97	.54	126	2.75	.61	114	2.98	.56	126	2.96	.53	126	37.13	17.46	133	44.13	15.39
High SES	81	2.73	.63	669	2.59	.65	78	3.01	.53	672	2.99	.55	85	47.88	17.83	690	53.62	17.58
Females	102	2.88	.61	403	2.61	.63	101	2.93	.52	404	2.99	.55	107	41.43	18.36	416	52.30	18.08
Males	93	2.86	.57	392	2.62	.66	91	3.05	.58	394	2.99	.55	104	41.49	18.42	407	51.87	17.08

Descriptive Statistics for Entire Sample after Matching Ethnic Groups

	Teacher Competence Support						Self-efficacy						Reading Achievement					
	African American			European American			African American			European American			African American			European American		
	n	M	SD	n	M	SD	n	M	SD	n	M	SD	n	M	SD	n	M	SD
All Students	170	2.89	.58	177	2.74	.70	167	2.98	.56	176	2.91	.60	183	41.43	19.01	183	41.73	19.28
Low SES	101	3.02	.52	36	2.95	.61	101	2.99	.58	37	2.90	.55	111	37.30	18.35	38	37.18	16.27
High SES	69	2.72	.62	141	2.69	.71	66	2.97	.54	139	2.91	.61	72	47.79	18.37	145	42.93	19.87
Females	90	2.90	.62	92	2.69	.70	87	2.92	.52	93	2.92	.59	93	41.74	19.19	96	40.71	18.99
Males	80	2.89	.54	85	2.81	.69	80	3.05	.59	83	2.89	.61	90	41.11	18.93	87	42.87	19.64

## APPENDIX K: Effect Sizes

### Reading Achievement

	African American	European American	Effect size
n	224	866	
M	41.26	51.44	.57
SD	18.25	17.83	

### Self-efficacy

	African American	European American	Effect size
n	167	176	
M	2.98	2.91	.12
SD	.56	.60	

### Teacher Competence Support

	African American	European American	Effect size
n	170	177	
M	2.89	2.74	.23
SD	.58	.70	

### Self-efficacy

	African American – Low TCS	African American – High TCS	Effect size
n	73	84	
M	2.82	3.12	.54
SD	.53	.57	



## APPENDIX L: Correlations for Self-efficacy and Reading Achievement

### Correlation of Self-efficacy and Reading Achievement

Teacher Competence Support	Ethnicity	n	Correlation	Sig.
High	African American	73	.31	.01
	European American	93	.50	.00
Low	African American	84	.20	.07
	European American	78	.23	.04

### Comparison of Self-efficacy/Achievement Correlation for All Students

Group 1		Group 2		z	Sig.
TCS	Ethnicity	TCS	Ethnicity		
High	AA	High	EA	-1.44	.07
Low	AA	Low	EA	-.2	.42
High	AA	Low	AA	.72	.24
High	EA	Low	EA	2.02	.02
High	AA	Low	EA	.52	.30
High	EA	Low	AA	-2.26	.01

Comparison of Self-efficacy/Achievement Correlation for High Achieving Students

Group 1		Group 2		<i>z</i>	Sig.
TCS	Ethnicity	TCS	Ethnicity		
High	AA	High	EA	-.34	.37
Low	AA	Low	EA	-.34	.37
High	AA	Low	AA	.71	.24
High	EA	Low	EA	-.75	.23
High	AA	Low	EA	.40	.34
High	EA	Low	AA	-1.04	.15

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