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Examining Student and Teacher Perceptions of the Classroom Social Environment across School Context: Effects of Individual Factors

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Examining Student and Teacher Perceptions of the Classroom Social Environment
across School Context: Effects of Individual Factors

by

Keri Stewart

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in School Psychology
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Abstract

Although teachers and students are the primary actors in the classroom environment, they often have different perceptions of the instructional and relational aspects of the classroom. Despite these differences, research indicates perceptions of the quality of the classroom social environment have implications for both student and teacher outcomes. Additionally, research has indicated the differences in perceptions occur not only between students and teachers, but also among individual students within classrooms. The extent and the manner in which these perceptions converge may vary across different class and school contexts. School and class context, as well as individual characteristics and beliefs have shown to influence student and teacher perceptions of their environment. Thus, to further understand the relationship between perceptions and outcomes, it is important to understand the factors that influence perception. Therefore, the current study examined (1) the extent to which elementary school students' and teachers' perceptions of the classroom social environment differ from middle school students' and teachers' perceptions, (2) the extent to which teachers and students in elementary and middle school agree about the classroom social environment, (3) if the degree of convergence between teachers and students differs based on high or low levels of motivational and socio-emotional components of the classroom environment, (4) the extent to which school, classroom, and individual teacher factors help to explain teacher perceptions of their classroom environment, (5) and the extent to which school, classroom, and individual student factors help to explain student perceptions of their classroom environment. The sample comprised of fifth- and sixth-grade students and teachers from ethnically diverse elementary and middle schools. Exploratory factor

analyses revealed differences in how teachers and students conceptualize the classroom environment. Results from multiple regression and design-model multi-level modeling indicated that school socio-economic status, classroom gender and ethnic composition, as well as teacher and student demographics and beliefs, influence both teacher and student perceptions of the Classroom Social Environment. Findings from the current study may guide researchers in developing effective instructional practices for specific teacher and student populations and may provide unique contributions to the literature regarding factors that may enhance early adolescences' and teachers' experiences in the classroom.

Chapter I: Introduction

Statement of the Problem

The classroom social environment is a multidimensional construct that includes academic and social components. Academic components focus primarily on student learning and success, while social components emphasize relationships with, and emotional support from teachers and students. Both academic and social components in the classroom are crucial in order for students to experience a positive classroom social environment. A positive classroom social environment focuses on student learning and competency, incorporates a variety of effective instructional strategies that challenge and motivate students, and provides opportunities for high quality relationships among and between teachers and students (Ames, 1992; Deemer, 2004; Luftenegger et al., 2014; Patrick et al., 2007; Pianta et al., 2011; Ryan & Patrick, 2001). The classroom social environment can have a substantial influence on student adjustment in school. For example, students in academically and emotionally supportive classrooms report higher levels of academic achievement, greater academic adjustment (i.e., motivation, engagement, and effort) and socio-emotional adjustment (i.e., self-efficacy, school belonging, enjoyment, and behavioral compliance; Dotterer & Lowe, 2011; Patrick et al., 2007; Rimm-Kaufman et al., 2005; Sakiz, Pape, & Woolfolk Hoy, 2012; Skinner & Belmont, 1993). In contrast, students in a negative classroom social environment characterized by high levels of competition and social comparison as well as low levels of teacher support, experience lower levels of achievement, engagement, and motivation (Anderman & Midgley, 2004; Lau & Nie, 2008; Turner et al., 2002). The classroom social environment also has important implications for teachers, especially

the socio-emotional dimension. For instance, positive teacher-student relationships are associated with greater levels of teacher-reported enjoyment and motivation (Hargreaves, 2000), whereas teacher-student relationships with high levels of conflict are associated with higher levels of teacher-reported negative emotions including depression, stress, and lower self-efficacy (Hamre et al., 2008; Spilt, 2010; Spilt et al., 2011; Yeo et al., 2008; Yoon, 2002).

Although teachers and students inhabit the same classroom, research indicates they rarely have similar perceptions of the classroom social environment. To achieve student success, the teaching and learning process must be a dynamic and collaborative process between teachers and students (Konings et al., 2014). However, the extent to which this process occurs and results in positive outcomes for students depends on the congruence between teacher and student perceptions of the classroom social environment (Elen et al., 2007). Unfortunately, current research indicates that not only do teachers and students not share similar views, they often have opposing perceptions about aspects of the classroom social environment, including instructional practices and interpersonal interactions (Conderman et al., 2013; Konings et al., 2014; Midgley & Feldlaufer, 1987; Sinclair & Fraser, 2002; Wang & Eccles, 2014). These opposing perceptions likely result in a negative classroom social environment as well as adverse outcomes for students and teachers (Konings et al., 2014; Vermetten et al., 2002). Despite the risk of adverse outcomes of a negative classroom social environment, few researchers have simultaneously examined student and teacher perceptions of the classroom social environment and their associated outcomes. Thus, additional research is needed to fully understand both student and teacher perceptions of the classroom social environment, and to gain further insight into what aspects of the classroom social environment students and teachers view similarly or differently.

Examining perceptions of the classroom social environment is of particular importance during the transition from elementary to middle school. During this transition, students experience school contextual changes, including changes to classroom structure, instructional practices, academic expectations, and relationships with teachers and peers (Eccles et al., 1993). In fact, research indicates teachers and students at the middle school level report more negative experiences compared to their elementary counterparts. For example, middle school students report less autonomy, less challenging assignments, lower quality teacher-student relationships, and more social comparisons with peers (Eccles et al., 1993). Furthermore, middle school teachers report experiencing more alienation and judgment by their students and report lower levels of self-efficacy than elementary teachers (Eccles & Midgley, 1989; Hargreaves, 2000). These findings underscore the importance of understanding elementary and middle school environments as separate entities, but also highlight the need to examine the association between classroom social environment perceptions and school context.

In addition to changes in school context, early adolescents experience multiple developmental changes (biological, social, and psychological; Steinberg, 2005). These individual changes may have important implications for early adolescents' perceptions of the classroom social environment (Eccles & Midgely, 1993). Similarly, individual and contextual characteristics can influence how teachers perceive their classroom social environment. Specifically, the school context, in addition to teachers' professional experiences, influence their teaching philosophy and approaches to instruction, which may have implications for their perceptions of the classroom social environment. Given that individual and contextual factors influence perceptions (Bevan et al., 2007; Rubie-Davies et al., 2011; Saabe & Aelterman, 2007; Wilson et al., 1984), it is important to consider how the school context (i.e., socio-economic

status; elementary vs. middle school) as well as individual student and teacher factors (i.e., demographics, background, and beliefs) influence their perceptions of the classroom social environment.

Definitions of Key Terms

Classroom motivational context. The classroom motivational context refers to the achievement goal emphasized in the classroom environment and provides information about the purpose of learning and the criteria for academic success (Ames, 1992). The achievement goals that teachers emphasize determine the classroom goal structures. Classroom goal structures primarily examine the degree to which classrooms are mastery or performance oriented (Polychroni et al., 2012). The current study focuses on two types of classroom goal structures: mastery-oriented classroom goal structure and performance-oriented classroom goal structure.

Mastery-oriented classroom goal structure. Mastery-oriented classroom goal structures focus on students developing competence. These classrooms are student-centered and are characterized by a focus on learning, mastery of skills, a variety of instructional strategies, high levels of student autonomy and collaboration, and rewards for effort and engagement (Ames, 1992; Deemer, 2004; Gettinger & Seibert, 2002; Luftenegger et al., 2014; Patrick et al., 2011). Research indicates mastery-oriented classroom goal structures are most beneficial to students and teachers (Kaplan & Midgley, 1999; Karabenick, 2004; Linnenbrink 2005; Murayama & Elliot 2009; Roeser et al., 1996).

Performance-oriented classroom goal structure. Performance-oriented classroom goal structures focus on students demonstrating competence. These classrooms are teacher-centered, and are characterized by a focus on accuracy of assigned tasks, social comparison and competition, and rewards for outperforming peers (Ames, 1992; Ciani et al., 2010; Deemer,

2004; Kaplan, et al., 2002; Roeser et al., 1996). Research indicates performance-oriented classroom goal structures are associated with more negative outcomes (Anderman & Midgley, 2004; Kaplan et al., 2002; Roeser, Marachi, & Gehlbach, 2002; Turner et al., 2002; Urdan, Midgley, & Anderman, 1998).

Classroom socio-emotional context. The classroom socio-emotional context is determined by the quality of social and emotional interactions in the classroom between and among students and teachers (Pianta et al., 2011; Ryan & Patrick, 2001). In the current study, socio-emotional context encompasses two main constructs; promoting social interaction and promoting mutual respect. Although promoting social interaction and mutual respect are similar concepts, research has demonstrated that teachers encouraging students to work collaboratively and to value individual student perspectives are different yet equally important to fostering positive classroom social environments (Patrick et al., 2011; Ryan & Patrick, 2001; Stewart, 2014). Classrooms with a positive socio-emotional context tend to foster students' sense of classroom community and school belonging, as well as encourage positive interactions and respect towards others in the classroom (Battisch et al., 1997; Skinner & Belmont, 1993; Wentzel et al., 2010).

Promoting social interaction. Teacher promotion of social interaction refers to the extent that students perceive teachers as encouraging students to interact with one another during academic activities (Ryan & Patrick, 2001). Teachers promote positive student interactions in the classroom when they encourage students working together in small groups and supporting each other during individual seatwork (Skinner & Belmont, 1993). Promoting student interaction is associated with higher levels of student academic self-efficacy, social self-efficacy with teachers,

behavioral engagement, and lower levels of disruptive behavior in the classroom (Ryan & Patrick, 2001; Stewart, 2014).

Promoting mutual respect. Teacher promotion of mutual respect refers to the extent to which students perceive teachers as encouraging respect among classmates (Ryan & Patrick, 2001). Teachers promote mutual respect when they encourage students to value others' perspectives and contributions, and discourage students from ridiculing or disrespecting their classmates (Patrick et al., 2011). Promoting mutual respect is associated with higher levels of academic self-efficacy and self-regulation, and lower levels of disruptive behavior in the classroom (Ryan & Patrick, 2001; Stewart, 2014).

Student beliefs and background. Students' personal beliefs encompasses two main constructs; Personal Achievement Goal Orientation and Academic Efficacy. Students' background includes classroom engagement.

Personal achievement goal orientation. Personal achievement goal theory focuses on global reasons why individuals strive to accomplish a task as well as relations between students' goal orientations, beliefs, and behaviors (Damian et al., 2012; Dweck & Grant, 2008; Urdan & Schoenfelder, 2006). Research has primarily focused on two goal orientations; mastery goal orientation and performance goal orientation. However, recently researchers have divided performance orientation into two subsets, performance-approach and performance-avoidance goal orientation.

Individuals with a mastery goal orientation have an intrinsic desire to learn, master a new skill, and understand content. These individuals engage in academic activities for the purposes of self-improvement and developing academic competence, and evaluate their competence based on a set of self-referent standards (Ames, 1992; Meece, Blumenfeld, & Hoyle, 1988). Individuals

with a mastery goal orientation report higher levels of effective cognitive thinking, self-regulated learning, engagement, positive attitudes, and well-being (Ames, 1992; Ozkal, 2013; Urdan, 1997).

Individuals with performance-approach goals desire to demonstrate ability, outperform others, and attain success and recognition. These individuals engage in academic activities to receive public recognition for superior performance, and evaluate their ability based on their performance compared to peers or normative standards (Elliot & Church, 1997; Elliot & Harackiewicz, 1996). Research indicates that individuals with a performance-approach orientation experience varied outcomes. Possible positive effects on students include behavioral and cognitive engagement, interest, and achievement (Elliot & Church, 1997; Hulleman et al., 2010; McGregor & Elliott, 2002; Wolters, Yu, & Pintrich, 1996), while negative effects on students include avoidance of help seeking, test anxiety, and cheating (Karabenick, 2004; Linnenbrink, 2005; Skaalvik, 1997; Skaalvik & Skaalvik, 2005; Tas & Tekkaya, 2010).

Individuals with a performance-avoidance orientation focus on avoiding failure and uncomplimentary judgments by others (Elliot & Harackiewicz, 1996; Lüftenegger et al., 2014). These individuals engage in or avoid academic activities to evade embarrassment and seeming incompetent. Individuals with a performance-avoidance orientation experience negative outcomes such as lower levels of intrinsic motivation, academic self-efficacy, engagement, and achievement (Church et al., 2001; Middleton & Midgley, 1997; Midgley & Urdan, 2001; Pajares, Britner, & Valiante, 2000; Skaalvik, 1997).

Academic efficacy. Academic efficacy is a judgment of one's capability to accomplish a specific academic task at a certain level of performance (Linnenbrink & Pintrich, 2002).

Academic efficacy represents an individual's confidence that he or she can successfully execute

an academic task at a selected level, based on abilities, attitudes, and previous experiences (Lorsbach & Jinks, 1999; Schunk, 1991). Academic self-efficacy is positively related to a host of positive school outcomes such as persistence, cognitive engagement, use of regulatory strategies, and academic achievement (Usher & Pajares, 2006).

Classroom engagement. Two aspects of classroom engagement include involved behavior and disruptive behavior. Classroom engagement refers to students' participation in academic and nonacademic activities at school as well as effort and perseverance in learning activities (Fredricks et al, 2004). Involved behavioral engagement describes students' effort, attention, and persistence during the initiation and execution of learning activities (Skinner & Belmont, 1993). Disruptive behavior refers to students' behavior within the classroom that annoys the teacher or disrupts instruction or academic activities (Kaplan, Gheen & Midgley, 2002). Classroom engagement has been associated with higher academic achievement (Fredricks et al., 2004; Klem & Connell, 2004).

Teacher beliefs. In the current study teacher beliefs encompasses three constructs; teacher self-efficacy, general teacher efficacy and teacher autonomy.

Teacher self-efficacy. Teacher self-efficacy refers to a teacher's confidence in his/her competence in specific teaching tasks in a specified situation (Dellinger et al., 2008). Teacher efficacy impacts critical aspects of teachers' instructional attitudes, decision making, and practices in the classroom (Ashton & Web 1986; Chong et al., 2010; Gibson & Dembo, 1984; Woolfolk, Rosoff, & Hoy, 1990). Students in classes with highly self-effacious teachers experience higher levels of overall achievement, motivation, and academic self-efficacy (Ross, 1992).

General teacher efficacy. General teacher efficacy refers to one's belief that teachers, in general, can and should influence student performance despite perceived student barriers to learning, such as difficult home circumstances or low socio-economic status (Berman & McLaughlin, 1977; Cantrell & Callaway, 2008). General teacher efficacy is related to teachers' use of humanistic classroom or discipline approaches and teachers' willingness to implement new and innovative teaching practices (Ashton & Webb, 1986; Guskey, 1988; Nie et al., 2013). Research indicates that general teacher efficacy is linked to higher student expectancies and perceptions of their performance, and higher student achievement (Archmabault, 2012; Ashton & Webb, 1986; Midgley et al., 1989).

Teacher autonomy. Teacher autonomy refers to freedom from demands or pressure from colleagues, administrators, or policies that influence teacher decisions regarding curriculum delivery and daily pedagogical and classroom management practices (Blase & Kirby, 2009; Brunetti, 2001; Curren, 2007; Sentovich, 2004). Teacher autonomy influences teachers' instructional and interactional approaches in the classroom (Gess-Newsom & Lederman, 1995; Robertson & Jones, 2013).

Purpose and Research Questions

The purpose of the current quantitative study is to examine teacher and student perceptions of the classroom social environment in the spring of fifth-grade (elementary school) and fall of sixth-grade (middle school). Primary research questions include;

1. To what extent do elementary school students' and teachers' perceptions of the classroom social environment differ from middle school students' and teachers' perceptions of the classroom social environment?

2. To what extent do teachers and students in elementary and middle school agree about the:
 - a. Classroom motivational context: mastery & performance classroom goal structure?
 - b. Classroom socio-emotional context: social interaction & mutual respect?
3. Does the degree of convergence between teachers and students differ based on high or low levels of motivational and socio-emotional components of the classroom environment?
 - a. Classroom motivational context: mastery & performance classrooms goal structure?
 - b. Classroom socio-emotional context: social interaction & mutual respect?
4. To what extent do school, teacher and student factors help to explain teacher perceptions of their classroom social environment?
 - a. School factors: School Socio-Economic Status (SES)
 - b. Teacher factors:
 - i. Demographics and background: gender, ethnicity, age, years of experience,
 - ii. Teacher beliefs: teacher self- efficacy, general teacher efficacy, autonomy
 - c. Student factors:
 - i. Demographics and background: gender, ethnicity, engagement, disruptive behavior
 - ii. Student beliefs: mastery, performance-approach, and performance-avoidance goal orientation, academic self-efficacy
5. To what extent do school, individual student and teacher factors help to explain student perceptions of their classroom social environment?
 - a. School factors: School Socio-Economic Status (SES)
 - b. Student factors:

- i. Demographics and background: gender, ethnicity, engagement, disruptive behavior
 - ii. Student beliefs: mastery, performance-approach, and performance-avoidance goal orientation, academic self-efficacy
- c. Teacher factors:
- i. Demographics and background: gender, ethnicity, age, years of experience
 - ii. Teacher beliefs: teacher self- efficacy, general teacher efficacy, autonomy

Significance of the Study

Teachers play a critical role in creating the classroom social environment as they shape the motivational context and the nature of student interactions. The classroom social environment is influenced by a range of instructional and communicative decisions that teachers make, often with specific pedagogical goals in mind. These decisions are also guided by their teaching philosophies and prior experiences (Konings et al., 2014a). Although teachers spend considerable time with students across the school year, it is likely their intentions for specific instructional practices and classroom policies may be misinterpreted by students (Wolters et al., 2011). When teachers and students have varying opinions about the goal or purpose of classroom procedures, strained relationships and a subsequent negative classroom environment is likely to ensue (Konings et al., 2014b). Thus, it is important to understand teacher and student perceptions of academic and social dimensions of the classroom social environment to determine which classroom dimensions students and teachers have higher or lower convergence. This can ultimately assist researchers in identifying the dimensions that are likely to promote or hinder a positive classroom environment.

Research is the early stages of determining the influence of school context and

environment on students' perceptions of their classroom environment. Some research exists that speak to effect of school socio-economic status, ethnic composition, social community on students' enjoyment of the classroom experience as well as their perceptions of their teachers' practices. Additionally, research has shown that students' individual characteristics such as gender, and ethnicity, as well as self-evaluative and learning beliefs can cause similar instructional practices to be interpreted differently across students (Elen & Lowyck, 1998; Vermetten et al., 2002). Individuals with different characteristics have unique experiences that shapes how they perceive their academic and social environment. This finding indicates that students may not only misinterpret the purpose of teacher practices, but that students in the classroom may have unique interpretations of these practices. Thus, understanding these associations can guide researchers in developing the most effective instructional practices for specific teacher and student populations.

Investigating the associations between student and teacher perceptions of the classroom social environment and the influence of school, classroom (teacher) and individual factors can have important practical implications for educators and school psychologists. Understanding the impact of school socio-economic status could assist district and school leaders to determine which schools are at-risk for negative perceptions of classroom environments. This may provide guidance on how districts can efficiently utilize resources to provide school-wide supports and interventions to schools with the most need. Additionally, examining associations between teacher characteristics and aspects of the classroom social environment may help determine which teachers create classroom environments that are positively interpreted by students (Retelesdorf et al., 2010). The findings from such research may provide opportunities for administration and school psychologists to engage in early intervention for teachers in the form

of additional professional development and support in order to create a positive classroom environment for them and their students.

Furthermore, understanding the associations between individual characteristics and perceptions could assist educators in matching students to teachers and providing teachers with effective classroom practices. Specifically, this may provide insight into determining which students view certain teacher practices as positive or negative. This information may allow schools and teachers to adapt and improve practices for specific populations of students at-risk for negative school experiences and improve their chances of experiencing success at school. Researchers indicate that current classroom perception studies that exist ignore the role of individual factors, which can result in educators and school psychologists undermining the effectiveness of instructional interventions (Vermetten et al., 2002; Wang & Eccles, 2014). For instance, research-based instructional practices may be prematurely discarded as ineffective because of its incompatibility with the student population rather than its overall effectiveness to impact student learning. Therefore, it is important that students are provided with instruction that matches their unique needs. Alternatively, understanding associations between individual characteristics and perceptions can provide educators the opportunity to intervene and change students' perceptions of teacher practices. Research has shown positive outcomes of interventions aimed at adjusting students' perceptions of learning contexts (Lizzio, Wilson, & Simmons, 2002).

Contributions to the Literature

Researchers have recently started to investigate teacher and student perceptions of the classroom social environment (Wang & Eccles, 2014). However, little is known about teacher and student perceptions with respect to motivational and social aspects of the classroom

environment. Furthermore, few studies simultaneously investigate whether teacher and student perceptions vary based on contextual and individual factors. Given the differences in context between elementary and secondary schools and between schools with varying levels of socio-economic status, especially as it relates to academic demands and daily teacher-student interactions, the current study can help researchers understand how these contexts differentially influence teachers' and students' perceptions of the classroom social environment. Additionally, the growing diversity of school populations underscores the need to understand how individual characteristics shape perceptions. The diverse student population analyzed in the current study will contribute to our understanding of perceptions of different student populations. Furthermore, the significant diversity with regards to teacher age and educational background and the analysis of gender and ethnic diversity, although small, can provide preliminary knowledge about the associations between teacher characteristics and perceptions. Thus, the current study may provide several unique contributions to the literature regarding factors that may enhance early adolescents' and teachers' experiences in the classroom. Lastly, the current study may add to the sparse literature analyzing contextual, classroom and individual factors utilizing design-based multi-level modeling when investigating student and teacher perceptions of the classroom social environment. This study will be among the few classroom perception studies to examine the influence of school, classroom, and individual variables using statistical methods that can account for the nested data structure.

Chapter II: Literature Review

This chapter provides a review of relevant literature and theoretical foundations for student and teacher perceptions of the classroom social environment. The first section begins with a review of early adolescence and the classroom social environment with specific focus on the motivational and socio-emotional context. In the next section, research related to student and teacher perceptions of the classroom social environment as well as associated outcomes are discussed. In the following section, individual factors that influence student and teacher perceptions of the classroom are discussed including the demographics, background, and individual beliefs. Lastly, a discussion regarding the convergence and divergence of the teacher and student perceptions of the classroom social environment is presented.

Early Adolescence and the Classroom Social Environment

Stage-environment fit theory. The stage-environment fit theory postulates that the extent to which characteristics of the learning environment are responsive to adolescents' developmental needs influences their motivation, behavior, and mental health (Eccles et al., 1993; Eccles & Midgley, 1989). Adolescent developmental needs include need for autonomy, competence, emotional support, engagement, the desire to make meaningful contributions, the desire to form relationships with peers and non-familial adults, and the need to develop a strong sense of identity (Eccles, 2004, 2014; Eccles & Roeser, 2011). When an individual's environment is responsive to their development needs, their motivation and mental health are enhanced. However, when an individual's environment is not responsive to their needs, or when

there is a mismatch between the environment and their developmental needs, individuals experience lower levels of motivation, engagement, and poorer mental health (Eccles et al., 1993). Educators can promote a responsive learning environment by aligning students' developmental needs at the classroom- and school-levels (Eccles & Roeser, 2011; Wang & Eccles, 2013; Zimmer-Gembeck et al., 2006). Thus, educators must consider the importance of students' various developmental needs when fostering responsive learning environments (Eccles, 2004; Eccles et al., 1993).

Research indicates the stage-environment theory is particularly salient during the transition to middle school, as students often experience a decline in motivation and engagement. Eccles and Midgley (1989) attribute this decline in motivation and engagement to a mismatch between students' needs and their new educational environment. The transition from elementary school to middle or junior high school encompasses a series of individual developmental changes (e.g., biological, cognitive, social, and psychological; Eccles 1999; Steinberg & Morris, 2001) as well as contextual changes regarding the type of educational environment students experience (Holas & Huston, 2012). Individual developmental changes often spur an amplified desire for autonomy and peer orientation, as well as increasingly abstract and sophisticated cognitive abilities (Dennis et al., 2011). Learning environments that are responsive to adolescents' developmental needs are often characterized as having a comforting and welcoming environment, and providing challenges and new opportunities for growth (Eccles et al, 1993). Learning environments enhance adolescents' motivation, well-being, and school adjustment when they provide opportunities for students to foster their academic and social competencies, feel connected to people in their environment, and have input in their learning process (Eccles, Wigfield, & Schiefele, 1998; Roeser et al., 2000). Learning environments that are not responsive

to adolescents' developmental needs are characterized as having an environment that emphasizes competition and social comparison, minimizes student decision-making and choice, disrupts social networks, and emphasizes lower-level cognitive strategies (Eccles et al., 1993; Roeser et al., 2000). These types of environments increase the risk of disengagement and school problems and significantly reduce adolescents' opportunities for healthy development (Eccles, 1999; Eccles et al., 1993; Guthrie & Davis, 2003; Holas & Huston, 2012). The notion of matching adolescents' developmental needs and their environment is equally salient when examining adolescents' classroom environment.

The classroom social environment. The classroom social environment is shaped by the relationships between and among teachers and students (Allodi, 2010; Fisher & Fraser, 1983b; Moos, 1979; Pianta et al., 2011). The classroom social environment refers to the extent to which the classroom is characterized by affiliation, cohesion, fairness, mutual respect, and support from teachers and students (Patrick et al., 2007; Patrick, Kaplan, & Ryan, 2011; Ryan & Patrick, 2001). This line of research demarcates important components of the classroom social environment including student perceptions of teacher support (academic and emotional), teacher promotion of social interaction, and teacher promotion of mutual respect. The proposed research study will focus on the latter two components, namely student perceptions of teacher promotion of social interaction and mutual respect. Examining these components of the classroom environment provide a comprehensive understanding of how students view their interactions with their teachers and peers and how this environment influences their current and future academic, motivational, and socio-emotional adjustment in school. Additionally, this framework helps educators and researchers understand the characteristics of responsive environments that promote positive student adjustment.

Responsive classrooms are also referred to as positive classroom environments in the literature (Pianta et al., 2011; Reyes et al., 2012). Characteristics of a responsive or positive classroom include a sense of emotional connection, respect, and enjoyment reported by students and teachers (Pianta et al., 2011). Classrooms where teachers and students report minimal support as well as a general disregard and disrespect for one another are characterized as unresponsive or negative classroom environments (Reyes et al., 2012). Recent research underscores the important role students' perceptions of the classroom environment plays in understanding their development and adjustment. When students view their classrooms as responsive and welcoming environments they are likely to experience and report more positive adjustment (Patrick et al., 2007; Rimm-Kaufman et al., 2005; Skinner & Belmont, 1993). Students who perceive their classrooms as responsive report greater effort, interest, engagement, focus and investment in school, as well as a higher compliance to teacher requests (Patrick et al., 2007; Rimm-Kaufman et al., 2005; Skinner & Belmont, 1993). Conversely, students who experience negative classroom environments often report more adverse outcomes (Eccles, 1991; Eccles, 2004).

The Classroom Motivational Context

In addition to assessing the quality of the relationships between and among teachers and students (Patrick et al., 2011), researchers have investigated the classroom motivational context (Ames, 1992). Research on the motivational and social dimensions has made important contributions to the classroom environment literature, each with its own strengths and limitations. Examining these two dimensions provide a comprehensive understanding of how students' perceptions of the classroom environment meet their developmental needs and influence their academic and social adjustment in school.

The classroom motivational context is informed by the Achievement Goal Orientation theory (Ames, 1992; Dweck, 1986; Elliot & Dweck, 1988). Achievement goal theory within the academic domain focuses on overarching reasons why individuals strive to accomplish a task as well as the relations between students' goal orientations, beliefs, and behaviors (Damian et al., 2012; Dweck & Grant, 2008; Urdan & Schoenfelder, 2006). Research examining achievement goals has focused on understanding individuals' orientation to academic competence, including developing and demonstrating competence (Ames, 1992; Dweck, 1986; Urdan & Schoenfelder, 2006), and includes both individual-level goals and school- and/or classroom-level goal structures.

Individual achievement goal orientation. Primarily within the current literature, the three main individual achievement goal orientations include mastery, performance-approach, and performance-avoidance goal orientations. Individuals with a mastery goal orientation have an intrinsic desire to learn, master a new skill, understand content, and focus on developing mastery of skills. These individuals engage in academic activities for the purposes of self-improvement and developing academic competence, and evaluate their competence based on a set of self-referent standards (Ames, 1992; Meece, Blumenfeld, & Hoyle, 1988). Additionally, these students tend to feel successful by engaging in challenging or interesting tasks. In contrast, individuals with a performance goal orientation desire to demonstrate competence and receive public recognition for superior performance. Individuals with a performance goal orientation believe that achieving normative standards of success is directly tied to ability, and thus his/her self-worth is dependent on surpassing normative-based standards, particularly when great effort is exerted (Dweck, 1986). Researchers differentiate between performance-approach and performance-avoidance goals, as each has unique outcomes for individuals (Elliot & Church,

1997; Elliot et al., 1999; Elliot & Harackiewicz, 1996). Individuals with performance-approach goals desire to demonstrate competence, outperform others, and attain success and recognition, whereas individuals with a performance-avoidance orientation focus on avoiding failure and uncomplimentary judgments by others (Elliot & Harackiewicz, 1996; Lüftenegger et al., 2014). Research has underscored the importance of individual goal orientation in predicting a host of adaptive academic and social outcomes for both students and teachers. A review of the literature to understand these outcomes will be discussed later in this chapter. The following section will focus on the motivational context of the classroom.

Classroom achievement goal structures. Although research has shown that individual student achievement goal orientations are key to understanding students' academic and social outcomes, it is important that the influence of contextual factors on student adjustment is considered (Urduan & Schoenfelder, 2006). Examining achievement goal orientation at the classroom level – classroom goal structures – provides insight into how classroom environments may influence student functioning. Examining classroom goal structures can inform educators about what strategies may enhance student learning and development. An achievement goal-oriented classroom environment involves two main types of classroom goal structures: mastery goal and performance goal structures. Each of these goal structures is associated with a unique pattern of student beliefs, attributions, and affects that influence academic behavior (Ames, 1992; Elliot & Dweck, 1988). Thus, classroom goal structures influence how students in the classroom think, feel, and behave in response to certain academic activities. These classroom goal structures are derived from the achievement goals that teachers emphasize in the classroom. These goals differ primarily in terms of the extent to which learning itself is perceived and valued or whether learning is viewed as a means to a goal external to the task (Meece,

Blumenfeld, & Hoyle, 1988).

The achievement goal emphasized in the classroom environment impacts the classroom's motivational context. Investigations of the classroom motivational context focus on the students' perceptions of what is defined as success and reasons for approaching, engaging in, and responding to academic activities (Ames, 1992). Examining the classroom motivational context may assist researchers and educators in understanding how "the structure of learning environments can make different goals salient and consequently affect how students think about themselves, their tasks, and others" (Ames, 1992, p.261). Classroom structures and characteristics can influence the salience of a particular achievement goal. These achievement goals influence the type of tasks and learning strategies students select as well as how they define academic success (Ames, 1984; Elliot & Dweck, 1988). Instructional policies and practices at the classroom level determine whether mastery or performance goals are salient (Urdu, 2004).

Mastery oriented classrooms focus on the development of competence. Teachers often assign and provide opportunities for students to engage in challenging tasks, offer variety, and permit students to choose priorities in task completion, method, and pace of learning (Ames, 1992; Luftenegger et al., 2014). Assignments are formulated utilizing students' personal interests and are based on what students perceive as meaningful. In mastery-oriented classrooms, teachers share authority and responsibility for rules and decisions with the students. Grouping is flexible and heterogeneous rather than based on ability or performance (Patrick et al., 2011). Classroom activities are matched to student skill and pace, extend and develop over time, and allow students to collaborate (Gettinger & Seibert, 2002). Distribution of recognition and rewards in mastery-oriented classrooms are based on participation, effort exerted, progress, and mastery of knowledge or skills (Deemer, 2004). Failures are considered as opportunities to learn and gain

new information, rather than as indicators of a lack of ability (Deemer, 2004). In mastery-oriented classrooms, all students have multiple opportunities to receive rewards, and recognition is provided privately in order to diminish a competitive atmosphere (Ames, 1992).

Performance-oriented classrooms focus on the demonstration of competence as teachers often highly value the quantity and accuracy of products. Assignments are teacher defined and structured. Students have limited choices in the selection, delivery, and completion time of assigned tasks (Kaplan, et al., 2002; Roeser, et al., 1996). Teachers who emphasize performance goals provide uniform assignment of tasks, and group students based on ability. In these classrooms, social comparison is emphasized, often with public displays or announcements of student performance (Ciani et al., 2010). Additionally, only students who achieve the normative standards or who outperform others are eligible to receive recognition or rewards. These rewards are applied to students regardless of interest in the reward or recognition (Ames, 1992). In these classrooms applying great effort to succeed is indicative of low ability (Deemer, 2004).

Student perceptions of classroom goal structures. Existing literature on classroom goal structures primarily examines the degree to which classrooms are mastery or performance oriented based on students' perceptions of the classroom (Polychroni et al., 2012). Students' perception of the classroom goal structure has been investigated using instruments based on the TARGET framework (Church et al., 2001; Greene et al., 2004; Tapola & Niemivirta, 2008). Among the most frequently employed surveys based on the TARGET framework is the Patterns of Adaptive Learning Survey (PALS; Anderman et al., 1998; Midgley et al., 1996; Turner et al., 2002; Urdan & Midgley, 2003). Researchers also have investigated classroom goal structures using observational methodologies, often in conjunction with student perception surveys (Meece, Anderson, & Anderson, 2006; Patrick et al., 2001; Urdan, 2004).

The TARGET framework represents a mastery classroom goal structure (Ames, 1992a, 1992b; Epstein, 1988; Schunk et al., 2008). This framework highlights six instructional strategies or dimensions that create and influence the classroom motivational context: task, authority, recognition, grouping, evaluation, and time. Thus, the extent to which a classroom is a mastery oriented environment can be determined based upon the design of tasks and learning activities, the level of authority students have regarding their learning, how student learning is evaluated, how rewards are distributed, and the pace of instruction (time) in the classroom. (Ames, 1992a, 1992b; Epstein, 1988). The TARGET framework represents a classroom structure that involves the use of a compilation of instructional strategies rather than on a singular instructional method (Luftenecker et al., 2014). These strategies are not viewed as independent contributors to student motivation; rather they are overlapping and impact similar classroom, teacher, and student variables (Ames, 1992). Researchers have utilized the TARGET framework to construct items for classroom environment questionnaires or surveys to assess students' perception of and preferences regarding the classroom environment (Church et al., 2001; Tapola & Niemivirta, 2008). Most empirical studies that adopt the TARGET framework have investigated a single dimension separately, or have examined a few dimensions together (Schunk et al., 2008). However, a recent longitudinal research has taken a comprehensive approach and has found that utilizing the comprehensive TARGET framework can in fact foster a mastery goal orientation in the classroom (Luftenecker et al., 2014). Luftenecker et al. (2014) examined the impact of the comprehensive multi-dimensional TARGET framework and its impact on mastery goal orientation with 1,680 secondary school students over a two-year period. Results confirmed that the TARGET dimensions work together to foster a mastery classroom goal structure and are associated with students' individual mastery goal orientation in the classroom over time.

Meece (1991) have produced similar constructs of mastery classroom goal structure based on observational records that identify differences in teaching approaches. Results from their analyses indicated that teachers characterized as creating high or low mastery oriented classroom varied in the extent they emphasized the value of learning, promoted meaningful learning, differentiated instruction based on students' developmental levels and personal interests, and created an environment that fostered student autonomy and collaboration. Despite utilizing different methodologies, these research findings converge in terms of the classroom dimensions that identify and create mastery-oriented classrooms.

The Patterns of Adaptive Learning Scales (PALS) measures students' perceptions of classroom practices that signify either mastery- or performance-oriented instructional practices. Although this instrument has evolved over time, the Midgley et al. (1997) version delineates two scales, Mastery and Performance- Approach Goal Structures. Mastery Classroom Goal Structure assesses the degree to which students perceive their teacher as emphasizing learning and understanding as primary goals in the classroom. Performance-Approach Classroom Goal Structure assesses the degree to which students perceive their teachers as emphasizing outperforming other students and showing how smart they are. Recent studies have examined the relationship between students' perceptions of classrooms, the goals they pursue, and their motivational and behavioral outcomes (Patrick et al., 2007; Ryan & Patrick, 2001).

Current literature on classroom goal structures is based on the assumption that a direct causal link exists between teacher practices and students' perceptions of classroom goal structures (Urdan, 2004). Specifically, teachers' instruction, evaluation, and grouping strategies are believed to contribute to students' perceptions of classroom goal structures (Kaplan et al., 2002; Meece, Anderson, & Anderson, 2006). This line of research indicates teacher practices

play a key role in shaping early adolescents' perceptions of the classroom goal structure. Researchers have used observational methods, often in conjunction with student reports, to determine how teaching practices differ in classrooms with high or low mastery and performance goal structures (Urdan, 2004). For instance, Meece (1991) aggregated fifth- and sixth-grade students' survey reports and observational data to describe the differences between high- and low-mastery classrooms. High mastery-focused classrooms were characterized by meaningful learning, differentiated instruction, instructional teacher support, and limited focus on ability and competition. Patrick and colleagues (2001) found similar results in their multi-method (student surveys and observations) study conducted in four fifth-grade classrooms, which produced detailed descriptions of classroom practices that were associated with 223 students' reports of a high or low mastery goal structure in their classroom. Running record observations revealed that teachers whose classroom students classified as high mastery believed that student learning success encompassed student involvement, student participation and interaction, and underscored effort and improvement. Conversely, in student-reported, low- mastery classrooms, teachers believed learning success was defined by memorization and replication of knowledge, following procedures, and accuracy of work. They also believed the learning process involved minimal occurrences of student participation and interaction.

Results from the Patrick et al. (2001) study underscored the importance of emotional and instructional components when investigating classroom goal structures. Classrooms where teachers showed concern about students' learning and progress, as well as demonstrated concern for students' physical and emotional comfort, were perceived by students as having a high-mastery orientation. Classrooms where teachers only demonstrated concern for students' well-being and comfort, but not for their learning and progress, were perceived by students as having

a low mastery focus. This study also highlighted that certain teacher behaviors overlapped goal structures and were present regardless of being characterized as high and low mastery-focused. These behaviors included public acknowledgement or distribution of student performance and the dissemination of rewards to selected students for answering questions correctly. However, it was noted that teachers in low-mastery classrooms placed greater emphasis on formal assessments, grades, and students' relative performance than teachers in high-mastery classrooms (Patrick et al., 2001).

Patrick and Ryan (2008) also contributed to our understanding of students' perceptions of the classroom goal structure. These authors investigated 197 middle school students' perceptions of teacher practices that influence their assessments of their classroom mastery goal structure. Results indicated that when students evaluated classroom mastery goal structure, they primarily attended to teachers' affective and pedagogical approaches. Affective approaches included teachers' friendliness, kindness, approachability, and caring about student learning and concern for them as individuals. Pedagogical aspects of the interactions encompassed teacher support of student participation and the utilization of various teaching methods to enhance student engagement and learning. A multi-method study conducted by Turner and colleagues (2002) with 1,197 sixth-grade elementary school students in four ethnically and economically diverse school districts in three Midwestern states also yielded similar findings. Survey and observational results from this study support the notion that mastery goal environments consist of both cognitive and affective components. Overall results from these studies indicate that when examining early adolescents' interpretations of their classroom structure, there is considerable agreement regarding the types of teacher practices that promote a high-mastery classroom goal structure.

Outcomes of student perceptions. Student perceptions of the learning environment are related to a host of current and future outcomes, including academic performance as well as emotional and behavioral adjustment in school (Kaplan et al., 2002; Kaplan & Midgley, 1999; Lau & Nie, 2008; Polychroni et al., 2012). Numerous studies have investigated the relationship between students' perceptions of the goal structures in the classroom and their motivational, affective, and achievement outcomes (Anderman & Midgley, 2004; Kaplan & Midgley, 1999; Karabenick, 2004; Lau & Nie, 2008; Linnenbrink 2005; Murayama & Elliot 2009; Roeser et al., 1996; Turner et al., 2002; Wentzel, 1998). Studies to date have found support for the hypothesis that mastery classroom goal structures are most beneficial to students and that performance goal structures often are associated with more negative outcomes. The dichotomy in student outcomes when comparing these two classroom structures may be explained by the fact that middle school students often view these goal structures as separate and not compatible (Rollands, 2012).

Research studies at the elementary and secondary levels have found that a mastery goal structure is a direct positive predictor of intrinsic motivation, positive affect, school belonging, help-seeking, and meta-cognitive learning strategies (Kaplan & Midgley, 1999; Karabenick, 2004; Linnenbrink 2005; Murayama & Elliot 2009; Roeser et al., 1996). Students tended to perform better academically, demonstrated greater levels of effort and persistence in classrooms, and exhibited superior fluency, flexibility, and creativity in classrooms where teachers were perceived to emphasize learning and improving (Lau & Nie, 2008; Peng et al., 2013). Students in mastery-oriented classrooms also reported higher levels of personal competence, efficacy, and self-esteem (Rollands, 2012). Similarly, when students perceived a stronger emphasis on mastery goals in the classroom they were more likely to adopt personal mastery goals, which have been

shown to indirectly influence student achievement (Bergsmann et al., 2013)

Contrary to the outcomes for mastery classroom goal structures, extant literature indicates that performance-oriented classroom goal structures are linked to maladaptive academic outcomes (Kaplan & Midgley, 1999; Polychroni et al., 2012; Wolters, 2004). For instance, students who perceived a performance goal structure in their classroom experienced lower levels of math achievement and engagement and higher levels of effort withdrawal, avoidance coping, self-handicapping, avoidance of help-seeking, and an increase in self-reported cheating (Anderman & Midgley, 2004; Lau & Nie, 2008; Turner et al., 2002). Students who reported their classrooms as being performance goal-oriented reported higher levels of individual performance goals (Rolland, 2012). Additionally, a meta-analysis of longitudinal research conducted by Rollands (2012) indicates classroom goal structures can influence secondary students' perceptions of future classroom environments and goal structures. Specifically, research indicates students who perceived higher levels of classroom performance goal structures in one grade were more likely to perceive higher levels of performance in the subsequent grade levels than those students who reported more mastery level classroom goal structures (Rolland, 2012).

In addition to academic outcomes, research indicates performance classroom goal structures are significant predictors of behavioral and social outcomes. Performance goal structures were related to higher incidents of student disruptive behavior (Kaplan et al., 2002) and poorer student-student and teacher-student relationships (Polychroni et al., 2012). When students perceived that their classroom had a performance-oriented goal structure, they viewed relationships between students and teachers as less warm and responsive (Roeser et al., 1996). Additionally, this type of classroom structure also has been shown to influence perpetrated verbal aggression among peers in the classroom (Bergsmann et al., 2013).

Interestingly, Ciani and colleagues (2010), when examining these relations with 178 high school students, found that the negative effect of students' perception of performance-oriented classrooms can be significantly buffered by a concurrent perceived emphasis on classroom community and teacher autonomy support. However, contrasting results were found when classrooms simultaneously emphasized mastery and performance goals, but did not emphasize classroom community and teacher autonomy support. Thus, these findings indicate that dual emphasis on mastery and performance in the classroom is not sufficient to completely buffer the negative effects of a perceived performance-oriented context on students' motivation to learn (Ciani et al., 2010), as well as reiterate the salience of affective and relational components in classrooms.

Performance-approach goal classroom structures were also shown to be direct, negative predictors of intrinsic motivation, academic self-concept, and students' reports of individual mastery goal orientation (Ciani et al., 2010; Midgley & Urdan, 2001; Murayama & Elliot, 2009; Wolters, 2004). Interestingly, despite noted differences in the personal achievement orientation literature, studies examining the performance-avoidance classroom goal structure have not found evidence to support the differentiation between performance-approach and performance-avoidance at the classroom level (Kaplan, Gheen, & Midgley, 2002; Karabenick, 2004; Linnenbrink –Garcia et al., 2012; Murayama & Elliot, 2009; Wolters, 2004).

Teacher perceptions of classroom goal structure and outcomes. Teachers' instructional practices mirror their fundamental principles about learning and reflect the goals they have for their students in the classroom (Ames, 1992; Midgley, 2002). Teachers' reports of their instructional practices have often been termed as “approaches to instruction” in the achievement motivation literature, and similar to research on students' perceptions have

primarily focused on mastery and performance approaches to instruction. Research focused on teachers' perception of classroom goal structure has been substantially understudied in comparison to students' perception. Studies in this vein of research have dominantly utilized the PALS measure developed by Midgley et al. (2000) to assess the degree to which teachers emphasize mastery or performance approaches to instruction in their classrooms and have found that teachers also differed in the degree to which they reported using mastery- and performance-oriented practices (Wolters & Daugherty, 2007; Wolters et al., 2011). According to this measure, teachers are classified as demonstrating mastery approaches to instruction when they modify instruction to meet students' needs, provide a variety of tasks, as well as emphasize progress and effort. Teachers who endorse several of these items tend to believe that the purpose of engaging in learning and completing academic tasks is for students to develop competency. Conversely, teachers demonstrate a performance approach to instruction when they compare student performance, highlight and reward the highest achieving students, and encourage student competition. Teachers who endorse several of these items tend to believe that the purpose of engaging in learning and completing academic tasks is for students to demonstrate competence.

In addition to confirming the two-factor structure, research on teachers' approaches to instruction have focused on individual factors that predict teachers' endorsement of either mastery or performance orientations as well as student and teacher outcomes of various classroom goal structures. Among the individual factors investigated is teachers' personal motivation for learning. Research has shown that teachers' personal achievement goals influence not only their self-reported instructional practices, but also how students perceive these practices. For example, research has shown that teachers who have personal mastery-goal orientations are likely to report and be perceived by students as implementing mastery approaches to instruction

(Butler, 2007; Butler & Shibaz, 2008; Retelesdorf et al., 2010). In addition to personal goal orientation, research has shown that individual factors such as demographics (i.e. age, gender and ethnicity) and teacher beliefs about their competence and impact on student learning have been shown to influence teachers' approaches to instruction (Rubie-Davies, Flint, & McDonald, 2011; Wilson et al., 1984). These individual demographic factors and teacher beliefs will be discussed in further detail later in this chapter and will be among the variables investigated in the current study.

Although not heavily researched, teachers' approaches to instruction have shown to have differential impact on student behavior and teacher beliefs. For instance, Urdan, Midgley, and Anderman (1998) examined the relationship of individual and classroom characteristics on student reports of academic self-handicapping with 646 fifth-grade students and 31 fifth-grade elementary teachers. Specifically, they examined whether teachers' approaches to instruction predicted students' use of self-handicapping strategies. Teachers' reports of instructional practices were measured using a Likert scale questionnaire developed by the authors which included items that addressed both task (mastery) and ability (performance) instructional practices. Results from hierarchical linear modeling (HLM) analysis indicated that in classrooms in which teachers reported using more performance oriented instructional practices, students were more likely to report using self-handicapping strategies. Additionally, the authors found no impact of teachers' reports of task-focused instructional practices on students' use of self-handicapping strategies.

Kaplan et al. (2002) also found results that underscore the importance of teacher reported performance approaches to instruction and its relationship to student behavior. This study investigated the influence of both student-reported and teacher-reported classroom goal

structures on students' reports of disruptive behavior. This investigation was conducted using HLM analysis with 388 ninth-grade students and 25 teachers from five ethnically diverse high schools in southeastern Michigan. Authors of this study gathered students and teachers perceptions of math teachers' use of either mastery or performance approaches to instruction in the classroom utilizing the PALS Classroom Goal Structure Scale (Midgely et al., 2000). The study aimed to investigate the effects of these perceptions on students' personal achievement goals and disruptive behavior in the classroom. Findings revealed that teachers' reports of performance-oriented approaches to instruction were related to students' level of disruptive behavior. No relationship between teachers' reports of mastery-oriented approaches to instruction and students' level of disruptive behavior were discovered.

Roeser, Marachi, and Gehlbach's (2002) study revealed opposing findings when they examined teacher beliefs. These authors added the PALS teacher-reported classroom goal structure survey to data collected by Marachi, Gheen, and Midgley (2001), which included a longitudinal sample of fifth-, sixth- and ninth-grade students and their teachers. The researchers examined the relationships between teachers' approaches to instruction, teacher efficacy beliefs, and teacher beliefs about their roles in providing socio-emotional support to students. Results indicated that teachers' mastery-oriented approaches to instruction were related to teacher efficacy and teachers' beliefs about their role in addressing students' mental health needs. Additionally, results also revealed that teachers' performance-oriented approaches to instruction was not related to teacher efficacy or mental health role beliefs when analyzed across all school levels, but showed effects on both outcomes when examined only at the elementary school level. Results from the above studies indicate inconsistent results regarding the relationship between teachers' reported approaches to instruction and student and teacher outcomes. This

inconsistency across studies highlights the need for further research in this area.

Classroom Socio-Emotional Context

Student perceptions of classroom socio-emotional context and outcomes. The classroom socio-emotional context is determined by the quality of social and emotional interactions in the classroom between and among students and teachers (Pianta, et al., 2011; Ryan & Patrick, 2001). Classrooms with a positive socio-emotional environment tend to foster students' sense of belongingness and community, as well as encourage positive interactions and respect towards classmates (Battisch et al., 1997; Skinner & Belmont, 1993; Wentzel et al., 2010). Teachers differ in the extent to which they promote positive classroom socio-emotional context. How students interpret teachers' behaviors related to developing a classroom community can determine how students perceive their classroom social-emotional context.

Research on classroom socio-emotional context indicates that when students believe that their teachers create a sense of community, respond to students' needs, and foster meaningful relationships in the classroom, positive student academic and behavioral adjustment ensues (Merrit et al., 2012; Patrick et al., 2007; Sakiz, Pape, & Woolfolk Hoy, 2012; Stewart, 2014). The following sections will examine two dimensions of the classroom socio-emotional context and their associated outcomes: (1) promoting social interaction and (2) promoting mutual respect.

Promoting social interaction. Teacher promotion of social interaction refers to the extent that students perceive teachers as encouraging classmates to interact with one another during academic activities (Ryan & Patrick, 2001). When teachers encourage positive interactions among students in the classroom such as working together in small groups and supporting each other during individual seatwork, they create a positive classroom social environment (Skinner &

Belmont, 1993). This is particularly true for adolescents who value and seek peer relationships in their learning environment (Eccles, 1999). Class interactions and discussions provide opportunities for students to self-regulate behaviors and emotions, enhance social skills, and feel connected to peers (Kasen, Johnson, & Cohen, 1990; Patrick et al., 2007; Wang & Holcombe, 2010). Research indicates students who reported being encouraged to interact and discuss ideas with each other in class reported higher levels of student engagement, academic self-efficacy, school identification, use of self-regulatory strategies, and reported fewer instances of disruptive behavior (Battisch et al., 1997; Patrick et al., 2007; Ryan & Patrick, 2001; Stewart, 2014; Wang & Holcombe, 2010).

Promoting mutual respect. Teacher promotion of mutual respect refers to the extent to which students perceive teachers as encouraging respect among classmates (Ryan & Patrick, 2001). In an environment characterized by mutual respect teachers' encourage students to value others' perspectives and contributions, and discourage students from ridiculing or disrespecting their classmates (Patrick et al., 2001). A focus on mutual respect should help create an environment where students communicate positively with one another and feel efficacious about their social relationships. Adolescents who perceive they are valued and respected members of the classroom community report higher self-efficacy, as well as higher levels of mastery, performance-approach, intimacy, and responsibility goals (Nelson & DeBacker, 2008; Pajares, 1996; Wentzel, 1993).

Teacher perceptions of classroom socio-emotional context and outcomes. Teachers are key determinants of the classroom social environment. How students interact and cooperate with each other is influenced by the social norms and behaviors that are modeled and valued by the teacher (Kinderman, McCollam, & Gibson, 1996). Despite the important role teachers play in

fostering a positive classroom environment, teachers' perceptions of their role in promoting students' emotional and social behaviors has been understudied (Gillies, 2004). Most of the research that exists examines teachers' perception of their relationships with students.

Furthermore, studies that seek to investigate teachers' perception of their classroom environment primarily aim to analyze the convergence between teacher and student perceptions. These studies rarely examine any associated student and teacher outcomes of teachers' classroom environment perceptions and will be discussed in further detail in a later section of this chapter. Studies have recently begun examining the relationships between teachers' perception of their classroom's socio-emotional context and student outcomes. More research clearly is needed.

Research focused on teachers' perceptions of teacher-student relationships assess the degree to which teachers experience conflict or provide support to their students. Teacher-reported conflict is associated with negative academic outcomes, behavioral challenges, and lower levels of engagement and belongingness for students (Hamre & Pianta, 2001; Hughes, 2011; Murray et al., 2008). Conversely, teacher reported support is associated with student academic achievement, high levels of academic self- efficacy, as well as students' sense of belonging, social competence, and interest in school (Hamre & Pianta, 2001; Hughes, 2011; Murray et al., 2008). These findings suggest that teachers' assessment of their relationships with students have important implications for students' academic and behavioral adjustment.

Research has also examined teachers' perception of their own interpersonal behaviors in the classroom. In a study conducted by Wubbels et al., (1992), 286 teachers were asked to report about their own interpersonal behaviors in the classroom including leadership, friendliness/helpfulness, understanding, and giving students responsibility. Teachers were also asked to report about their ideals related to these behaviors. Additionally, students were asked to complete

a similar questionnaire to evaluate teachers' interpersonal behaviors in the classroom. Findings from this study indicate a divide between the sample of teachers, with some teachers scoring themselves higher and some scoring themselves lower than student reports. Findings also revealed that teacher self-reports were more influenced by their ideals than by student perceptions. The authors note that utilizing ideals for the basis of self-evaluations can result in either self-serving/optimistic perceptions, where teachers score themselves higher than their students or negative perceptions that force them to score themselves below student perceptions. More research is needed to determine how optimistic or negative teacher self-perceptions about interpersonal behaviors impact classroom socio-emotional contexts.

A recent study has highlighted the influence of teachers' classroom environment perception on student outcomes. Kiuru et al. (2012) examined the role of a teacher-reported supportive classroom context as a protective factor against students' peer rejection for 376 children at risk for reading problems in Finland. Teachers responded to a questionnaire that measured the extent to which they perceived their relationships with students were characterized by affection, sensitivity, and responsiveness to the needs and interests of those students. Results indicated that in classrooms where teachers reported creating more positive classroom contexts, students with reading difficulties were less likely to experience peer rejection. This study provided preliminary evidence indicating that how teachers perceive their social and emotional behaviors in the classroom is an important field of research. The current study aims to contribute to the literature by analyzing teachers' views about how they foster social interactions and mutual respect in their classrooms which contribute to a positive socio-emotional classroom context.

Factors that influence student perceptions. Analysis of classroom goal structures based on student perceptions assumes that student perceptions provide an accurate picture of what actually occurs in the classroom (Urdu, 2004). However, student perceptions of the classroom may vary considering school contextual and individual factors. Extant research is in the early stages of investigating how school contextual factors including school SES influences students' perceptions of their classroom social environment. Recent research has shown that school motivational context and goal structure influence students' perceptions of their teachers' practices (Skaalvik & Skaalvik, 2013) and provide educators with an early understanding of this relationship. However, the majority of the work examining school contextual factors such as school socio-economic status (SES) and school ethnic composition has been related to student achievement (Brault et al., 2014; Caldas & Bankston, 1999; Lan et al., 2010). Additionally, a few studies have examined the impact of SES on students' perception of the school climate (Battistich, et al., 1995; Griffith, 1999). Further research is needed to understand the impact of school contextual factors on students' perception of their classroom environment. The aim of the current study is to contribute to the body of knowledge in this area of research.

Student perceptions may also vary based on individual factors such as differential treatment from teachers (Ames, 1992; Bergsmann et al., 2013; Kaplan et al., 2002; Wentzel et al., 2010). Variations across student reports indicate that although students are in the same classroom with the same teacher, they do not experience the same educational context. Further, students' elucidations of their classroom experiences are influenced by their personal characteristics and history, which in turn, influences their behavior (Ames, 1992; Wentzel et al., 2010). Students' perceptions of teacher practices are filtered through their own motivational lenses and may be influenced by individual characteristics such as age, ability level, gender, and

school experiences (Roeser et al., 1996; Urdan, 2004; Wang & Eccles, 2014; Wentzel et al., 2010). Overall, only a few studies have investigated the impact of various individual characteristics on students' perceptions of their educational environments. The majority of existing studies investigate the influence of individual student factors on students' perception of the learning environment at the school level, rather than at the classroom level (Battitstich et al., 1995; Fan et al., 2011; Griffith, 2000; Mitchell et al., 2010). Recent research has begun to investigate how these individual factors influence students' perception of the learning environment at the classroom level (Wang & Eccles, 2014; Wentzel et al., 2010).

The section below will discuss the influence of individual factors on perceptions of the school and classroom environments. Examination of this literature highlights the need to provide additional interventions and supports for particular students to ensure they experience positive and responsive school and classroom environments, and consequently experience positive developmental trajectories.

Student demographics and individual factors: School environment. Gender and ethnicity are often the most frequently studied individual factors in research investigating learning environments at the school level (Fan et al., 2011; Koth et al., 2008; Mitchell et al., 2010). The compilation of research findings highlight that male, minority students, and students labeled with behavioral problems are often at-risk for perceiving negative school and classroom contexts. For example, Koth and colleagues (2008) found that gender and ethnicity were associated with perceptions of the school environment for 2,468 fifth-graders. This study examined variations in student perceptions of school environment based on individual-, classroom-, and school-level factors to determine the influence of predictors at multiple levels. Results indicated that the largest proportion of variance originated from individual-level factors

(65%–86%), including gender and ethnicity. Specifically, male students perceived the school environment as having less order and discipline and reported lower levels of achievement motivation compared to females. Further, minority students perceived the school environment as less safe and reported lower levels of achievement motivation than did Caucasian youths, even after controlling for classroom- and school-level factors.

Fan and colleagues (2011) highlight the influence of gender and ethnicity on student perceptions of the school climate. The study examined the roles of social and academic risk factors at the individual level (e.g., behavioral problems, low academic achievement, school mobility and low socio-economic) as well as school level factors (e.g., school enrollment, percentage of students on free and reduced lunch, and public vs. private school sector) in predicting students' perceived school climate among the 16,168 tenth-grade participants. Three aspects of the school climate were examined: (1) order, safety, and discipline; (2) fairness and clarity of school rules; and (3) teacher–student relationships. Multilevel analyses indicated the majority (more than 80%) of the variance of student perceptions of the school climate was explained by the individual level factors. Specifically, findings indicated male students perceived school rules to be less fair and clear, and teacher–student relationships to be less supportive and warm than female students. Hispanic and Asian students perceived lower levels of school order, safety, and discipline compared to students from other ethnic groups. Further, African American students perceived higher levels of fairness and clarity of school rules. Additionally, less favorable teacher–student relationships were reported by Native American, Hawaiian, and Multiracial students, as well as students of other ethnicities.

Fan and colleagues (2011) also provided a unique contribution to the literature by investigating whether being a student with parent-reported behavior problems at school was a

significant predictor of students' perceptions of school order, safety, and discipline. Multilevel analyses revealed students whose parents reported that their children had behavior problems at school had less favorable perceptions toward their teacher–student relationships, and perceived school rules to be less fair and clear. Additional factors that impacted students' perceptions of the school climate included parents' education level, the number of siblings who dropped out of high school, whether the student or his/her mother was born outside of the United States, being from a single-parent family, and being retained a grade. These findings suggest that students with discipline issues, minority youth, and males may be less likely to perceive school as a safe, warm, caring place.

Student demographics and individual factors: Classroom environment. Recent research indicates individual characteristics play an important role in student perceptions of the learning environment at the classroom level. Gender was among the most salient characteristics that impacted students' perceptions. Butler (2012) examined whether teacher relational goals predicted student perception of teachers' instructional and social practices among 1,790 seventh through ninth-grade students. Butler found that girls reported higher levels of mastery-oriented classroom goal structures, whereas boys reported higher levels of performance-oriented goal structures. Previous studies have found similar results as it relates to boys perceiving their classrooms as more performance-oriented than girls (Urdu, Midgley, & Anderman, 1998).

Wentzel et al. (2010) examined 358 early adolescents' perceptions of teachers' and peers' multiple classroom supports in relation to motivational outcomes (interest and social goal pursuit) in middle school (grade 6-8). Girls reported higher levels of perceived emotional support and higher expectations for behaving in socially competent ways from teachers and peers than did boys. Additionally, there was significant gender by grade-level interactions for peer safety

and teachers' help and emotional support. Along these dimensions, seventh-grade girls perceived less support than boys, while sixth- and eighth-grade girls perceived more support than boys. However, when examined independently there was no notable gender difference in the perception of academic expectations.

Wang and Eccles' (2014) recent study contributes to our understanding of the influence of individual factors on student perceptions of the classroom learning environment. Specifically, they examined a variety of individual variables including gender, ethnicity, socioeconomic status (SES) as well as student reports of problem or disruptive behaviors and standardized math scores among 2,950 seventh-grade students. The authors examined the extent to which individual, classroom/teacher, and school level factors predicted student and teacher perceptions of four distinct aspects of math classroom climate (i.e., authentic instruction, collaboration promotion, autonomy support, and teacher social support). Similar to the school climate studies, multilevel analyses indicated all variables influenced student perceptions of their classroom and that individual variables had a greater influence than classroom- or school-level variables.

As it relates to gender, girls perceived lower levels of authentic instruction, but higher levels of collaboration promotion, autonomy support, and teacher social support than boys. Students with higher SES reported higher levels in all aspects of the math classroom climate except for collaboration promotion. Additionally, students who had more problem behaviors reported lower levels of all classroom climate aspects, while students with higher math achievement perceived all four aspects more favorably than students with lower math achievement. Earlier research conducted by Kaplan and Midgley (1999) provides support for the influence of individual factors related to coping and stress and affect on students' perceptions. Kaplan and Midgley (1999) investigated the relationship between students' perception of

classroom goal structure and students' affect in school and found that individual students' coping strategies completely mediated the relations between classroom perception and affect in school.

In summary, the current literature indicates that specific individual characteristics (e.g., gender, ethnicity, SES, behavioral problems, coping behaviors) may put students at risk for experiencing a more negative school environment. However, additional studies are needed to examine the extent to which these characteristics lead to variations in student perceptions of the social and motivational aspects of the classroom learning environment. The current study will investigate the influence of individual characteristics of students' perceptions of the social and motivational aspects of the classroom learning environment, as this is where both teachers and students interact the most and spend most of the school day.

Student beliefs: goal orientation and self-efficacy. Research on achievement motivation has focused on the impact of specific goal orientations towards learning on student outcomes (Ames, 1992, Midgely, Arkrunkumar, & Urdan, 1996; Pintrich, 2000; Urdan, 1997) and the effects of classroom goal structures on students' adoption of specific goal orientations (Bergsmann et al., 2013; Urdan & Midgley, 2003). Early research of personal goal orientations has primarily focused on the associated outcomes of mastery and performance personal goal orientation, however, researchers have recently begun to examine the outcomes of performance-approach and performance-avoidance. Individuals with a mastery achievement goal orientation desire to learn and master new skills. Individuals with a performance-approach goals desire to demonstrate ability, outperform others, and attain success and recognition, while individuals with a performance-avoidance orientation focus on avoiding failure and uncomplimentary judgments by others (Elliot & Harackiewicz, 1996; Lüftenegger et al., 2014). Each of these goal orientations has been linked to a variety of academic and socio-emotional outcomes for students.

Consensus across studies indicates that students with mastery goal orientation experience more positive outcomes including effective cognitive thinking, self-regulated learning, engagement, positive attitudes, and well-being (Ames, 1992; Ozkal, 2013; Urdan, 1997). Research has revealed that individual performance-approach goals can have positive effects on students including behavioral and cognitive engagement, interest, and achievement (Elliot & Church, 1997; Elliot & McGregor, 1999; Hulleman et al., 2010; McGregor & Elliott, 2002; Skaalvik, 1997; Wolters, Yu, & Pintrich, 1996). However, research has also revealed that this goal orientation can also have negative effects on students such as avoidance of help seeking, test anxiety, and cheating (Karabenick, 2004; Linnenbrink, 2005; Skaalvik, 1997; Skaalvik & Skaalvik, 2005; Tas & Tekkaya, 2010). As it relates to performance-avoidance goals, research indicates that this goal orientation is often associated with maladaptive outcomes for students including lower levels of intrinsic motivation, academic self-efficacy, behavioral and cognitive engagement, and achievement, as well as heightened levels of test anxiety, avoidance of help seeking, and self-handicapping (Church et al., 2001; Elliot & McGregor, 1999, 2001; Middleton & Midgley, 1997; Midgley & Urdan, 2001; Pajares, Britner, & Valiante, 2000; Skaalvik, 1997; Skaalvik, 1997; Skaalvik & Skaalvik, 2005).

In addition to the outcomes of individual student orientation, research in this domain has highlighted the influence of classroom goal structure on students' goal orientation for learning. Specifically, research has shown that students are likely to adopt the goal orientation emphasized in their classroom. However, the interaction between individuals and environments has been categorized as a complex, reciprocal process (Bandura, 1997). Additionally, how students perceive their classroom environments or classroom goal structures is likely to differ as a function of their achievement goal orientations (Kaplan, Gheen, & Midgley, 2002; Tapola &

Niemivirta, 2008; Wolters, 2004). Proponents of this perspective suggest students attend and react to environmental structures that are compatible and support their own beliefs and individual goal orientations (Tapola & Niemivirta, 2008). However, there is a scarcity of research highlighting the influence of students' predetermined personal goal orientations on their classroom perceptions. The limited extant research has found mixed results. For instance, Kaplan, Gheen, and Midgely (2002) investigated the relationship between classroom goal structure and student disruptive behavior with 388 ninth-grade students from ethnically diverse high schools. In this study students' personal goal orientation and classroom goal structures were examined from a trichotomous approach; mastery, performance-approach and performance-avoidance goals. Although not the focus of their study, they found that students' personal goal orientations did not predict students' perception of the classroom goal structure.

Conversely, Wolters (2004) presented preliminary findings to support the importance of students' subjective interpretations of their classroom environments. This study investigated the relationships between student goal orientation, classroom goal structure, and academic outcomes with 525 junior high school students. A trichotomous approach to goal orientation and classroom goal structure also was used in this study. Data analysis revealed that students' personal goal orientations were associated with perceptions of the classroom goal structure. However, Wolters (2004) noted that the classroom goal structure generally did not predict students' adoption of specific goal orientations. The author explained these findings by proposing that students may perceive their classroom environment using lenses that are consistent with their predetermined personal goal orientations rather than being solely influenced by the classroom motivational environment.

Tapola and Niemivirta (2008) provided evidence to support Wolters (2004) postulation

and found that students constructed different interpretations of their classroom environment by way of their own goal orientations. These authors examined the influence of students' individual goal orientation on their perceptions of and preferences for the learning environment with 208 sixth-grade students in southern Finland and found differences in classroom perception across student goal orientations. This study included four goal orientations; (1) learning-oriented students (focus on learning), (2) achievement-oriented students (focus on both learning and performance goals), (3) performance-oriented students (focused on ability), and (4) avoidance-orientation (indifference towards learning). Additionally, these authors based their classroom goal structure variable on the TARGET framework, which represents a mastery-oriented classroom goal structure (Tapola & Niemivirta, 2008). Results indicate students' perception of the classroom varied based on goal orientation related to three TARGET domains including emphasis on learning as a goal, the amount of individualistic work assigned, and the variety of tasks provided. Learning- and achievement-oriented students perceived their classroom as more learning focused than students with other orientations. Achievement-oriented students perceived more opportunities for individualistic work than performance- and avoidance-oriented students. Additionally, both performance- and avoidance-oriented students viewed their classrooms as including less variety in task structure than did achievement-oriented students. Differences across studies that examine the influence of goal orientation on perception may exist due to variations in conceptualization and measurement of both goal orientations and classroom goal structures. Despite the mixed findings in the literature, results from the Tapola and Niemivirta (2008) and Wolters (2004) studies suggest that students' predetermined goal orientation has the potential to influence how they perceive their classroom environment. Thus, the current study aims to contribute to the literature by examining this relationship among middle school students.

Student self-efficacy is another important belief that is likely to impact how students perceive their classroom environment. Self-efficacy is a judgment of one's capability to accomplish a specific task at a certain level of performance (Linnenbrick & Pintrich, 2002). Self-efficacy can be examined from a variety of domains including academic self-efficacy. Academic self-efficacy represents an individual's confidence that he or she can successfully execute an academic task at a selected level based on abilities, attitudes, and previous experiences (Lorsbach & Jinks, 1999; Schunk, 1991). Several studies have examined the relationship between student academic self-efficacy (sometimes referred to as perceived competence) and achievement goal orientations (Anderman & Midgley, 1997; Midgley et al., 1995; Nasiriyah et al., 2011). For example, Nasiriyah et al. (2011) investigated the influence of self-efficacy, achievement goals, task value, and effort on 280 high-school students' mathematics achievement. Results indicated students who perceived themselves as less competent were oriented towards performance-avoidance goals, while students who reported having high self-efficacy had higher mastery and performance-approach goal orientations.

Additionally, studies have investigated the impact of student perceptions' of classroom goal structure on their feelings of self-competence, efficacy, and self-esteem. Research across studies has revealed that students who perceived their classrooms as having higher levels of mastery focus also reported higher levels of self-perception across all domains. Additionally, no relationship between students' perceptions of performance classroom goal structures and feelings of personal competence, self-efficacy, or self-esteem was found (Rollands, 2012). However, a review of the literature indicates that studies have not examined whether students' feelings of efficacy can influence how they perceive the academic and social messages occurring in their classroom environment. Thus, the current study will investigate whether students' perceptions

about their academic competence and their ability to interact with their peers influence how they perceive their classroom motivational and socio-emotional context.

Factors that influence teacher perceptions. Teachers are the primary decision makers with regard to instructional policies and practices, and thus create the goal structures that occur within their classrooms (Wolters & Daughtery, 2007). Teachers make many instructional decisions including determining tasks, how groups are assigned, the degree of student autonomy, as well as evaluation and recognition. Teachers' underlying beliefs about the goal of student learning — their goal-oriented approaches to instruction — are important yet under-examined in comparison to students' goal-oriented approaches to learning (Deemer, 2004; Midgley et al., 1995). Similar to prior research indicating a demarcation between mastery and performance goals in students' perceptions of classroom goal structures (Wolters, 2004), these two goal orientations also exist for teacher-reported classroom goal structures (Wolters et al., 2011). Understanding the factors that influence teachers' motivational orientations to instruction are crucial in assisting and supporting teachers' instructional practices. However, research only has recently begun to investigate contextual and individual characteristics that may influence teacher motivational orientations and the adoption of specific instructional strategies (Butler, 2012). The sections below address extant research investigating contextual factors within the wider educational context, school, as well as individual factors that impact teacher-reported behaviors and instructional strategies in the classroom.

Educational context. The accountability movement in education has had strong implications for teaching and learning (Hamilton, Stecher, & Yuan, 2008). Despite findings that indicate mastery approaches to instruction have positive effects on student learning and achievement (Kaplan & Midgley, 1999; Karabenick, 2004), and that mastery approaches

underpin several of the popular teaching and assessment models (Bloom, 1968; Marzano, Pickering, McTighe, 1999), the critical criterion to determine teacher and student success is performance on standardized assessments (Zimmerman & DiBenedetto, 2008). The current emphasis on adequate yearly progress, student performance compared to a predetermined level of proficiency, standards based curriculum, and the utilization of rewards and sanctions tied to performance has created and permeates a culture of competition and comparison. In fact, current assessment practices encourage a performance-goal orientation as oppose to a mastery-goal mindset (Usher & Kober, 2012). This mindset is particularly evident in states that utilize high-stakes testing, to make decisions about student promotion, teacher employment, and schools' access to resources (Heubert & Hauser, 1999). The pressure from the education system is even more pronounced for educators working with students from ethnically and socio-economically diverse populations where additional tensions emerge from concentration on reducing the achievement and discipline gap (Giroux & Schmidt, 2004; Gregory, Skiba & Noguera)

Research has indicated that teachers perceive these policy changes to result in implementation of practices contradictory to best practices, deteriorated quality in student-teacher relationships, reduction in instructional time due to excessive testing, and heightened stress levels (Valli & Buese, 2007). Furthermore, research indicates that utilizing these high stake testing has not consistently produced the desired increases in student learning and reduced student motivation and engagement, particularly for minority students (Amrein & Berliner, 2003; Lomax et al., 1995; Madaus & Clarke, 2001; Stiggins, 1999). Thus, the current context may impact not only academic but also social domains of the Classroom Social Environment by inadvertently promoting a performance classroom goal structure which has been associated with negative student outcomes; (Anderman & Midgley, 2004; Lau & Nie, 2008; Turner et al., 2002;

Usher & Kober, 2012). Although the current study does not directly address the influences of the current educational context, it is important to consider how it directly and indirectly affects teachers' and students' perceptions of their Classroom Social Environment and the associated outcomes to help inform how teachers may best utilize school reform efforts to promote more mastery classroom goal structures and positive environments

School contextual factors. Previous literature indicates school contextual factors, including school level factors as well as the broader school context and school goal structure can influence and alter teacher instructional practices (Solomon, Battistich, & Hom, 1996). School level organizational factors (i.e., primary or secondary level) shape teachers' motivational orientations to instruction. Specifically, teachers at the secondary school level tend to report using more performance-oriented approaches and fewer mastery-oriented approaches to instruction compared to their colleagues in elementary school (Anderman, Maehr, & Midgley, 1999; Midgley et al., 1995). For example, Retelesdorf et al. (2010) conducted a study with 281 elementary and secondary teachers in Germany. Results revealed differences between elementary and secondary teachers as elementary teachers reported engaging in instructional practices that supported student mastery, autonomy, and critical thinking more so than secondary teachers. This study contributes to research examining the influence of school contextual factors on teacher practices by comparing teacher reported instructional practices across high and low track elementary and secondary schools. The findings indicate that in addition to school level, school tracking shaped teachers' approaches to instruction. Specifically, teachers at low track elementary and secondary level schools (characterized by low academic rigor) reported higher levels of performance-oriented instructional practices than teachers at higher tracked elementary and secondary level schools. Notably, secondary teachers at low track schools had the highest

reports of using performance-oriented instructional strategies.

In addition to school level and tracking, research indicates the broader school context and the school level goal structure impact teacher classroom goal orientation. The school context shapes the overall purpose of learning and how this purpose is communicated to teachers, which in turn influences what goal structure teachers emphasize in their classrooms (Deemer, 2004; Marachi et al., 2001; Roeser et al., 1996; Roeser et al., 2002; Slaavik & Slaavik, 2013). For instance, research by Deemer (2004) indicated that in schools characterized as performance-oriented and having high levels of competition among staff members, teachers utilized more performance-oriented practices in their classroom. Additionally, a mastery-oriented school environment was associated with teachers' use of both mastery and performance-oriented practices in the classroom.

School socio-economic status (SES) has also shown to impact teachers' beliefs and practices. Although research has not specifically examined its impact on teachers' approaches to instruction, there is evidence to support that School SES is associated with teacher educational beliefs and attitudes. Low School SES has been linked to lower general teacher efficacy beliefs and more negative teacher beliefs about handling student misbehavior (Belfi et al., 2003; Tsouloupas et al., 2014). However, these studies have suggested that the link between School SES and teacher beliefs may be mediated by other external factors including school social capital (quality of relationships between teachers, parents and teachers), school academic achievement, and school ethnic composition. Additionally, Solomon and colleagues (1996) found that educational attitudes of teachers in low SES schools reflected a greater degree of external control and fewer opportunities for student autonomy, student engagement, and cooperative activities than teachers in higher SES schools. These attitudes may reflect a more performance-oriented

approach to instruction. Further research in this area is needed to determine how School SES impacts teacher-reported use of mastery and performance-oriented practices.

Although research has highlighted the importance of examining school-level variables in understanding teacher instructional practices, it also is critical to examine individual factors. Teachers within the same school context often develop different approaches to instruction based on their individual characteristics. These individual characteristics can have unique contributions to teachers' perception of their school context and their reported use of specific instructional practices (Bevan et al., 2007). Therefore, the remainder of this section focuses on the impact of individual characteristics (i.e., teacher demographics and beliefs) on teachers' perceptions of school context and their reports of their instructional practices.

Teacher demographic factors. Similar to research focused on students' perceptions, individual teacher characteristics affect not only how they perceive and interpret their school and classroom environment, but also how they report their instructional practices (Rubie-Davies, Flint, & McDonald, 2011; Wilson et al., 1984). Individual characteristics such as age, gender, ethnicity, and years of teaching experience have been found to influence teachers' perceptions of the learning environment. Studies discussed in this section have shown some consistent results as it relates to gender and ethnicity in shaping teacher perceptions, however, less consistency exists regarding age and years of teaching experience.

Bevan and colleagues (2007) examined the association among school- and staff- level predictors and staff-perceived school climate. These researchers found evidence to support the impact of gender, ethnicity, and age on perceptions of the school climate. The sample in this study consisted of 1,395 elementary staff members including teachers, administrators, and support staff across five Maryland school districts. Aspects of school climate included order and

discipline among students, leadership warmth and support, as well as a collective sense of friendliness, enthusiasm, and school pride. Results indicated male and minority staff members perceived lower levels of staff affiliation (a collective sense of friendliness, enthusiasm, and school pride). Additionally, younger staff members that worked in large schools perceived lower staff affiliation, with this finding being more pronounced among male minorities (Bevan et al., 2007).

Wilson et al. (1984) conducted a similar investigation and examined how teacher individual characteristics such as age, gender, ethnicity, education level and years of teaching experience influenced perceptions of school climate. Their results indicated age and gender predicted teachers' perception of their school climate among teachers in four schools across levels in Indiana. School climate was measured based on five components: leadership, communication, relationships, goal setting, and motivation. Teachers who were between the ages of 30-39 and 50-59 had more positive perceptions of the school climate, whereas teachers between the ages of 40-49 reported more negative perceptions. Furthermore, males tended to have more negative perceptions than females regardless of age. Results also indicated education level, teaching experience, and ethnicity did not influence teachers' overall perceptions of the school climate. However, when each component of school climate was investigated individually, ethnicity affected teachers' perceptions of two aspects of the school climate, leadership, and communication. Black teachers viewed these two aspects less favorably than white teachers. Overall, these studies indicate specific teacher populations - primarily males and minorities - may be more likely to view the school climate more negatively, particularly as it relates to leadership and communication.

In addition to perceptions of the school context, research demonstrates individual

characteristics influence teachers' various classroom-based instructional decisions (Ross, 1998). Gender and ethnicity influence teachers' perspectives including their goal orientation (Rubie-Davies et al., 2011). In a review of the literature on teaching and gender, Saabe and Aelterman (2007) found that across studies, female teachers reported utilizing more innovative, student-centered instructional strategies that reflected mastery-oriented approaches than their male counterparts. Retelsdorf and colleagues (2010) found similar results when they examined the relationship between teachers' individual goal orientation and their instructional teaching practices among 281 elementary and secondary teachers in Germany. In this sample, female teachers also were more likely than males to report utilizing mastery-oriented practices. Similarly, teacher gender predicted teacher-reported instructional practices among 68 teachers from elementary and middle schools in a variety of socio-economic and geographic locations in New Zealand (Rubie-Davis et al., 2012). In this study, females also reported using more mastery-oriented practices, whereas males reported using more performance-oriented practices. Overall, findings across studies and teacher populations provide evidence to support that female teachers report utilizing more mastery-oriented practices than male teachers. These gender differences in reported practices may emerge as a result of the differences in individual goal orientation where female teachers reported to have more mastery-oriented approaches to learning than male teachers (Retelesdorf et al., 2010).

Examining teaching experience as an influential factor on teacher-reported instructional practices has yielded mixed results. Wolters and Daugherty's (2007) study of prekindergarten through twelfth-grade teachers from a large suburban school district in Texas revealed no significant differences in teacher goal structures based on years of experience in the fall of the academic year. Wolters, Daugherty, and Fan conducted a follow up study in 2011 with the same

sample in the spring of the academic school year and again found no differences in the goal structures reported by teachers with varying amounts of teaching experience (Wolters et al., 2011). However, more recent research with elementary school teachers has found contradictory results. For example, Peterson (2012) conducted a study examining the relationships between teacher perceived stress and years of experience on teacher reported performance-oriented practices. Results revealed that teachers with fewer years of teaching experience reported greater use of performance goal-oriented practices in the classroom. These contrasting findings may suggest that the impact of teacher experience may vary at specific school levels. Thus, the current study aims to examine and compare the relationship between teaching experience and teacher-reported practices at both the elementary and middle school level.

Research also has examined the influence of teachers' subject area and grade level on their instructional practices. Research indicates teachers in the language arts and social sciences subject areas were more likely to report using mastery-oriented instructional practices than teachers who taught more linear subjects such as mathematics and natural sciences (Roeser et al., 2002; Wolters et al., 2011). However, no relationship has emerged between teachers' grade level in elementary school and their use of performance-oriented practices (Peterson, 2012). These initial findings regarding the influence of teachers' subject area should be interpreted with some caution. For example, Wolters et al. (2011) noted a poor model fit for the two-factor model of mastery versus performance goal structure for middle school teachers and math and science teachers. Additionally, Peterson (2012) only examined teachers' reported use of performance-oriented practices. Reports of mastery-oriented practices were not measured. Nevertheless, these results underscore the need for additional research into the influence of teachers' individual characteristics on their perceptions and instructional practices.

Teacher beliefs: Teacher self-efficacy. The beliefs that teachers hold influence their thoughts and their instructional decisions (Woolfolk Hoy, Hoy, & Davis, 2009). “Teacher efficacy has been identified as a crucial motivational belief that influences teachers’ practices and student learning” (Klassen et al., 2011). Teacher efficacy, according to Gibson and Dembo (1984) consists of two factors: (a) teacher self-efficacy, which assess teachers’ confidence in their own competence as a teacher, and (b) general teacher efficacy, which assess teachers’ beliefs that they can impact student learning despite environmental limitations and obstacles. Both dimensions of teacher efficacy have demonstrated unique contributions to teachers’ reported instructional beliefs and practices. Individual factors and school-based factors such as years of teaching experience, school type, environment, policy, and relationships with colleagues have also shown to impact teacher self-efficacy. However, research does suggest that teacher self-efficacy can be enhanced through mentorship and professional development (Gotshall & Stefanou, 2011; LoCasale-Crouch et al., 2012) and that teacher self-efficacy beliefs are strong predictors of teacher behavior including the use of instructional strategies, classroom management and discipline techniques, and engaging students in learning (Chong et al., 2010; Gibson & Dembo, 1984). These behaviors have significant impact on student outcomes. Research indicates teachers with higher self-efficacy have students with higher levels of overall achievement, motivation, and academic self-efficacy (Ross, 1992). The following section will discuss research examining teacher self-efficacy as well as general teacher efficacy and its relation to teachers’ instructional decisions.

Teacher self-efficacy refers to a teacher’s confidence in his/her competence in a specific teaching task in a specified situation (Dellinger et al., 2008). Teacher self-efficacy impacts critical aspects of teachers’ instructional attitudes, decision-making, and practices in the

classroom (Ashton & Web, 1986; Chong et al., 2010; Gibson & Dembo, 1984; Woolfolk, Rosoff, & Hoy, 1990). Levels of teacher self-efficacy have differential outcomes for teachers, with higher self-efficacy being associated with more positive interactions with students and more mastery-oriented instructional practices that promote student motivation and learning (Bandura, 1993; Chong et al., 2010; Gibson & Dembo, 1984; Slaavik & Slaavik, 2007).

Teacher self-efficacy beliefs influence how teachers interact with their students through their instructional practices. Gibson and Dembo (1984) conducted classroom observations in a sample of eight elementary teachers (four high efficacy and four low efficacy). Observational themes indicated teachers who were confident in their ability to teach, demonstrated more positive behaviors in the classroom related to academic focus, feedback, and persistence in failure situations than teachers with low levels of self-efficacy. Specifically, more efficacious teachers communicated higher expectations, provided less criticism to students, and persisted for longer periods of time with students with academic challenges than teachers with low levels of self-efficacy.

Current literature also demonstrates teachers with high levels of self-efficacy create classroom environments that foster mastery-oriented learning (Deemer, 2004; Onafowora, 2005). Deemer (2004) investigated the relationship between teachers' overall feelings of confidence in their teaching ability with 99 high school (grades 9–12) science teachers in the state of Delaware and found that more efficacious teachers reported utilizing instructional practices focused on task mastery and understanding. Specifically, these teachers were more likely to report utilizing a variety of instructional strategies to promote student understanding, create challenging lessons, and persist with students who experience academic challenges. Contrary to expectations, low levels of efficacy did not have an inverse relationship with reported use of performance-oriented

instructional practices.

Wolters and Daughtery (2007) provide additional support for these findings in their investigation of prekindergarten through twelfth-grade teachers from a large suburban school district in Texas. These authors examined teacher-self efficacy from a multifaceted approach, and included teachers' efficacy about their ability to provide high quality instruction, maintain discipline, and promote a positive learning environment (Tschannen-Moran & Woolfolk Hoy, 2001). Findings revealed identical results to Deemer (2004) when examining instructional efficacy. Teachers who reported greater confidence in their ability to modify their instruction and assessment strategies to meet student needs also reported greater use of mastery-oriented instructional practices. Additionally, this study found no relationship between teachers' sense of efficacy for instruction and their reported performance-approach goal structure. As it pertains to efficacy to create a positive environment, teachers who were more confident in their ability reported use of instructional practices consistent with a mastery structure as well as those associated with a performance approach structure. Conversely, teachers' confidence in their abilities to maintain discipline was not strongly associated with either mastery or performance approaches to instruction.

Rubie-Davis et al. (2012) also examined this relationship with teachers from elementary and middle schools in a variety of socio-economic areas and geographic locations within New Zealand. These authors utilized a multifaceted approach to investigating teacher self-efficacy similar to Wolters and Daughtery (2007). Teachers who were confident about their instructional practices were less likely to report adhering to performance-oriented practices, while teachers who were less confident in this domain were more likely to reporting having a performance-oriented approach to instruction. Higher teacher self-efficacy for creating a positive environment

predicted teachers' reports of mastery-oriented approaches to instruction. However, teachers who were confident about their discipline practices were less likely to adhere to mastery-oriented practices, whereas those with low efficacy in this domain were more likely to demonstrate mastery-oriented practices.

Although results from these initial studies suggest teacher self-efficacy is predictive of their instructional strategies, there is little consistency across the findings when teacher self-efficacy is examined using a multifaceted approach. This inconsistency may result from the diversity of teachers across the studies, but also may signify that each facet of teacher self-efficacy has unique contributions to reported teacher practices. Additional research is needed that examines a direct link between teacher self-efficacy and classroom goal structures in order to assist and support teachers in the implementation of mastery-oriented practices that support student learning. The current study aims to contribute to this line of research by examining teacher self-efficacy and classroom goal structures with elementary and middle school teachers (Midgley, Anderman, & Hicks 1995; Wolters & Daughtery, 2007).

Teacher beliefs: General teacher efficacy. As mentioned above, general teacher efficacy refers to one's belief that teachers, in general, can and should greatly influence student performance despite perceived barriers such as difficult home circumstances or low socio-economic status (Berman & McLaughlin, 1977; Cantrell & Callaway, 2008). Most of the research centered on general teacher efficacy has analyzed its effect on several student-related outcomes including student achievement and academic experiences (Archambault, Janosz, & Chouinard, 2012; Goddard, Hoy, & Woolfolk Hoy, 2004; Ross, 1998; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Research also has examined the influence of general teacher efficacy on teacher-related outcomes including discipline approaches, willingness to implement

changes in instructional practices (Berman & McLaughlin 1977; Cantrell et al., 2013; Ghaith & Yaghi, 1997), enthusiasm for teaching, and teacher burnout (Schwarzer & Hallum, 2008; Skaalivik & Skaalivik, 2010).

There is a consensus in the literature that general teacher efficacy is related to teachers' use of humanistic classroom or discipline approaches. Ashton and Webb (1986) found that secondary school teachers with low general teacher efficacy were more likely to endorse the use of punishment, coercion, and public embarrassment as classroom management strategies, whereas teachers with high general teacher efficacy endorsed a more positive, relaxed, friendly, and trusting approach to classroom management. Woolfolk, Rosoff, and Hoy (1990) replicated this study with sixth- and seventh-grade language teachers in 40 Hebrew schools. Results indicated teachers high in general teacher efficacy reported having more humanistic beliefs about student control and a greater tendency to share responsibility for problem-solving with students. These results indicate that general teacher efficacy can impact whether teachers implement mastery-oriented discipline practices and develop positive interactions with students.

Research also indicates general teacher efficacy impacts teachers' willingness to implement new and innovative teaching practices (Guskey, 1988; Nie et al., 2013). Guskey (1988) examined how teacher general efficacy of 120 elementary and secondary school teachers influenced teacher willingness to adopt mastery-oriented learning instructional strategies following a one-day professional development workshop. Teachers who reported being more efficacious regarding their ability to influence student learning viewed mastery-oriented learning strategies as important and congruent with their current practices. Despite these views, these teachers also viewed implementing such practices as being associated with costs as these practices were perceived as difficult and requiring significant amounts of additional work and

preparation. Nonetheless, more efficacious teachers did view implementing these practices as less difficult and requiring less work than their less efficacious colleagues. A more current study which examined teachers' implementation of content literacy strategies with 16 middle and high school teachers in a southeastern state found results that were similar to that of Guskey (Cantrell & Callaway, 2008). In this study, teachers who were classified as high implementers of literacy strategies were the teachers with high levels of general teacher efficacy. Conversely, low implementers were those with lower levels of general teacher efficacy.

Ghaith and Yaghi (1997) also conducted a similar study with 25 middle and high school teachers after a four-day staff development program on cooperative learning in Lebanon. The findings were contradictory from Guskey's (1988). In this sample, teachers' sense of general teacher efficacy was related to the importance of implementing cooperative learning, but was not congruent with teachers' current practice. Further, teachers did not perceive additional difficulty or cost with implementing cooperative learning strategies. Additionally, no relationship emerged with teachers' attitude towards implementing cooperative learning practices. The differences between teacher attitudes and willingness across studies may be explained by the overall complexity of implementing the innovative practices. For instance, even a four-day program for complex practices such as cooperative learning may not be sufficient to change high efficacy teachers' attitudes towards implementation, particularly when practices are not congruent with current instructional practices. Guskey (2002) suggests that only after teachers' experience student learning success with instructional practices will teachers' attitudes towards innovative practices change.

In addition to influencing teacher discipline practices and how teachers perceive new instructional innovations, general teacher efficacy has been shown to impact specific teacher

behaviors. For example, research indicates efficacious teachers tend to spend more time and effort assisting lower ability students, persist despite student failures, foster students' self-perceptions of their academic skills, and develop more frequent and ambitious goals for students (Allinder, 1995; Ashton, Webb, & Doda, 1983; Ross, 1998).

Both teacher self-efficacy and general teacher efficacy have been shown to impact teachers' perception and their reports of their instructional strategies. However, recent studies do not exist that examine the influence of general teacher efficacy on teachers' report of their mastery or performance goal-oriented strategies across different school contexts. Thus, the current study aims to fill this gap in the research and examine these relationships with elementary and middle school teachers. This information will help educators and researchers better understand the antecedent beliefs that influence how teachers' perceive their classroom motivational context and what instructional approaches they endorse.

Teacher beliefs: Teacher autonomy. Teacher autonomy refers to freedom from demands or pressure from colleagues, administrators or policies that allow teachers to make decisions about the delivery of curriculum, as well as pedagogical and classroom management practices (Blase & Kirby, 2009; Brunetti, 2001; Curren, 2007; Sentovich, 2004). Teachers' degree of decision-making power across these components determines their perception of their autonomy. These components include curriculum selection, school finances, professional development, student assessment and evaluation practices, as well as discipline and reward strategies (Strong & Yoshida, 2014). Investigating teacher autonomy across these different components of teaching has revealed that teachers perceive minimal control of the curriculum content and pace as well as assessment practices, but perceive considerable flexibility in teaching methods, material selection and classroom management practices (LaCoe, 2006; Rudolph, 2006). This flexibility to

make decisions regarding instructional methods and classroom management has implications for the methods and practices actually implemented in the classroom.

Teacher autonomy research has primarily focused on determining teachers' perceived levels of control over the instructional practices (Archbald & Porter, 1994; Ozturk, 2012) and how these perceptions influence their feelings towards their jobs or profession (Bogler, 2001; Pearson & Moomaw, 2005; Saad et al., 2012). Fewer studies have investigated the relationship between teacher autonomy and teacher-reported motivational and socio-emotional classroom practices. Extant research indicates teacher autonomy - similar to other teacher beliefs - influences what teaching approaches and methods teachers use in the classroom as well as the type of interactions teachers foster with their students (Gess-Newsom & Lederman, 1995; Robertson & Jones 2013). Specifically, research has revealed that teachers who feel more autonomous report utilizing more differentiated instruction to meet student needs (Gess-Newsom & Lederman, 1995) and report providing more opportunities for students to exert their own autonomy in the classroom (Robertson & Jones, 2013). These results may suggest teachers who feel autonomous are more likely to utilize a mastery-oriented approach to instruction. Conversely, teachers who perceive high amounts of pressure and responsibility for student performance (i.e. feel low levels of autonomy) may provide reduced levels of autonomy for students (Deci et al., 1982). These teachers make more directive statements, emphasize performance, ask more controlling questions, and provide more criticism to students (Deci et al., 1982). These controlling practices have been shown to have negative impacts on student engagement, self-efficacy and student perceptions of autonomy (Pelletier et al., 2002; Reeve, 2009), and may be associated with the use of a performance-oriented approach to instruction. Additionally, teachers who perceive low levels of autonomy often experience decreased

motivation (Pelletier et al., 2002). Thus, understanding how teacher autonomy directly relates to teachers' reported use of either mastery or performance-oriented practices may be important for both teacher and student outcomes. The current study will examine how teacher autonomy influences teachers' perception of their motivational and socio-emotional practices in the classroom.

Convergence and Divergence between Teacher and Student Perceptions

Although students and teachers spend most of their day in the same learning environment, research has shown that their interpretations and perceptions of the environment often differ (Conderman et al., 2013; Konings et al., 2014; Midgley & Feldlaufer, 1987; Sinclair & Fraser, 2002; Wang & Eccles, 2014). Teachers' perceptions of the learning environment are based on their beliefs about effective instruction and student learning, while students' perceptions may be based on their past experiences with successful or unsuccessful learning environments (Elen & Lowyck, 1999; Konings et al., 2014; Trigwell et al., 1999). Despite their varying perceptions, each provide unique information and contribute to our understanding of learning environments (Urdan, Midgely, & Anderman, 1998).

Some of the research on comparisons between teacher and student perception of the classroom environment has focused primarily on socio-emotional aspects of the classroom. These aspects include student-teacher and peer relationships, student collaboration, and teacher support. Studies that have investigated convergence between teachers and students reports of their teacher-student relationships generally have little convergence, especially in the elementary grades (Murray et al., 2008; Rey et al., 2007). Results across studies indicate teachers and students do not agree in perceptions of teacher support. However, teachers and students tend to show greater agreement related to the level of conflict in their relationship (Hughes, 2011).

Research also has suggested that teachers and students have varying degrees of convergence depending on the aspect of socio-emotional classroom domain examined. For example, Poulou (2009) contributed to the scarcity of literature by investigating teachers' and students' perceptions of the social and emotional dimensions of the classroom environment with 400 teachers and 526 students in Grecian elementary schools. Examination across teacher and student reports revealed both raters agreed that mutual respect, inclusion, and attentive listening skills were frequently implemented in the classroom environment, but that less effort was made to build a sense of classroom community or working cooperatively. Additionally, students and teachers had varying perceptions about the extent to which their classroom procedures promote a sense of belonging and feeling valued.

Authors investigating the differences between teacher and student perceptions also have focused their research on examining perceptions of instructional practices or motivational context. Findings from these studies suggest high levels of divergence exist between students and teachers regarding the instructional practices that occur in the classroom. For example, Desimone et al. (2010) conducted a study to examine differences between teacher and student reports of classroom instruction. The study sample consisted of 16,000 eighth-grade students and their mathematics teachers. Teachers and students were asked to provide responses to surveys that assess the frequency of use of certain instructional techniques or methods including (1) textbooks, (2) partners, (3) measurement, (4) writing, (5) discussions, (6) computers, and (7) calculators. Results demonstrated divergence between student and teacher responses for all techniques. Overall, students reported higher frequency use of computers and calculators than their teachers, while their teachers reported higher usage for all other techniques. Correlational analysis revealed small to medium relations between responses in teachers' use of discussions (α

= .2310), computers ($\alpha = .2876$), measurement apparatus ($\alpha = .2945$), textbooks ($\alpha = .4993$), calculators ($\alpha = .6834$) writing assignments ($\alpha = .4072$), and partner work ($\alpha = .4172$). Urdan et al. (1998) found similar results when they examined individual-and classroom-level predictors of self-handicapping with 646 fifth-grade elementary students and 31 of their teachers. Among their study aims the authors investigated the convergence of student and teacher reported classroom goal structure. Specifically, correlations between students' perceptions of a mastery or performance-focused goal structure in the classroom and teachers' reports of their use of mastery or performance classroom instructional practices were examined. Results revealed small, but not significant correlations between student and teacher reports about the use of mastery ($r = .26$) and performance classroom instructional practices ($r = .25$). This finding indicates that students and teachers have low levels of convergence regarding the extent to which either mastery or performance practices were utilized in the classroom.

Although some studies have focused primarily on either instructional or socio-emotional dimensions of the classroom environment when comparing student and teacher perceptions, a few also have taken a multi-dimensional approach and examined factors that extend across both dimensions. Findings across these studies have been mixed regarding the degree to which students and teachers agree on various aspects of the motivational and socio-emotional domains of the classroom. For instance, an early study conducted by Fraser and O'Brien (1985) compared student and teacher perceptions of several dimensions of their classroom environments with 758 third-grade students and 22 of their teachers. Teachers and students were asked to evaluate the classroom related to their degree of satisfaction, feelings about the existence of fiction, competition, cohesiveness as well as the difficulty of the academic assignments. A comparison of student and teacher profiles indicates that teachers generally perceived a more favorable

classroom environment in terms of more satisfaction, less friction, and less competitiveness than did their students in the same classrooms. Additionally, both teachers and students had similar views about the levels of cohesiveness and academic difficulty in the classroom. A similar study was conducted by Sinclair and Fraser (2002) with 745 students and 10 teachers in urban middle schools. Teachers in this sample also perceived their classroom environments more positively than their students as it relates to student cooperation, task orientation, and student involvement. Conversely, teachers and students perceived similar levels of teacher empathy in the classroom. Reported mean differences between teachers' and students' perceived average item means were 0.19 for Cooperation, 0.15 for Task Orientation, 0.79 for Involvement, and 0.00 for Teacher Empathy.

Results across studies indicate that teachers predominantly perceive their classroom environment more positively, although studies have found some teachers who reported more negative perceptions of their practices than their students. Further research is need to differentiate what characteristics predict teachers' likelihood to view their classroom environment more or less negatively than their students (Wubbels et al., 1992).

Feldlaufer (1988) investigated student, teacher, and observer perception of the classroom environment before and after the transition to junior high school with 1,788 students and 158 teachers. The author also examined motivational and socio-emotional domains of the classroom environment by asking students and teachers to report on the level of cooperation and comparison that occurred in the classroom as well as students' level of autonomy related to math assignments and topics. Analysis of variance was used to compare pre-and post-transition scores within samples, however, no direct analysis comparing students' with teachers' reports across the transition occurred. Results examining similarity in F scores between students and teachers

indicate teacher and student perceptions converged on the opportunities for student cooperation and interaction before and after the transition to junior high school. Both noted a decrease in the students' opportunities to work together in small groups, choose peers to work with, and provide assistance to each other in junior high. Similar patterns emerged for the use of social comparison, with both teachers and students reporting increases in students' grade comparisons among classmates after the transition. Additionally, teachers and students agreed that students had less autonomy related to the topics they wished to study and the completion order of their math assignments, as well as fewer opportunities for input related to the type of projects they completed in junior high when compared to elementary school.

Midgley and Feldlaufer (1987) also conducted a similar longitudinal analysis of 2,210 student and 158 teacher perceptions of actual and desired student autonomy throughout the transition from elementary to junior high school. Results from analysis of variance indicated that in elementary (Year 1) and junior high (Year 2) students reported lower levels of autonomy than that reported by their teachers related to the their opportunities to decide seat assignment (Year 1 $F=41.57$, $p<.0001$; Year 2 $F=40.62$; $p<.0001$), class activities (Year 1 $F=21.27$, $p<.0001$; Year 2 $F=6.66$, $p=.01$), class rules (Year 1 $F=60.86$, $p<.0001$; Year 2 $F=10.83$, $p<.001$) and activities after completing their math assignments (Year 1 $F=215.94$, $p<.0001$; Year 2 $F=35.20$, $p<.0001$). In elementary, both teachers and students agreed that students have minimal input about homework assignments, but showed discrepancy in junior high, with teachers reporting higher opportunities than reported by students ($F= 4.74$, $p=.03$). Overall both teachers and students agreed that students had less autonomy in their math classes after than before the transition. However, junior high teachers thought students should have less autonomy than students desired related to homework and additional assignments. Additionally students desired less autonomy for

classroom rules while teachers believed they should have more autonomy in this area. Distinctive findings between Feldlaufer (1988) and Midgley and Feldlaufer (1987) may be due to differences in decision-making areas investigated.

A more recent study of math classrooms was conducted by Wang and Eccles (2014) who examined multi-level predictors of student and teacher perceptions of the classroom environment with 2,950 seventh-grade students and 132 of their math teachers from suburban public schools in Michigan. Classroom climate was assessed in terms of the extent to which students and teachers believed that math instruction and curriculum was meaningful to students, teachers promoted student collaboration and interaction, and the level of student autonomy and support teachers provided to students. Hierarchical linear modeling analyses revealed a small level of convergence between student and teacher perception as it related to teacher promotion of student collaboration and interaction ($b = .26, p < .001$) as well as student autonomy ($b = .19, p < .05$). Students and teachers had varying perceptions about the extent to which the math curriculum was meaningful as well as the support provided by teachers, but neither comparisons showed significant results.

In addition to understanding the degree of convergence or divergence between teacher and student perception of the classroom environment, research most recently has begun to investigate the individual student and/or teacher characteristics that may account for these differences in perception. Desimone and colleagues (2010) made an important contribution to the literature by investigating what individual characteristics predicted stronger or weaker agreement between eight-grade students and teachers when examining specific teaching strategies. These authors specifically examined the correlations between student and teacher responses when student, teacher, and class characteristics were taken into account. Results indicated little to no

changes in correlation values when only student or student and class characteristics were controlled compared to when all three levels of variables were controlled (see pg.61 for correlation values).

When examining specific student characteristics that influenced convergence, results indicated that students who were female, who thought success in math was important, who had higher levels of parent education, and who had higher math scores had higher convergence with teacher reports across various instructional practices. Additionally, students from lower socio-economic backgrounds, students who were in special education or other nontraditional classes, and students who were African American had higher levels of divergence (lower agreement) from teacher reports. Despite these differences across students, findings indicate that a small amount (3-7%) of the variance in within-class student responses was attributable to individual level differences. Teacher variables such as feeling prepared to teach math and having 6-10 years of experience was related to higher discrepancies from student reports, while having an education degree was associated with more agreement with student reports. However, these teacher variables had quite small and inconsistent associations across various techniques.

Konings and colleagues (2014) also contributed valuable knowledge to our understanding of individual characteristics that may predict the degree of convergence or divergence between teachers and students. This study defined meaningful patterns of differences between students' and teachers' perceptions of classroom environments with 994 tenth-grade students and 136 teachers from secondary schools in the Netherlands. Students were grouped according to their learning characteristic including, (1) cognitive processing strategies, (2) regulation strategies, (3) motivational orientations, (4) conceptions of learning, and (5) affective processing strategies. Students also were classified based on their academic performance. Teachers were characterized

based on their conceptions of teaching, which included either a student-focused approach or an information-transmission approach to teaching. Classroom learning environment was assessed based on the extent teachers and students perceived the classroom as containing fascinating content, focusing on knowledge, emphasizing regurgitation, promoting student autonomy, facilitating student and teacher interactions, promoting teacher support, communicating clear goals, and differentiating instruction.

Results from an analysis of variance indicated overall significant differences between student and teacher perceptions of the learning environment, with teachers reporting a more positive perception than students (Konings et al., 2014). Results also indicated differences in perception and agreement with teacher reports across student profiles. In regards to cognitive processing strategies, students who reported utilizing more deep and stepwise processing strategies ($F = 12.63, p < .01$) had greater levels of agreement with teacher responses. Similarly, students who utilized more self ($F = 14.81, p < .01$) and external ($F = 9.64, p < .05$) regulating strategies, and reported less regulation problems ($F = 5.85, p < .01$) had greater agreement with teacher reports. Additionally, students who were more vocationally ($F = 17.59, p < .01$) and intrinsically ($F = 24.21, p < .01$) motivated had greater agreement with teacher reports. Conversely, students who reported low levels of motivation and affective processing ($F = 18.57, p < .01$), who had less constructivist conceptions of learning ($F = 24.48, p < .01$), and had poor academic performance ($F = 4.93, p < .01$) had the largest discrepancy from teacher perceptions of the learning environment. Additionally, teachers who identified with the student-focused approach to teaching had higher levels of divergence from student perceptions than teachers who had an information-transmission approach ($t = -2.31, (p < .05)$). Results from these recent studies underscore the importance of individual factors impacting the degree to which teachers and

students agree or disagree about their classroom environment. Thus, the current study will examine a myriad of student and teacher characteristics and investigate the extent to which these impact agreement between the two groups.

Summary of Current Study's Aims and Research Questions

Current literature supports the premise that effective motivational and positive socio-emotional classroom contexts are important for student and teacher outcomes. Additionally, research also indicates students and teachers often have low levels of agreement about what occurs in classrooms related to instructional and social aspects. These studies often examine either instructional or social aspects of the classroom, with minimal research examining both aspects within one study. Thus, the current study aims to concurrently investigate the motivational and socio-emotional classroom context. Although some research has investigated the effects of contextual and individual characteristics on perceptions of the classroom environment, this premise has been under-studied, especially as it relates to simultaneously examining student and teacher individual characteristics across the transition to middle school. Therefore, the current study attempts to address these gaps in literature and aims to investigate;

- 1) To what extent do elementary school students and teachers perceptions of the classroom social environment differ from middle school students and teachers?
- 2) To what extent do teachers and students in elementary and middle school agree about the motivational and socio-emotional aspects of the classroom social environment?
- 3) Does the degree of convergence between teachers and students differ based on high or low levels of motivational and socio-emotional components of the classroom environment?
- 4) To what extent do school, classroom, and individual student and teacher factors help to explain teacher perceptions of their classroom environment?

5) To what extent do school, classroom, and individual student and teacher factors help to explain student perceptions of their classroom environment?

Based on trends in the current literature, it is expected that there will be a significant difference between elementary and middle school populations as well as differences between student and teacher perceptions of the classroom environment. Furthermore, it is hypothesized that individual factors will have a significant impact on subjects' perceptions as well as the convergence between student and teacher perceptions. This investigation may result in unique contributions to this field of research by examining these variables together, using a diverse population of young adolescents and by providing additional information about individual and classroom (teacher) factors that may enhance early adolescents' and teachers' experiences in the classroom.

Chapter III: Method

The purpose of the current study was to examine the relationship between teachers' and students' perception of the classroom environment and investigate individual factors that predict their perceptions in elementary and middle school contexts. In order to answer the research questions, this study utilized two data points from a larger, longitudinal, quantitative study, which examined student motivation and adjustment across the transition from elementary school into middle school. Data from the larger study conducted by Dr. Kiefer, the Primary Investigator, originating from the Educational Psychology Department at the University of South Florida, consisted of three time points (spring 2009, fall 2009, and spring 2010). This study utilized archival data from this larger study, specifically fifth-grade teacher and student self-reports from spring 2009 and sixth-grade teacher and student self-reports from fall 2009. Quantitative methods were utilized to answer the research questions regarding the associations between teacher-reported and student-reported perceptions of the Classroom Social Environment. The study examined the degree to which teachers and students agree about the academic and social dimensions of their classrooms, as well as school, classroom, and individual characteristics and beliefs that influence these perceptions. This chapter outlines the participants, measures, procedures, and analyses conducted.

Participants

School demographics. Participants in this study were fifth-grade students recruited from three elementary schools (School A, School B, and School C) and sixth-grade students recruited

from three middle schools (School D, School E, and School F) in a southeastern state. The Principal Investigator for the larger study used the 2008-2009 No Child Left Behind Act Accountability Report for demographics (refer to Tables 1 and 3). In order to follow students longitudinally, the Principal Investigator selected the schools based on their diverse population and on the feeder patterns between elementary and middle schools within the school district. A convenience sampling method was used as the sample was drawn from an accessible population of local schools. The sections below provide additional demographic information about the students and teachers from each elementary and middle school included in the sample.

Student demographics: Elementary schools. As it relates to socio-economic status, School B had a low percentage (7%), and School A (30%) had approximately a third of their student population who qualified for free and reduced lunch. School C had about two thirds (66%) of their population in this category. In terms of ethnic composition, the three elementary schools had an average of 43% Caucasian students, 37% Latino students, 9% African American students, and 11% from other ethnic backgrounds.

A total of 204 fifth-grade students across the three elementary schools were included in the student sample for this study. In the elementary student sample collected in the spring of 2009, there was a fairly equal distribution of gender ($N = 106$ males, 52%) and several ethnicities were represented (40.4% Latino, 34.5% Caucasian, 13.8% Other/Multi-racial, 6.9% African American, and 3.9% Asian). Student participation in the spring of 2009 was an average of 61% across the three elementary schools. Please refer to Table 2 for information on student demographics across the three elementary schools.

Student demographics: Middle schools. There was a wide range of variability regarding socio-economic status across the middle schools, with School D having 30%, School E with

52%, and School F with 13% of students who qualified for free and reduced fee lunch. In terms of ethnic composition, the middle schools had an average of 56% Caucasian students, 26% Latino students, 8% African American students, and 9% students from other ethnic backgrounds.

Table 1

Student Population Demographics for Elementary Schools (2008-2009)

Variable	School A	School B	School C
Sex			
Male	48%	50%	55%
Female	52%	50%	45%
Ethnicity			
Caucasian	58%	25%	47%
Latino	25%	57%	28%
African American	7%	10%	9%
Other	11%	8%	13%
Free/Reduced Lunch	30%	7%	66%

A total of 336 sixth-grade students across the three schools were included in the student sample for this study. In the middle school student sample collected in fall 2009, there was an equal distribution of gender ($N = 174$ males, 52%) and several ethnicities were represented (54% Caucasian, 21% Latino, 12% Other/multi-racial, 5% African American, and 6% Asian). Student participation in the fall of 2009 was an average of 57% across the three middle schools. Please refer to Table 4 for the demographic information for students across the three middle schools.

Table 2

Elementary School Student Sample Demographic Data Spring 2009

Variable	N	School A	School B	School C	Average
Sex					
Male	106	55%	46%	58%	52%
Female	98	45%	54%	42%	48%
Ethnicity					
Caucasian	70	46.4%	20.5%	41.2%	34.5%
Latino	82	31.9%	51.8%	33.3%	40.4%
African American	14	2.9%	7.2%	11.8%	6.9%
Asian	8	8.7%	1.2%	2%	3.9%
Other	28	10.1%	18.1%	11.5%	13.8%
Undisclosed	2	0%	1.2%	1.9%	1%

Note. Percentages were rounded to the tenth place

Teacher demographics: Elementary schools. Data were collected from a total of 17 fifth-grade teachers across the elementary schools (N = 16, 94% female). Of the total sample of teachers, the largest percentage originated from School B (40%), followed by School A and School C with equal proportions of participants (30%). In terms of ethnic composition, 76.4% of sixth-grade teachers were Caucasian, 11.8% were Latino, and 11.8% were African American. The Principal Investigator collaborated with principals to recruit teachers for the study. Teacher participation rate in this sample for spring 2009 data collection was 100%. See Table 5 for fifth-grade teacher demographic data and background information.

Table 3

Student Population Demographics for Middle Schools (2008-2009)

Variable	School D	School E	School F
Sex			
Male	54%	51%	49%
Female	46%	49%	51%
Ethnicity			
Caucasian	60%	40%	69%
Latino	21%	42%	16%
African American	10%	7%	6%
Other	9%	10%	9%
Free/Reduced Lunch	30%	52%	13%

Teacher demographics: Middle schools. Data were collected from a total of 31 sixth-grade teachers across the middle schools (N = 23, 77% female). Of the total sample of teachers, the largest percentage originated from School F (48.4%), followed by School E (35.5%), and then School D (16.1%). In terms of ethnic composition, 74.3% of sixth-grade teachers were Caucasian, 12.9% were Latino, 6.4% were African American, 3.2% were Asian, and the remaining 3.2% did not report their ethnicity in the survey. The Principal Investigator collaborated with principals to recruit teachers for the study. Teacher participation rate for fall 2009 data collection was 75.6%. See Table 6 for sixth-grade teacher demographic and background information.

Table 4

Middle School Student Sample Demographic Data Fall 2009

Variable	N	School A	School B	School C	Average
Sex					
Male	174	48%	52%	49%	52%
Female	162	52%	48%	51%	48%
Ethnicity					
Caucasian	183	61.2%	30.9%	65.2%	54%
Latino	71	18.8%	43.6%	10.7%	21%
African American	18	3.5%	8.7%	4.8%	5%
Asian	21	5.9%	2.7%	7.5%	6%
Other	43	10.6%	14.1%	11.8%	12.0%

Note. Percentages were rounded to the tenth place.

Procedures

Participant selection. Participants were recruited from three local elementary and three local middle schools. All fifth-grade students and their teachers were invited to participate in the spring 2009 administration, while sixth-grade students and their teachers were invited to participate in the fall of 2009. Students who participated in general education and who possessed medium to high English language proficiency - as determined by the school English proficiency assessment - were eligible to participate. Participants who received active consent from guardians and who assented to participate prior to the study were included in the current study.

Assistant Principals assisted with teacher recruitment in each elementary and middle school. All willing teacher participants who signed informed consent forms are included in the current study.

Table 5

Teacher Sample Demographic and Background Data Spring 2009: Elementary Schools

Variable	N	School A	School B	School C	Average
Sex					
Male	1	0%	0%	20%	6%
Female	16	100%	100%	80%	94%
Ethnicity					
Caucasian	13	60%	100%	60%	76.4%
Latino	2	20%	0%	20%	11.8%
African American	2	20%	0%	20%	11.8%
Asian	0	0%	0%	0%	0%
Undisclosed	0	0%	0%	0%	0%
Background					
Full Time >5	13	80%	57%	80%	76.5%
Masters or higher	5	40%	14%	40%	31.2%
Certification	13	100%	71%	100%	86.6%

Note. Percentages were rounded to the tenth place. Total N = 17; Full time N = 17; Masters or higher N = 16; Certification N = 15.

Table 6

Teacher Sample Demographic and Background Data Fall 2009: Middle Schools

Variable	N	School A	School B	School C	Average
Sex					
Male	4	17%	18%	7%	13%
Female	27	83%	82%	93%	87%
Ethnicity					
Caucasian	23	60%	81.8%	86.6%	74.3%
Latino	4	40%	0%	6.7%	12.9%
African	2	0%	9.1%	6.7%	6.4%
Asian	1	0%	0%	0%	3.2%
Undisclosed	1	0%	9.1%	0%	3.2%
Background					
Full time>5	31	100%	73%	87%	83.7%
Masters or higher	31	80%	73%	27%	51.6%
Certification	27	80%	82%	100%	90%

Note. Percentages were rounded to the tenth place. Total N = 31; Certification N = 30.

Instrumentation and Study Variables

Variables in the current study included demographics and background, Classroom Social Environment, and beliefs for both student and teacher samples. Student measures followed by teacher measures for the variables examined in the study are discussed below (See Appendices for all measures). All measures were administered during both data waves (Time 1 = Elementary Spring 2009, Time 2 = Middle School Fall 2009). All self-report, non-demographic measures described below used a 5-point Likert scale (1 = *not at all true*; 5 = *very true*) and were positively worded (i.e., higher scores indicated higher degrees of a given attribute), with the

exception of the Teacher Self-Efficacy measure, which used a 9-point Likert scale and the Preparing Students to Achieve Scale used to measure General Teacher Efficacy which used a 7-point Likert scale.

Student measures. This section discusses all instruments utilized to measure student demographics and background, student perceptions of the classroom social environment, and student beliefs at the elementary and middle schools.

Demographics and background. Student gender and ethnicity were collected from items in the student survey (see Appendix A). For gender, students indicated whether they were a boy or a girl. For ethnicity, students selected one of the following ethnic categories: Asian American or Pacific Islander, Black or African American, Latino, Caucasian, Multi-racial, or Other (followed by an area to specify ethnicity). Results from these questions are included in Table 2 for elementary students and Table 4 for middle school students.

Classroom social environment. Students' perceptions of the classroom social environment consisted of two concepts; the classroom motivational context and the classroom socio-emotional context.

Students' perception of the classroom motivation context was measured by the Perception of Classroom Goal Structure Survey from the Manual for Patterns of Adaptive Learning Scales (PALS; Midgley et al., 2000). This measure had two subscales; Classroom Mastery Goal Structure, and Classroom Performance-Approach Goal Structure.

The student-version of the Classroom Mastery Goal Structure Subscale (PALS; Midgley et al., 2000) assessed the extent to which students perceived that their teachers emphasized developing competence and mastery of skills as the main purpose of learning. This subscale was comprised of four items. An example item was, "My teacher recognizes us for trying hard." This

subscale has been administered to early adolescents previously and has been found to be valid and reliable with a reported Cronbach alpha of .73 (Patrick et al., 2011).

The student-version of the Classroom Performance-Approach Goal Structure Subscale (PALS; Midgley et al., 2000) assessed the extent to which students perceived that their teachers emphasized demonstrating competence and outperforming peers as the main purpose of learning. This subscale was comprised of five items. An example item was, “My teacher lets us know which students get the highest scores on a test.” This subscale has been previously administered to early adolescents and has been found to be valid and reliable with a reported Cronbach alpha of .67 (Patrick et al., 2011). Scores for both subscales in this measure were computed by taking the mean of corresponding items for each subscale.

Students’ perception of the classroom socio-emotional context was measured by the Classroom Social Environment measure developed by Ryan and Patrick (2001). This measure consisted of two subscales: Teacher Promotion of Mutual Respect and Teacher Promotion of Social Interaction.

The student-version of the Teacher Promotion of Mutual Respect Subscale (Ryan & Patrick, 2001) assessed the extent to which students perceived teachers as encouraging respect among classmates. This subscale was comprised of five items. Sample items included “My teacher wants students to respect each others’ opinion” and “My teachers want all students to feel respected.” This subscale has been administered to early adolescents previously and has been found to be valid and reliable with reported Cronbach alphas of .90 (Ryan & Patrick, 2001).

The student-version of the Teacher Promotion of Social Interaction Subscale (Ryan & Patrick, 2001) assessed the extent to which students perceived teachers as encouraging students to interact with one another during academic activities (Ryan & Patrick, 2001). This subscale

was comprised of five items. Sample items included, “My teacher often allows students to discuss their work with classmates” and “My teacher lets students ask other students when they need help with their work.” This subscale has been previously administered to early adolescents and has been found to be valid and reliable with a reported Cronbach alpha of .82 (Ryan & Patrick, 2001). Scores for both subscales in this measure are computed by taking the mean of corresponding items for each subscale.

Classroom engagement. Classroom engagement referred to students’ participation in academic and nonacademic activities at school as well as effort and perseverance in learning activities (Skinner & Belmont, 1993; Sook-Lee, 2012). In the current study classroom engagement was measured using two separate scales including the Involved Behavior Scale created by Skinner and Belmont (1993) and the Disruptive Behavior Scale from the PALS Manual (Midgley et al., 2000). Each scale had a total of four items. Involved Behavior items included, “I listen carefully in class,” and “I try very hard in school.” Items on the Disruptive Behavior Scale included “I always follow the classroom rules (reverse),” and “I sometimes behave in a way that annoys my teachers.” Both scales have been used with young adolescents and have been found to be reliable with a report Cronbach of .80 for Involved Engagement (Midgley et al., 2000) and .82 for Disruptive Behavior (Kaplan & Maehr, 1999).

Student beliefs. Students’ personal beliefs were measured utilizing two main constructs; Personal Achievement Goal Orientation and Academic Efficacy.

Personal Achievement Goal Orientation referred to students’ academic motivational beliefs and students’ reasons or purposes for engaging in academic behavior. This construct was measured by the Personal Achievement Goal Orientation Survey from the Manual for Patterns of Adaptive Learning Scales (Midgley et al., 2000). This measure had three subscales; Mastery

Goal Orientation, Performance-Approach Goal Orientation, and Performance-Avoid Goal Orientation.

The Mastery Goal Orientation subscale of the Personal Achievement Goal Orientation Survey (Midgley et al., 2000) was utilized to measure the degree to which students' individual learning goals focused on personal improvement, mastering new skills and understanding content. This measure consisted of five items. An example item was, "An important reason I do my schoolwork is because I want to improve my skills." Scores for this subscale were computed by taking the mean score of all items in the measure. This subscale has been previously administered to early adolescents and has been found to be valid and reliable with a reported Cronbach alpha of .84 (Middleton & Midgley, 1997).

The Performance-Approach Goal Orientation subscale of the Personal Achievement Goal Orientation Survey (Midgley et al., 2000) measured the degree to which students' individual learning goals focused on competition and demonstrating ability relative to others. This measure consisted of five items. An example item was, "I would feel successful in class if I did better than most of the other students." Scores for this subscale were computed by taking the mean score of all items in the measure. This subscale has been previously administered to early adolescents and has been found to be valid and reliable with a reported Cronbach alpha of .84 (Middleton & Midgley, 1997).

The Performance-Avoid Goal Orientation subscale of the Personal Achievement Goal Orientation Survey (Midgley et al., 2000) measured the degree to which students' individual learning goals focused on avoiding embarrassment or evading demonstrations of incompetence. This measure consisted of four items. An example item was, "An important reason I do my schoolwork is so that I won't embarrass myself." Scores for this subscale were computed by

taking the mean score of all items in the measure. This subscale has been previously administered to early adolescents and has been found to be valid and reliable with a reported Cronbach alpha of .84 (Middleton & Midgley, 1997).

Academic efficacy referred to student contextually specific judgments of their capabilities to perform academic tasks successfully (Bandura, 1986; Schunk, 1991). In the current study academic efficacy was measured using the Academic Efficacy scale from the Manual for Patterns of Adaptive Learning Survey (PALS; Midgley et al., 2000). This self-report instrument measured the extent to which a student felt he or she was academically competent in his or her coursework (Midgley et al., 2000). This scale consisted of five items. Example items included “I can do even the hardest work if I try,” and “I’m certain I can master the skills taught in school this year.” This measure has been found to be valid and reliable with reported Cronbach alphas between .86 - .90 (Midgley et al., 2000).

Teacher measures. This section discusses all instruments utilized to measure teacher demographics and background, teacher perceptions of the classroom social environment, and teacher beliefs at the elementary and middle schools.

Demographics and background. Gender and ethnicity were determined from the teacher’s self-report in both elementary and middle schools. For gender, teachers indicated whether they were male or female. For ethnicity, teachers selected one of the following ethnic categories: Asian American or Pacific Islander, Black or African American, Latino, Caucasian, Multi-racial, or Other (followed by an area to specify ethnicity). In addition, teachers self-reported years of teaching experience (full and/or part time) in public schools as well as whether they had a bachelor’s or master’s degree, and any additional degrees or certification were collected. These data are presented in Tables 5 for elementary school teachers and Table 6 for

middle school teachers.

The classroom social environment. Teachers' perception of the classroom social environment consisted of two concepts: the classroom motivational context and the classroom socio-emotional context.

Teachers' perception of the classroom motivation context was measured by the Perception of Classroom Goal Structure Survey from the Manual for Patterns of Adaptive Learning Scales (Midgley et al., 2000). This measure had two subscales: Classroom Mastery Goal Structure and Classroom Performance-Approach Goal Structure.

The teacher-version of the Classroom Mastery Goal Structure Subscale (PALS; Midgley et al., 2000) assessed the extent to which teachers perceived that they emphasized the development of student competence and skill mastery. This measure was modified by the Principal Investigator and Adolescent Development Research Lab based on the student-version of the Classroom Mastery Goal Structure Subscale (PALS; Midgley et al., 2000) and contained similar items and Likert scales, but was reworded to reflect teachers' own perceptions using the phrase "In my classroom, I..." For example, "In my classroom, I make a special effort to recognize students' individual progress, even if they are below grade level." Similar to the student-version, this measure contained four items. A similar modified scale has been administered to math teachers of sixth-grade students and has been found to be valid and reliable with a reported Cronbach alpha of .62 (Midgley, Anderman, & Hicks, 1995).

The teacher-version of the Classroom Performance-Approach Goal Structure Subscale (PALS; Midgley et al., 2000) assessed the extent to which teachers perceived that they emphasized students demonstrating competence and outperforming peers as the main purpose for learning. This measure was modified by the Principal Investigator and Adolescent Development

Research Lab based on the student-version of the Classroom Performance-Approach Goal Structure Subscale (PALS; Midgley et al., 2000) and contained similar items and Likert scales, but was reworded to reflect teachers' own perceptions using the phrase "In my classroom, I..." For example, "In my classroom, I display the work of the highest achieving students as an example." Similar to the student-version, this measure contained five items. A similar modified scale has been administered to math teachers of sixth-grade students and has been found to be valid and reliable with a reported Cronbach alpha of .73 (Midgley, Anderman, & Hicks, 1995).

Teachers' perception of the classroom socio-emotional context was measured by the Classroom Social Environment measure developed by Ryan and Patrick (2001). This measure consisted of two subscales: Teacher Promotion of Mutual Respect and Teacher Promotion of Social Interaction.

The teacher-version of the Teacher Promotion of Mutual Respect subscale assessed the extent to which teachers perceived that they encouraged respect among classmates. This measure was modified by the Principal Investigator and the Adolescent Development Research Lab based on the student-version of the Teacher Promotion of Mutual Respect subscale (Ryan & Patrick, 2001). The measure used similar items and Likert scale as the student measure, but it was reworded to reflect teachers' own perceptions using the phrase "In my classroom, I..." For example, "I want all students to feel respected." Similar to the student-version, this measure contained four items. Scores for the student and teacher scales were computed by taking the mean of corresponding items for each scale. This is the first time this has scale been administered to teachers so previous Cronbach alphas were not available.

The teacher-version of the Teacher Promotion of Social Interaction subscale assessed the extent to which teachers perceived they encouraged students to interact with one another during

academic activities (Ryan & Patrick, 2001). This measure was modified by the Principal Investigator and the Adolescent Development Research Lab based on the student-version of the Teacher Promotion of Social Interaction subscale (Ryan & Patrick, 2001). The measure used similar items and Likert scale as the student-version, but it was reworded to reflect teachers' own perceptions using the phrase "In my classroom, I..." For example, "In my classroom, I let students ask other students when they need help with their work." Similar to the student-version, this measure contained four items. Scores for the student and teacher scales were computed by taking the mean of corresponding items for each scale. This is the first time this has scale been administered to teachers so previous Cronbach alphas were not available.

Teacher beliefs. In the current study, teacher beliefs encompassed three separate constructs, Teacher Self-efficacy, General Teacher Efficacy, and Teacher Autonomy.

Teacher self-efficacy was measured using the Teacher Self-Efficacy Scale (Bandura, 1997). This measure consisted of 15-items with three subcomponents, including instructional self-efficacy, disciplinary self-efficacy, and positive classroom environment self-efficacy. Each item on the scale used a 9-point Likert Scale ranging from 1 (*nothing*) to 9 (*a great deal*). Teacher self-efficacy involved teachers' perceptions of their ability to deliver instruction, carry out discipline, and create a positive classroom environment. The Instructional Self-Efficacy Subscale measured teachers' expectation of his/her ability to deliver effective instruction and engage students in the learning process, even those who are disruptive or who lack motivation (Guskey & Passaro, 1994). The Instructional Self-Efficacy Subscale contained seven items and includes items such as "How much can you get through to the most difficult students?" and "How much can you do to get students to work together?" The Disciplinary Self-Efficacy Subscale measured a teacher's expectations of his/her ability to engage in effective classroom

management practices including enforcing class rules and preventing disruptive behavior. The Disciplinary Self-Efficacy Scale consisted of three items, “How much can you do to get children to follow rules?” and “How much can you do to control disruptive behavior in the classroom?” The Positive Classroom Environment Efficacy Subscale measured teachers’ expectation of his/her ability to create a trusting atmosphere and make school enjoyable for students. This subscale contained five items. Examples included, “How much can you do to get students to trust teachers?” and “How much can you do to make the school a safe place?” These scales have been administered to teachers in previous research and have been found to be reliable, with a reported Cronbach alpha of .91 for the entire teacher self-efficacy scale (Hines & Kritsonis, 2008; LoCasale-Crouch et al., 2012; Stewart, 2014).

General Teaching Efficacy was measured using the Preparing Students to Achieve created by National Institute of Child Health and Human Development. This measure assessed the extent to which teachers believed specific factors hindered their ability to assist students to succeed academically. This scale consisted of 14 questions and items on this survey were on a 7-point Likert Scale, 1 (*not at all a problem*) to 7 (*very problematic*). Example of factors included, “Home/Family Life,” “Low intelligence”, and “English Proficiency”. This scale has not yet been administered to elementary and secondary school teachers. Therefore, previous Cronbach alpha scores were not available.

Teacher Autonomy was measured using the Perceived Control over Planning and Teaching Scale created by National Institute of Child Health and Human Development. This measure assessed teachers’ perceived feelings of control over areas of planning and teaching in their classroom. This measure consisted of three questions on a 5-point Likert Scale from 1 (*no control*) to 5 (*complete control*). An example item included, “Selecting contents, topics, and

skills to be taught.” This scale has not yet been administered to elementary and secondary school teachers. Therefore, Cronbach alpha scores were not available.

Survey administration. The following section describes how surveys were administered and how data were collected among fifth- and sixth- grade students and teachers. The Principal Investigator and graduate assistants collected the data in the three elementary and middle schools. Prior to data collection, graduate students received a 2-hour training which included an overview of the content and purpose of the surveys, the survey administration protocol, how to answer student questions, and classroom management procedures to allow for smooth administration processes. Additionally, all graduate students received an Administration Handbook, underwent IRB training, and received initial training or a refresher course on survey administration. The Principal Investigator paired research assistants who administered the survey with assistants who had more experience to ensure consistency across survey administration. Similar training procedures occurred prior to elementary and middle school survey administration.

For students to participate in the study, active parental consent was required. Active parental consent was obtained through sending a letter home through the student’s respective school at least two weeks prior to survey administration. Most students received English only forms; however, teachers provided English/Spanish forms to students who had Spanish-speaking parents. If the student’s parent/guardian consented, the student could take part in the study. There was no coercion to continue the survey if the parent or child wanted to discontinue participation. Regardless of the parent or guardian’s decision, any student who returned a consent form was eligible for a raffle prize of a movie ticket gift certificate at a local cinema.

Surveys were distributed and administered in a similar manner among fifth- and sixth-

grade students. The only notable differences were large groups of students in the middle schools were administered surveys in the library or cafeteria while elementary students were administered survey in their assigned classrooms. Fifth-grade survey administration was conducted during the spring of 2009, while sixth-grade survey administration occurred in the fall of 2009. Procedures remained consistent throughout the two times of data collection. Survey administration took about 45 minutes. Administration occurred during the period of Geography. Before administering the survey, students were given a verbal overview of the purpose of the survey. Students then were read a Verbal Assent Script and decided whether or not they wanted to participate in the survey (see Appendix G). Students were informed that they could discontinue the study at any time. In order to familiarize students with the survey items, survey administrators gave students an example of a typical survey item prior to completing the survey. Survey administrators read survey items out loud to students and answered any questions students had about the survey in order to increase comprehension. Furthermore, students were given a folder to help increase privacy of their answers in efforts to increase the internal validity of the measures completed. After completing the survey, a small incentive of a mini pen/ highlighter was offered to participants. Researchers visited schools an additional day to administer make-ups for students who were absent for survey administration. No adverse events transpired that would affect the survey results.

Teachers who demonstrated interest in the study were provided a sealed packet that included a description of the study purpose, all teacher relevant questionnaires, informed consent forms, and directions for returning the surveys. All teachers who agreed to participate returned sealed packets with signed consent forms to the Principal Investigator. Most sealed packets were returned on the day of administration. Remaining packets were collected by the Principal

Investigator when the team returned later that week to administer make-ups to previously absent students.

Data Analysis

Data integrity. Following data collection, student and teacher surveys were de-identified and scanned into a computer program called Remark. A graduate assistant reviewed each survey prior to scanning it to ensure that there were no erratic patterns or errors in marking. If a participant marked a multiple choice answer with two answers - each being on opposite ends of the spectrum - that answer was considered invalid and consequently was considered missing data. If two answers were selected that were next to each other or with only one space between them on the scale, the answer closest to the middle of the scale was marked as the participant's response. Data were checked through a feature in Remark as well as through graduate assistant review. Finally, data were checked via frequency and preliminary analyses including means, standard deviations, and normality on IBM SPSS Version 22 to ensure accuracy of data.

Missing data. The study only utilized data from spring 2009 for fifth-grade and fall of 2009 for sixth-grade students and their respective teachers. When scoring the collected data, if there was only one item missing per scale, an average was created for that scale and mean imputation was used (Byrne, 2001). Listwise deletion, which deletes the subject completely in case of missing data, was not utilized because of the amount of data that would be lost, the reduced sample size that would result, and the overall decrease in power of the study (Byrne, 2001).

Research questions analyses. The following section describes the statistical analyses that were conducted to answer each of the research questions.

Research question 1. To determine the extent to which elementary and middle school students differed in their perceptions of the Classroom Social Environment, multi-level exploratory factor analysis using Mplus Editor Version 7.3 was used (Muthen & Muthen, 2014). Multilevel exploratory factor analysis was appropriate given the nested structure of the data and the need to determine the underlying factor structure at the within and between levels for elementary and middle school samples. Multilevel analyses takes into consideration the correlation and dependence between/among variables (i.e. students within classrooms) and allows the exploration of the validity of aggregate structures (McDonald, 1993; Muthen, 1991). Multilevel Principal Axis Factor analysis with an oblique rotation was conducted to verify the hypothesized four-factor structure of the Classroom Social Environment (Mastery Classroom Goal Structure, Performance Classroom Goal Structure, Promoting Mutual Respect, and Promoting Social Interaction) for elementary and middle school students. Model fit indices indicated poor model fit and that the hypothesized factor structure was not confirmed. Due to poor fit, a full exploratory factor approach was used to identify the number of factors and corresponding items based on eigenvalues and factor loadings for elementary students and middle school students. These analyses produced several proposed factor structures, though the most parsimonious and theoretically sound models with acceptable fit were selected. The goodness-of-fit test statistic (including the number of degrees of freedom, and its p value) as a measure of absolute fit was assessed to determine satisfactory fit. Because the Chi-square fit statistic is considerably influenced by sample size when a model is approximately correct (Bearden, Sharma & Teel, 1982), model fit was also evaluated primarily according to the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Squared Residuals (SRMR), based on incremental fit approach proposed by Bentler & Bonett

(1980). Model fit is considered acceptable or good when the CFI coefficient is .95 or higher, the RMSEA coefficient is .05 or below, and the SRMR is less than .08 (Hu & Bentler, 1999; Steiger, 2007). Additionally, the between-group variation estimation to determine the proportion of total variance that can be attributed to between-class differences was assessed. This proportion is referred to as the Intra-class Correlation (ICC) and scores ranges from 0 to 1. The ICC indicates the proportion of total variance that can be attributed to between-class differences. Values closer to 1 indicate greater proportions of between-level variance and support the existence of a multi-level structure. Values closer to zero indicate little to no differences across class and suggest foregoing class level aggregation. To justify the use of Multi-Level Modeling techniques, education researchers suggest a minimum ICC value of 0.05 (i.e., at least 5% of total outcome variance lies between level-2 units) consistent with previous studies (Hedges & Hedberg, 2007; Jak. Oort & Dolan, 2014; Snijders & Bosker, 1999).

Research question 2 and 3. Due to the differences in factor structures between students and teachers identified through the exploratory factor analyses, no direct statistical comparison via a t-test could occur. Thus, no analyses were conducted for Research Question 2, which aimed to determine the extent to which teachers and students agree about the motivational and social-emotional aspects of the classroom, as well as for Research Question 3, which aimed to determine whether teachers who rate their classrooms as having a high mastery goal structure have more convergence with students than those who rate their classrooms as having a high performance goal structure. Implications for these findings are addressed in Chapter Five.

Research question 4. To answer research question 4, single-level multiple regression analyses using SPSS Version 22 were conducted to determine which teacher demographics and beliefs, as well as class-wide student variables explained teachers' perceptions of their classroom

environment. Given the small teacher sample size ($N = 17$ elementary, and $N = 31$ middle school), elementary and middle school teacher perceptions were combined into a unified teacher sample. Teacher Classroom Social Environment constructs included, Respectful Performance, Interactive Mastery, Promoting Student Engagement, Promoting Mutual Respect, and Evaluation practices. Teacher demographics included teacher gender (1 = female, 0 = male), ethnicity (0 = Caucasian, 1 = minority), age, and years of experience. Teacher belief variables included Teacher Self-efficacy, Teacher Autonomy, and General Teacher Efficacy. Associations between classroom level variables and teacher classroom practices were also examined. These included aggregated average classroom scores of student demographics (proportion of males and minorities), behavior variables (i.e., Involved Engagement and Disruptive Behavior) as well as student beliefs (i.e., Academic Self-efficacy, Mastery Goal Orientation, Performance-approach Goal Orientation, and Performance-avoidance Goal Orientation).

School socio-economic status (SES), which was based on the percentage of students receiving free and reduced lunch, was investigated using a dummy coded variable. High SES schools (0) were the reference category and were compared to Moderate SES and Low SES schools (1). Based on the distribution of students across the six schools at both elementary and middle school levels, schools were classified as High SES schools when the free and reduced lunch student populations were below 15% percent, Moderate was delineated to have populations between 15% and 50%, and Low was categorized as having populations above 50%. At both elementary and middle school levels, two schools were placed in each SES category.

Due to the small sample size of the combined teacher sample, separate multiple regression analyses were conducted for demographics variables, background variables, belief variables, as well as SES to reduce the number of predictor variables. School SES was entered

into the first regression model as a separate block to determine the variance explained for Interactive Mastery, Respectful Performance, Promotion of Student Engagement, Promoting Mutual Respect and Evaluation. The second block of variables included teacher demographics, followed by teacher beliefs, then student demographics, student behavior, and lastly student beliefs. Each of the five predictor categories were included in separate models to determine its influence on each of the five teacher Classroom Social Environment constructs. To determine the strength of the associations and predictive value, the size of the standardized and unstandardized parameter estimates were examined. Furthermore, variables which had significant predictive effects or non-significant effects greater than .30 were included in the subsequent regression models to ensure effects were based on the variables unique contribution to the outcome variables. To determine the percentage of variance of student and teacher perceptions on the Classroom Social Environment that is accounted for by individual factors, the size of the squared multiple correlation coefficients (R^2) are also reported. Results for these analyses are presented in Tables 23-26.

Research question 5. To determine the predictive effect of student and teacher variables on students' perceptions of the Classroom Social Environment, a series of design-based multi-level path analyses for each Classroom Social Environment construct were conducted using Mplus Version 7.3. To take into account the nested data structure, the Mplus design-based, multi-level analysis Type = Complex was used, as the multi-level models based on previously conducted exploratory factor analysis for elementary and middle school student samples did not converge. This design-based approach takes nested data into account by adjusting for parameter estimate standard errors based on the sampling design and only requires the specification of a single model (Wu & Kwok, 2012).

At the elementary level, aggregated classroom constructs examined included Respectful Mastery Classroom Goal Structure, Performance Classroom Goal Structure, Promoting Social Interaction and Promoting Mutual Respect. At the middle school level, aggregated classroom constructs included the same constructs.

Student variables entered in the analysis included student demographics (i.e., gender, ethnicity), and student behavior (i.e. self-reported Involved Engagement and Disruptive Behavior), as well as student beliefs (i.e., Academic Self-efficacy, Mastery Goal Orientation, Performance-approach Goal Orientation, and Performance-avoidance Goal Orientation). Teacher variables entered in the analysis included teacher demographics; (i.e., gender and ethnicity), teacher background (i.e., age and years of experience), and teacher beliefs; (i.e. Teacher Self-efficacy, Teacher Autonomy, and General Teacher Efficacy). School SES was entered as a dummy variable, comparing high SES schools with moderate and low SES schools to determine its effect on students' perceptions of their classrooms. To determine the strength of the associations and predictive value, the size of the standardized parameter estimates were examined. To determine the percentage of variance of students' perceptions of the Classroom Social Environment accounted for by school, classroom, and individual factors, the size of the squared multiple correlation coefficients (R^2) are also reported. Results for these analyses are presented in Tables 27-30.

Chapter IV: Results

This chapter presents the results of the analyses conducted to answer the current study's research questions. First, procedures used to check data entry accuracy and screen the data gathered are presented, followed by statistical analyses performed to answer each research question. Second, to address research questions one and two, the results of exploratory factor analyses for elementary students, middle school students, and combined teacher samples for the Classroom Social Environment items are discussed. Third, descriptive statistics including means, standard deviations, and normality (skewness and kurtosis) for the variables of interest as well as reliability and correlations among the variables are discussed. Next, question four is addressed with multiple regression analyses, which examined the influence of teacher and student variables on teacher perceptions of the Classroom Social Environment. Lastly, research question five is addressed with a discussion of design-based multi-level path analyses, which examined the influence of teacher and student variables on student perceptions of the Classroom Social Environment.

Data Screening

Data were screened using several techniques. First, data were reviewed through manual checks prior to scanning into Remark. Next, manual checks of every 10th survey entry and frequency checks in SPSS Version 20.0 were conducted to ensure data entry was accurate. For further information, refer to the Data Integrity section. The researcher defined outliers as any

response that was three standard deviations above or below the group mean for any variable. No subjects were identified as outliers based on this criterion.

Research Question 1

To determine the extent to which elementary and middle school students differed in their perceptions of the Classroom Social Environment, multi-level exploratory factor analysis using Mplus Editor Version 7.3 was conducted (Muthen & Muthen, 2014). Factor structure findings indicate similarities and differences between elementary and middle school student samples for perceptions of the Classroom Social Environment. Refer to Table 7 for absolute and comparative fit indices, as well as factor structures for the elementary and middle school student samples.

Elementary school. At the elementary student level, multi-level exploratory factor analysis with oblique rotations was conducted in order to determine the most parsimonious, interpretable factors to explain the relationships among the observed variables (Reio & Shuck, 2015). Results of the model indicated that the intra-class correlation, or the ICC, which specifies the proportion of total variance that can be attributed to between-class differences, ranged from .013 to .258. The selected model contained four factors at the within level, and two factors at the between level. At the within level the factors included Respectful Mastery Classroom Goal Structure, Performance Classroom Goal Structure, Promoting Social Interaction, and Promoting Mutual Respect. At the between level, the factors included Collaborative Performance and Cooperative Learning. The goodness-of-fit test statistic (including the number of degrees of freedom, and its p value) as a measure of absolute fit [$\chi^2 (N = 203, df = 151) = 105.684, p = .99814$] suggested that the model had satisfactory fit. For the elementary student model, the CFI was 1.000, RMSEA was .000 and the SRMR at the within level was .036 and at the between

level was .265. These model indices, except the SRMR between, indicated an acceptable fit. See Table 7 for model fit indices results and the factor structures.

Table 7

Exploratory Factor Analysis Model Fit Indices and Factors

	Elementary Students	Middle School Students
Model Fit	$\chi^2 = 105.684$ df = 151 p value = 0.99814 CFI = 1.000 RMSEA = .000 SRMR Within = .036 SRMR Between = .265	$\chi^2 = 256.453$ df = 253 p value = .2829 CFI = .993 RMSEA = .012 SRMR Within = .03 SRMR Between = .640
Factor Descriptions	Within F1= Respectful Mastery Within F2= Performance Within F3= Promoting Social Interaction Within F4= Promoting Mutual Respect Between F1= Collaborative Performance Between F2= Cooperative Learning	Within F1= Respectful Mastery Within F2= Performance Within F3= Promoting Social Interaction Within F4= Promoting Mutual Respect Between F1= Interactive Competition

Note. df = degrees of freedom; CFI= Comparative Fit Index; RMSEA= Root Mean Square of Approximation; SRMR= Standardized Root Squared Residuals; F = Factor.

Factor loadings on the four within factors ranged from .409 to .829 for Respectful Mastery Classroom Goal Structure, from .325 to .796 for Performance Classroom Goal Structure, from .218 to .827 for Promoting Social Interaction, and from .333 to 1.961 for Promoting Mutual Respect. Respectful Mastery Classroom Goal Structure included 5 items derived from the original Mastery Classroom Goal Structure (3 items) and Promoting Mutual Respect (2 items) scales. Performance Classroom Goal Structure was comprised of 4 items from the original Performance Classroom Goal Structure scale. Promoting Social Interaction was comprised of 4 items from the original Promoting Social Interaction scale. Promoting Mutual Respect was comprised of 2 items from the original Promoting Mutual Respect Scale. Refer to

Table 8 for a description of the items included in the four factors at the within level and Table 9 for descriptive statistics. At the between level, Collaborative Performance encompassed 11 items which included items from the original Mastery Classroom Goal Structure (1 item), Performance Classroom Goal Structure (4 items), Promoting Social Interaction (2 items), and Promoting Mutual Respect (4 items) scales. Cooperative Learning encompassed 4 items, which included items from the original Mastery Classroom Goal Structure (2 items) and Promoting Social Interaction (2 items) scales. Refer to Table 10 for items included at the between level.

Findings indicate that at the within level, elementary students perceived Performance Classroom Goal Structure that focused on competition and comparison as a distinct concept, similar to the originally hypothesized factor structure. Comparable findings were found for Promoting Social Interaction, where the factors reflected items in the original scales. Findings also indicate that for elementary students, mastery classroom goals that emphasize learning to gain competency and actively promote mutual respect among classmates were viewed as a single factor (Respectful Mastery Classroom Goal Structure). The findings suggest there may be a distinction between practices that intentionally promote mutual respect and those that prevent students from being disrespectful to one another (Promoting Mutual Respect). At the between or classroom level, elementary students perceived practices that emphasized competition as co-existing with practices that promote mutual respect among classmates and encourage sharing and discussing ideas. Additionally, practices that encourage learning and exploration of ideas (mastery) and building an interactive learning community were viewed as a singular factor.

Table 8

Elementary School Student Within Level Classroom Social Environment Factors and Loadings

Elementary School Student Within Factors	Factor Loading	ICC	Elementary Students Within Factors	Factor Loading	ICC
<u>Respectful Mastery Classroom Goal Structure</u>			<u>Performance</u>		
My teacher wants us to understand our work, not just memorize it.	.567	.013	My teacher points out those students who get good grades as an example to all of us.	.224	.117
My teacher really wants us to enjoy learning new things.	.829	.101	My teacher points out those students who get poor grades as an example to all of us.	.798	.154
My teacher gives us time to really explore and understand new ideas.	.648	.094	My teacher tells us how we compare to other students.	.494	.178
My teacher wants us to respect each other's opinions.	.409	.032	My teacher lets us know which students get the lowest scores on a test.	.723	.186
My teacher wants all students to feel respected.	.632	.054			
<u>Promoting Social Interaction</u>			<u>Promoting Mutual Respect</u>		
My teacher often allows us to discuss our work with classmates.	.505	.258	My teacher does not allow students to make fun of other students' ideas in class.	1.961	.145
My teacher lets us ask other students when we need help with our work.	.827	.087	My teacher does not let us make fun of someone who gives the wrong answer.	.333	.102
My teacher encourages us to get to know all the other students in class.	.218	.057			
My teacher encourages us to share ideas with one another in class.	.446	.133			

Note. N = 203; ICC= Intra-Class Correlations.

Table 9

Descriptive Statistics and Intra-Class Correlations for Elementary School Classroom Environment Items

Classroom Social Environment Items	N	Mean	SD	Skewness	Kurtosis	ICC
My teacher allows us to discuss our work with classmates.	202	3.535	1.316	❖ -0.413	-0.933	.258
My teacher does not let us make fun of someone who gives the wrong answer.	202	4.366	1.244	-1.838	1.941	.102
My teacher does not allow students to make fun of other students' ideas in class	201	4.378	1.235	-1.926	2.350	.145
My teacher wants us to respect each other's opinions.	202	4.649	.829	-2.760	7.670	.032
My teacher points out those students who get poor grades as an example to all of us.	203	1.631	1.097	1.751	2.172	.154
My teacher tells us how we compare to other students.	202	1.886	1.231	1.255	.529	.178
My teacher wants all students to feel respected.	203	4.517	.977	-2.190	4.283	.054
My teacher points out those students who get good grades as an example to all of us.	203	3.473	1.398	-.449	-.987	.117
My teacher wants us to understand our work, not just memorize it.	202	4.604	.774	-2.110	4.189	.013
My teacher really wants us to enjoy learning new things.	203	4.478	.940	-2.099	4.239	.101
My teacher gives us time to really explore and understand new ideas.	203	4.133	1.061	-1.098	.521	.094
My teacher lets us know which students get the lowest scores on a test.	203	1.537	1.068	2.094	3.542	.186
My teacher encourages us to get to know all the other students in class.	203	3.946	1.248	-1.009	.055	.057
My teacher lets us ask other students when we need help with our work.	202	3.371	1.236	-.355	-.755	.087
My teacher encourages us to share ideas with one another in class.	203	3.872	1.162	-.800	-.121	.133

Note. SD= Standard Deviation; ICC = Intra-Class Correlations.

Table 10

Elementary Between Level Classroom Social Environment Factors and Loadings

Elementary School Student Between Factors	Factor Loadings
<u>Collaborative Performance</u>	
My teacher points out those students who get good grades as an example to all of us.	.927
My teacher points out those students who get poor grades as an example to all of us.	.981
My teacher tells us how we compare to other students.	.963
My teacher lets us know which students get the lowest scores on a test.	1.013
My teacher does not allow students to make fun of other students' ideas in class.	1.011
My teacher does not let us make fun of someone who gives the wrong answer.	.990
My teacher often allows us to discuss our work with classmates.	.814
My teacher encourages us to share ideas with one another in class.	.799
My teacher wants us to enjoy learning new things.	.874
<u>Cooperative Learning</u>	
My teacher encourages us to get to know all the other students in class.	.991
My teacher gives us time to really explore and understand new ideas.	.968
My teacher wants us to understand our work, not just memorize it.	.950
My teacher lets us ask other students when we need help with our work.	.633

Middle school. At the middle school student level, exploratory factor analysis with oblique rotations produced four factors at the within level (individual student level) and one factor at the between level (classroom/teacher level). The ICC, which indicates the proportion of total variance that can be attributed to between-class differences, ranged from .029 to .107. The goodness-of-fit test statistic (including the number of degrees of freedom, and its p value) as a measure of absolute fit [$\chi^2 (N = 330, df = 253) = 265.453, p = .2829$] suggested that the model had satisfactory fit. Additionally, the CFI was .993, RMSEA was .012, and the SRMR at the within level was .037 and at the between level was .640. These model indices, except SRMR between, indicate an acceptable fit. See Table 7 for model fit indices results and the factor structures.

At the within level, all four factors identified had significant item factor loadings larger than 0.3. Factor loadings ranged from .399 to .950. The four factors identified were Performance Classroom Goal Structure (factor loadings: .493 to .824), Respectful Mastery Classroom Goal Structure (factor loadings: .339 to .824), Promoting Mutual Respect (factor loadings: .379 to .876), and Promoting Student Interactions (factor loadings: .395 to .785). Refer to Table 11 for factor loadings and Table 12 for the descriptive statistics. These four factors were very similar to the original four scales with the exception of Respectful Mastery Classroom Goal Structure, which included one item from the Promoting Mutual Respect and one item from the original Promoting Social Interaction scales. Performance remained as the original five-item scale. Promoting Student Interactions only included three items out of the original four-item scale, while Promoting Mutual Respect included four items of the original five-item scale. At the between level, the single factor contained all 19 items and was termed Classroom Motivational and Social Environment as it included items from each of the four original scales. Refer to Table 13 for items at the between level. Findings indicate that at the within level, middle school students perceived performance classroom goals that focused on competition and comparison as a distinct concept, similar to the original hypothesized factor structure. Comparable findings were found for Promoting Social Interaction and Promoting Mutual Respect, where the factors reflected items in the original scales. Findings also indicate that for middle school students, mastery classroom goals that emphasize learning to gain competency, encourage interaction, and actively promote mutual respect among classmates belong to a single factor (Respectful Mastery Classroom Goal Structure). At the between level, findings indicate that middle school students viewed all of the original four factors as a part of a single construct that incorporates both motivational and social aspects of the classroom.

Table 11

Middle School Student Within Level Classroom Social Environment Factors and Loadings

Middle School Student Within Factors	Factor Loading	ICC	Middle School Students Within Factors	Factor Loading	ICC
<u>Respectful Mastery Goal Structure</u>			<u>Performance Goal Structure</u>		
My teacher wants us to understand our work, not just memorize it.	.608	.029	My teacher points out those students who get good grades as an example to all of us.	.493	.106
My teacher really wants us to enjoy learning new things.	.824	.054	My teacher points out those students who get poor grades as an example to all of us.	.712	.050
My teacher recognizes us for trying hard.	.442	.067	My teacher lets us know which students get the highest scores on a test.	.519	.072
My teacher gives us time to really explore and understand new ideas.	.504	.050	My teacher tells us how we compare to other students.	.621	.044
In our classes, we are supposed to be quiet all the time. (Reverse item)	.339	.047	My teacher lets us know which students get the lowest scores on a test.	.824	.055
My teacher wants all students to feel respected.	.542	.036			
<u>Promoting Social Interaction</u>			<u>Promoting Mutual Respect</u>		
My teacher often allows us to discuss our work with classmates.	.552	.065	My teacher wants us to respect each other's opinions.	.389	.076
My teacher lets us ask other students when we need help with our work.	.701	.072	My teacher does not allow students to make fun of other students' ideas in class. (Reverse item)	.950	.073
My teacher encourages us to get to know all the other students in class.	.395	.107	My teacher makes sure that students don't say anything negative about each other in class	.379	.077
My teacher encourages us to share ideas with one another in class.	.785	.088	My teacher does not let us make fun of someone who gives the wrong answer. (Reverse item)	.876	.078

Table 12

Descriptive Statistics and Intra-Class Correlations for Middle School Classroom Environment Items

Middle School Classroom Social Environment Items	N	Mean	SD	Skewness	Kurtosis	ICC
My teacher often allows us to discuss our work with classmates.	328	2.979	1.115	.042	-.421	.065
My teacher does not let us make fun of someone who gives the wrong answer.	326	4.350	1.215	-1.803	1.909	.078
My teacher does not allow students to make fun of other students' ideas in class.	324	4.312	1.193	-1.635	1.476	.073
My teacher wants us to respect each other's opinions.	321	4.542	.904	-2.180	4.316	.076
My teacher lets us know which students get the highest scores on a test.	325	2.852	1.462	.139	-1.298	.072
In our classes, we are supposed to be quiet all the time. (reverse)	324	3.241	1.112	.030	-.498	.047
My teacher points out those students who get poor grades as an example to all of us.	324	1.620	1.102	1.828	2.390	.050
My teacher tells us how we compare to other students.	321	1.935	1.247	1.127	.111	.044
My teacher recognizes us for trying hard.	323	3.988	1.161	-.959	.027	.067
My teacher wants all students to feel respected.	325	4.434	.987	-1.886	3.058	.036
My teacher points out those students who get good grades as an example to all of us.	321	3.246	1.440	-.248	-1.233	.106
My teacher wants us to understand our work, not just memorize it	321	4.421	.972	-1.830	2.851	.029
My teacher really wants us to enjoy learning new things	320	4.253	1.002	-1.333	1.261	.054
My teacher gives us time to really explore and understand new ideas.	320	3.722	1.212	-.602	-.621	.050
My teacher lets us know which students get the lowest scores on a test.	320	1.572	1.145	2.003	2.824	.055
My teacher encourages us to get to know all the other students in class.	318	3.670	1.308	-.613	-.727	.107
My teacher makes sure that students don't say anything negative about each other in class. □	320	4.206	1.142	-1.389	.955	.077
My teacher lets us ask other students when we need help with our work.	321	2.932	1.251	.111	-.838	.072
My teacher encourages us to share ideas with one another in class.	321	3.368	1.231	-.325	-.757	.088

Note. SD = Standard Deviation; ICC = Intra-Class Correlation.

Table 13

Middle School Student Between Level Classroom Social Environment Factors and Loadings

Middle School Student Between Factors	Factor Loadings
<u>Classroom Motivational and Social Environment</u>	
My teacher wants us to respect each other's opinions.	.987
My teacher does not allow students to make fun of other students' ideas in class.	.975
My teacher makes sure that students don't say anything negative about each other in class.	-.061
My teacher does not let us make fun of someone who gives the wrong answer.	.991
My teacher wants all students to feel respected.	.975
My teacher lets us know which students get the highest scores on a test.	.995
My teacher points out those students who get good grades as an example to all of us.	.996
My teacher tells us how we compare to other students.	-.337
My teacher lets us know which students get the lowest scores on a test.	.942
My teacher points out those students who get poor grades as an example to all of us.	-.801
My teacher often allows us to discuss our work with classmates.	.888
My teacher lets us ask other students when we need help with our work.	.856
My teacher encourages us to share ideas with one another in class.	.998
In our classes, we are supposed to be quiet all the time. (Reverse item)	-.980
My teacher encourages us to get to know all the other students in class.	.643
My teacher wants us to understand our work, not just memorize it.	.858
My teacher really wants us to enjoy learning new things.	.969
My teacher recognizes us for trying hard.	.992
My teacher gives us time to really explore and understand new ideas.	.976

Table 14

Within Level Factors for Elementary and Middle School Students

Elementary Students	Middle School Students
<p><u>Respectful Mastery Goal Structure</u> My teacher wants us to understand our work, not just memorize it. My teacher really wants us to enjoy learning new things. My teacher gives us time to really explore and understand new ideas. My teacher wants all students to feel respected. <i>My teacher wants us to respect each other's opinions.</i></p>	<p><u>Respectful Mastery Goal Structure</u> My teacher wants us to understand our work, not just memorize it My teacher really wants us to enjoy learning new things My teacher gives us time to really explore and understand new ideas. My teacher wants all students to feel respected. <i>My teacher recognizes us for trying hard. In our classes, we are supposed to be quiet all the time. (Reverse item)</i></p>
<p><u>Performance</u> My teacher points out those students who get good grades as an example to all of us. My teacher points out those students who get poor grades as an example to all of us. My teacher tells us how we compare to other students. My teacher lets us know which students get the lowest scores on a test.</p>	<p><u>Performance</u> My teacher points out those students who get good grades as an example to all of us. My teacher points out those students who get poor grades as an example to all of us. My teacher tells us how we compare to other students. My teacher lets us know which students get the lowest scores on a test. <i>My teacher lets us know which students get the highest scores on a test.</i></p>
<p><u>Promoting Social Interaction</u> My teacher often allows us to discuss our work with classmates. My teacher lets us ask other students when we need help with our work. My teacher encourages us to get to know all the other students in class. <i>My teacher encourages us to share ideas with one another in class.</i></p>	<p><u>Promoting Social Interaction</u> My teacher often allows us to discuss our work with classmates. My teacher lets us ask other students when we need help with our work. My teacher encourages us to get to know all the other students in class.</p>
<p><u>Promoting Mutual Respect</u> My teacher does not allow students to make fun of other students' ideas in class. My teacher does not let us make fun of someone who gives the wrong answer.</p>	<p><u>Promoting Mutual Respect</u> My teacher does not allow students to make fun of other students' ideas in class. My teacher does not let us make fun of someone who gives the wrong answer. <i>My teacher makes sure that students don't say anything negative about each other in class My teacher wants us to respect each other's opinions.</i></p>

Note. Items that are different between elementary and middle school students are italicized.

Table 15

Between Level Factors for Elementary and Middle School Students

Elementary Students	Middle School Students
<p><u>Collaborative Performance</u> My teacher points out those students who get good grades as an example to all of us. My teacher points out those students who get poor grades as an example to all of us. My teacher tells us how we compare to other students. My teacher lets us know which students get the lowest scores on a test. My teacher does not allow students to make fun of other students' ideas in class. My teacher does not let us make fun of someone who gives the wrong answer. My teacher wants all students to feel respected. My teacher often allows us to discuss our work with classmates. My teacher encourages us to share ideas with one another in class.</p>	<p><u>Classroom Motivational and Social Environment</u> My teacher wants us to respect each other's opinions. My teacher does not allow students to make fun of other students' ideas in class. My teacher makes sure that students don't say anything negative about each other in class My teacher does not let us make fun of someone who gives the wrong answer. My teacher wants all students to feel respected. My teacher lets us know which students get the highest scores on a test. My teacher points out those students who get good grades as an example to all of us. My teacher tells us how we compare to other students. My teacher lets us know which students get the lowest scores on a test. My teacher points out those students who get poor grades as an example to all of us. My teacher often allows us to discuss our work with classmates. My teacher lets us ask other students when we need help with our work. My teacher encourages us to share ideas with one another in class. In our classes, we are supposed to be quiet all the time. (Reverse item) My teacher encourages us to get to know all the other students in class. My teacher wants us to understand our work, not just memorize it. My teacher really wants us to enjoy learning new things. My teacher recognizes us for trying hard. My teacher gives us time to really explore and understand new ideas.</p>
<p><u>Cooperative Learning</u> My teacher lets us ask other students when we need help with our work. My teacher encourages us to get to know all the other students in class. My teacher wants us to understand our work, not just memorize it. My teacher gives us time to really explore and understand new ideas.</p>	

Comparison between elementary and middle school student perceptions. Findings from the exploratory factor analyses across elementary and middle schools indicate considerable similarities in factor structures of the Classroom Social Environment between groups at the within level. Refer to Table 14 for a comparison.

Elementary and middle school students classified teacher practices that promote respect as an important part of a mastery goal classroom structure. Additionally, both groups perceived a Performance Classroom Goal Structure as distinct and reflecting teacher practices that emphasize demonstrating competence and comparisons based on academic performance. Furthermore, Promoting Social Interaction was viewed as a distinct factor across both groups. A notable difference at the within level was elementary students identified teacher practices that prevent disrespectful behavior as the primary way teachers promote mutual respect, while these practices were embedded with proactive strategies into the Promoting Mutual Respect factor for the middle school sample. At the between level, differences also occurred (refer to Table 15). Elementary students perceived two factors; Collaborative Performance, which primarily encompassed practices that emphasized a performance goal structure and that promoted mutual respect and social interaction, and Cooperative Learning, which focused on practices that guided learning and promoted social interaction. Conversely, at the middle school level, only one factor emerged that incorporated all classroom motivational and social environment constructs.

Elementary and middle school teachers. Principal Axis Factor analysis with oblique rotation was conducted to verify the hypothesized four-factor structure of the Classroom Social Environment for elementary and middle school teachers. Due to the small sample size in the elementary ($N = 17$) and middle school ($N = 31$) teacher samples, both samples were combined ($N = 48$), as an inadequate sample size can yield unreliable, non-valid results (Beavers et al.,

2013). Therefore, no comparison between elementary and middle school teachers was conducted. Similar to the elementary sample, there was a significant model misfit with the hypothesized four factor structure (Mastery Classroom Goal Structure, Performance Classroom Goal Structure, Promoting Mutual Respect and Promoting Social Interaction). Thus, a single-level exploratory factor analysis was conducted and revealed a five factor model. The goodness-of-fit test statistic (including the number of degrees of freedom, and its p value) as a measure of absolute fit [$\chi^2 (N = 48, df = 74) = 64.004, p = .3715$] suggested that the model had satisfactory fit. Additionally, the CFI was .986, RMSEA was .000 and the SRMR was .083, which is slightly above the cut off criterion of .08 (Hu & Bentler, 1999; Steiger, 2007).

Five distinct factor structures emerged and were named Respectful Performance, Collaborative Mastery, Promoting Student Engagement, Promoting Mutual Respect, and Evaluation. See Table 16 for the descriptive statistics and Table 17 for the items included in each factor. Factor loadings ranged from -.922 to 3.317. Respectful Performance (factor loadings: .331 to .924) incorporated one item from the original Promoting Mutual Respect scale and three items from the original Performance scale, while Interactive Mastery (factor loadings: .520 to .742) included three items from the Social Interaction scale and one from the Mastery scale. Promoting Student Engagement (factor loadings: -.922 to .623) was compromised of two items from the original Promoting Social Interaction and Mastery scales. Evaluation (factor loadings: .380 to .889) included one item from the original Performance scale and one item from the Mastery scale. Promoting Mutual Respect (factor loadings: .317 to 3.317) incorporated two items from the original Promoting Mutual Respect scale.

Table 16

Descriptive Statistics for Teachers Classroom Social Environment

Teachers Classroom Social Environment Items	N	Mean	SD	Skewness	Kurtosis
I give special privileges to students who do the best work.	47	3.68	1.144	-.604	-.418
I make a special effort to recognize students' individual progress, even if they are below grade level.	48	4.52	.583	-.756	-.374
I display the work of the highest achieving students as an example.	48	3.27	1.233	.165	-1.402
During class, I often provide several different activities so that students can choose among them.	48	3.38	1.044	-.238	-.841
I consider how much students have improved when I give them report card grades.	48	3.90	1.153	-.919	.034
I help students understand how their performance compares to others.	48	2.90	.994	.487	-.112
I encourage students to compete with each other.	48	2.46	1.010	.377	-.424
I point out those students who do well as a model for the other students.	48	3.44	.943	-.526	-.268
I give a wide range of assignments, matched to students' needs and skill level.	48	4.17	.724	-.967	1.792
I often allow students to discuss their work with classmates.	48	4.04	.874	-.282	-1.171
I want students to respect each other's' opinions.	48	4.88	.393	-3.367	11.749
I encourage students to share ideas with one another in class.	48	4.67	.559	-1.472	1.322
I want all students to feel respected.	48	4.98	.144	-6.928	48.000
I encourage students to get know all the other students in the class.	48	4.69	.552	-1.601	1.754
I let students ask other students when they need help with their work.	48	4.02	.863	-.249	-1.128
I do not allow students to make fun of other students' ideas in class.	48	4.98	.144	-6.928	48.000
In my class, students are supposed to be quiet all the time. (reverse)	48	4.13	.761	-.217	-1.217
I make sure that students don't say anything negative about each other in class.	48	4.73	.676	-3.061	9.895
I do not let students make fun of someone who gives the wrong answer.	48	4.98	.144	-6.928	48.000

Note. SD = Standard Deviation.

Table 17

Teacher Classroom Social Environment Factors and Item Factor Loadings

Teachers Factors	Factor Loading	Teachers Factors	Factor Loading
<u>Respectful Performance</u>		<u>Interactive Mastery</u>	
I display the work of the highest achieving students as an example.	.924	I make a special effort to recognize students' individual progress, even if they are below grade level.	.520
I help students understand how their performance compares to others.	.331	I often allow students to discuss their work with classmates.	.722
I encourage students to compete with each other.	.625	I encourage students to get know all the other students in the class.	.576
I point out those students who do well as a model for the other students.	.698	I let students ask other students when they need help with their work.	.742
I want all students to feel respected.	.424		
<u>Promoting Student Engagement</u>		<u>Evaluation</u>	
I give a wide range of assignments, matched to students' needs and skill level.	.391	I give special privileges to students who do the best work.	.380
During class, I often provide several different activities so that students can choose among them.	.623	I consider how much students have improved when I give them report card grades.	.889
I encourage students to share ideas with one another in class.	.475		
In my class, students are supposed to be quiet all the time. (Reverse item)	-.922	<u>Promoting Mutual Respect</u>	
		I want all students to feel respected.	3.317
		I make sure students do not say anything negative about each other in class.	.317

Descriptive Statistics

For each of the major variables, means, standard deviations, and normality were calculated using SPSS version 22. The results for each variable and its components are described below and can be seen in Table 18. Correlations between major variables are displayed in correlation matrices below for elementary students, middle school students, and combined elementary and middle school teachers. Moderate to high significant correlations (i.e. above .50) between Classroom Social Environment variables and predictor variables are discussed.

Student measures. The following section discusses the means, standard deviations, and normality data for the student Classroom Social Environment, Achievement Goal Orientation and Classroom Engagement measures.

Classroom social environment. Students' perceptions of the Classroom Social Environment at the elementary within level consisted of four constructs: Respectful Mastery Classroom Goal Structure, Performance Classroom Goal Structure, Promoting Social Interaction, and Promoting Mutual Respect. Elementary students reported high levels of Respectful Mastery Classroom Goal Structure ($M = 4.476$, $SD = .654$) and low levels of Performance Classroom Goal Structure ($M = 2.119$, $SD = .859$). Students reported moderate levels of Promoting Social Interaction ($M = 3.682$, $SD = .883$) and high levels of Promoting Mutual Respect ($M = 4.374$, $SD = 1.178$). At the between level two constructs existed: Collaborative Performance and Cooperative Learning. Collaborative Performance ($M = 3.441$, $SD = .461$) was within the average range and Cooperative Learning was in the high average range ($M = 3.986$, $SD = .721$). All skewness scores for the within variables fell slightly outside of the acceptable range (+1 and -1) for normality, with the exception of Promoting Social Interaction (.650). Both between level constructs fell within the normal ranges for skewness. All kurtosis scores fell within the acceptable range (+3 and -3), with the exceptions of Respectful Mastery Classroom Goal Structure (3.546) and Collaborative Performance (3.102). Cronbach's alphas for the within level constructs ranged from .668 to .895 and from .406 to .656 for the between level (see Table 18).

Students' perceptions of the Classroom Social Environment at the middle school within level consisted of four constructs: Respectful Mastery Classroom Goal Structure, Performance Classroom Goal Structure, Promoting Mutual Respect, and Promoting Social Interaction. Students reported high levels of Promoting Mutual Respect ($M = 4.346$, $SD = .901$) and Respectful

Mastery ($M = 4.002$, $SD = .688$). Promoting Social Interaction ($M = 3.226$, $SD = .919$) was in the average range, whereas Performance Classroom Goal Structure ($M = 2.238$, $SD = .895$) was in the low range. All scores for the four constructs were within normal distribution ranges according to skewness and kurtosis scores, with the exception of Promoting Mutual Respect (-1.509). At the between level, Classroom Motivational and Social Environment ($M = 3.444$, $SD = .528$) was in the average range and was normally distributed according to its skewness and kurtosis scores.

Achievement goal orientation. Achievement goal orientation included Mastery Goal Orientation, Performance-approach Goal Orientation, and Performance-avoidance Goal Orientation. Elementary students reported moderate levels of Mastery Goal Orientation ($M = 3.561$, $SD = .949$), and low levels of Performance-approach Goal Orientation ($M = 2.196$, $SD = 1.046$) and Performance-avoidance Goal Orientation ($M = 2.023$, $SD = .986$). Middle school students reported moderate levels of Mastery Goal Orientation ($M = 3.323$, $SD = 1.052$), and low levels of Performance-approach Goal Orientation ($M = 2.681$, $SD = 1.184$) and Performance-avoidance Goal Orientations ($M = 2.287$, $SD = 1.100$). Skewness and kurtosis scores indicated that Mastery, Performance-approach, and Performance-avoidance Goal Orientations at both elementary and middle school were normally distributed (see Table 19).

Classroom engagement. Classroom Engagement included student-reported Involved Engagement and Disruptive Behavior. Elementary students reported high levels of Involved Engagement ($M = 4.073$, $SD = .824$) and low levels of Disruptive Behavior ($M = 2.454$, $SD = .943$). Middle school students also reported high levels of Involved Engagement ($M = 4.157$, $SD = .842$) and low levels of Disruptive Behavior ($M = 2.211$, $SD = .999$). Skewness and kurtosis scores indicated that student-reported Disruptive Behavior scores at the elementary and middle school levels were normally distributed. Involved Engagement was normally distributed at the

middle school level but was outside the acceptable skewness range at the elementary school level (skewness = -1.027, kurtosis = .987; see Table 19).

Teacher measures. The following section discusses the means, standard deviations, and normality for the teacher Classroom Social Environment, and teacher beliefs measures.

Classroom social environment. Teachers' perceptions of the Classroom Social Environment consisted of five constructs: Respectful Performance, Interactive Mastery, Promotion of Student Engagement, Promoting of Mutual Respect, and Evaluation. Promoting Mutual Respect ($M = 4.852$, $SD = .341$) was in the very high range and was outside the normal ranges for skewness (-2.903) and kurtosis (9.016). Students reported high levels of Interactive Mastery ($M = 4.318$, $SD = .518$) and Promotion of Student Engagement ($M = 4.083$, $SD = .551$), and moderate levels of Respectful Performance ($M = 3.388$, $SD = .596$) and Evaluation ($M = 3.781$, $SD = .956$). These four constructs were normally distributed based on their skewness and kurtosis scores (see Table 18).

Teacher beliefs. Teacher beliefs included teacher-reported Teacher Self-efficacy, General Teacher Efficacy, and Teacher Autonomy. Teachers at the elementary ($M = 7.41$, $SD = .771$) and middle school levels ($M = 7.197$, $SD = .969$) reported high levels of Teacher Self-efficacy (9-point Likert Scale). Teachers in elementary ($M = 2.243$, $SD = .357$) and middle school ($M = 2.023$, $SD = .552$) reported low levels of General Teacher Efficacy. Elementary school teachers reported low levels of Teacher Autonomy ($M = 2.91$, $SD = .667$), whereas middle school teachers reported moderate levels of Teacher Autonomy ($M = 3.515$, $SD = .515$). Skewness and kurtosis scores indicated Teacher Self-efficacy, General Teacher Efficacy, and Teacher Autonomy at the elementary and middle school levels were normally distributed (see Table 19).

Table 18

Descriptive Statistics and Reliability for Student and Teacher Classroom Constructs

Factor	N	Mean	SD	Skewness	Kurtosis	Alpha
Elementary Students						
Within Level						
Respectful Mastery Classroom Performance	204	4.476	.654	-1.741	3.546	.821
Promoting Social Interaction	204	2.119	.859	1.195	2.049	.668
Promoting Mutual Respect	203	3.682	.883	-.650	.216	.677
	202	4.374	1.178	-1.906	2.362	.895
Between Level						
Collaborative Performance	200	3.441	.461	-.910	3.102	.406
Cooperative Learning	204	3.986	.721	-.647	.299	.656
Middle School Students						
Within Level						
Performance	327	2.238	.895	.808	.497	.746
Respectful Mastery Classroom	326	4.002	.688	-.917	.635	.705
Promoting Mutual Respect	327	4.346	.901	-1.509	1.538	.804
Promoting Social Interaction	330	3.226	.919	-.123	-.429	.745
Between Level						
Classroom Motivational and Social Environment	302	3.444	.528	-.344	.502	.773
Teachers						
Interactive Mastery	48	4.318	.518	-.214	-.953	.664
Respectful Performance	48	3.388	.596	.679	.748	.605
Promoting Student Engagement	48	4.083	.551	-.518	.629	.646
Promoting Mutual Respect	48	4.852	.341	-2.903	9.016	-.049
Evaluation	48	3.781	.956	-.405	.772	.560

Note. SD = Standard Deviation

Table 19

Descriptive Statistics and Reliability for Student and Teacher Background and Belief Variables

	<i>Elementary School</i>						<i>Middle School</i>					
	N	Mean	SD	Skewness	Kurtosis	α	N	Mean	SD	Skewness	Kurtosis	α
Student Variables												
Achievement Goal Orientation												
Mastery	204	3.561	.949	-.465	-.473	.823	455	3.323	1.052	-.251	-.796	.869
Performance- Approach	203	2.196	1.046	.750	-.269	.847	454	2.681	1.184	.387	-.964	.849
Performance-Avoidance	204	2.023	.986	.842	-.173	.743	453	2.287	1.100	.655	-.482	.747
Academic Self-efficacy	204	4.096	.677	-1.066	1.505	.775	455	4.005	.802	-.942	1.154	.840
Classroom Engagement												
Involved Engagement	203	4.073	.824	-1.027	.987	.825	453	4.157	.842	.115	.772	.855
Disruptive Behavior	203	2.454	.943	.530	-.100	.741	449	2.211	.999	.660	-.321	.789
Teacher Variables												
Teacher Self-efficacy	17	7.41	.771	.429	-.049	.869	34	7.197	.969	.000	-.640	.926
General Teacher Efficacy	17	2.243	.357	-.046	-1.230	.479	34	2.023	.552	.109	-.876	.886
Teacher Autonomy	17	2.91	.667	.184	-1.126	.587	34	3.515	.515	-.947	.675	.579

Note. SD = Standard Deviation.

Correlation analyses. This section discusses inter-correlations between the Classroom Social Environment measures, as well as moderate to large significant correlations ($> .50$) between the other variables of interests for elementary and middle school students, as well as for elementary and middle school teachers.

Elementary school students. The Classroom Social Environment constructs at the elementary school were all significantly associated at least at the $p < .05$ level (refer to Table 20). Specifically, Respectful Mastery Classroom Goal Structure was positively associated with Promoting Mutual Respect ($r = .396, p < .01$) and Promoting Social Interaction ($r = .481, p < .01$). Promoting Mutual Respect was positively associated with Promoting Social Interaction ($r = .279, p < .01$). These correlations indicate that mastery and both social aspects of the Classroom Social Environment were positively correlated. Respectful Mastery Classroom Goal Structure was also negatively associated with Performance Classroom Goal Structure ($r = -.138, p < .05$). Performance Classroom Goal Structure was negatively correlated with Promoting Mutual Respect ($r = -.290, p < .01$) and Promoting Social Interaction ($r = -.224, p < .01$). Promoting Social Interaction was positively associated with gender ($r = .158, p < .05$). Moderate SES School was negatively associated with Performance Classroom Goal Structure ($r = -.229, p < .01$) and positively associated with Promoting Social Interaction ($r = .140, p < .05$). Low SES School was negatively associated with Promoting Mutual Respect ($r = -.178, p < .05$) and Promoting Social Interaction ($r = -.243, p < .01$), but positively associated with Performance Classroom Goal Structure ($r = .175, p < .05$). Additional moderate to large significant correlations include positive relationships between Performance-avoidance Goal Orientation and Performance Approach Goal Orientation ($r = .545, p < .01$) and

Mastery Goal Orientation and Involved Engagement ($r = .657, p < .01$). Finally, Disruptive Behavior was negatively associated with Involved Engagement ($r = -.532, p < .01$).

Overall, these findings indicate that elementary students perceived Mastery-Classroom Goal Structures to be associated with more teacher-promoted Mutual Respect and Social Interactions and that Performance Classroom Goal Structures had low levels of these teacher-promoted behaviors. These findings align with research which indicates that classrooms that foster mutual respect and social interaction are characterized as high mastery classrooms and are associated with positive student outcomes (Merritt et al., 2012; Patrick et al., 2007; Sakiz, Pape, & Woolfolk Hoy, 2012; Stewart, 2014). Furthermore, elementary male students perceived higher levels of teacher-promoted social interaction which contradicts findings across studies that note that male students tend to perceive their environments more negatively than female students (Fan et al., 2011; Koth et al., 2008; Mitchell et al., 2010). Classroom engagement associations aligned with previous research, which indicates that involved behavior is associated with a mastery-oriented goal orientation and with lower levels of disruptive behavior (Ames, 1992; Ozkal, 2013; Skinner & Belmont, 1993; Urdan, 1997). Schools with higher proportions of free and reduced lunch students experience more negative classroom environments where teacher-promoted mutual respect and social interaction were low, and academic competition and comparison were high.

Table 20

Elementary School Students Correlation Matrix

Construct	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Gender	-													
Ethn.	.067	-												
Inv.	.300**	-.068	-											
Dis.	-.363**	-.107	-.532**	-										
Eff.	.110	.006	.359**	-.252**	-									
Mas.	.218**	.042	.657**	-.349**	.452**	-								
Pap.	-.172*	.000	.063	-.064	.125	.102	-							
Pav.	-.172*	-.122	-.006	.027	.050	.043	.545**	-						
RespMas.	-.027	-.153	-.027	.040	-.032	-.099	-.029	.010	-					
MutResp.	.086	-.128	.080	-.099	.101	.127	.001	-.090	.396**	-				
Perform.	-.122	.109	-.098	.035	-.130	.013	-.008	.060	-.138*	-.290**	-			
SocInt.	.158*	-.058	-.019	.050	-.004	-.066	.042	.049	.481**	.279**	-.224**	-		
ModSES	-.003	-.089	.025	.018	.146*	-.036	.005	-.001	.123	.080	-.229**	.140*	-	
LowSES	-.135	.112	.006	.083	-.125	.105	-.080	-.042	-.096	-.178*	.175*	-.243**	-.418**	-

Note. Ethn. = Ethnicity; Inv. = Involved Engagement; Dis. = Disruptive behavior; Eff. = Academic Self-efficacy; Mas. = Mastery Goal Orientation; Pap. = Performance-approach Goal Orientation; Pav. = Performance-avoidance Goal Orientation; RespMas. = Respectful Mastery Classroom Goal Structure; MutResp = Promoting Mutual Respect; Perform. = Performance Classroom Goal Structure; SocInt. = Promoting Social Interaction; ModSES = Moderate SES School; LowSES = Low SES School. * $p < .05$; ** $p < 0.01$, *** $p < .001$ level (2-tailed).

Table 21

Middle School Students Correlation Matrix

Construct	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Gender	-													
Ethn.	.016	-												
Eff.	.065	.041	-											
Mas.	.195**	.010	.524**	-										
Pap.	-.145**	-.024	.075	.019	-									
Pav.	-.110*	.020	-.008	-.050	.447**	-								
Inv.	.164**	-.069	.421**	.543**	.023	-.019	-							
Dis.	-.188**	.100	-.300**	-.447**	.044	.090	-.610**	-						
Perform.	-.176**	.023	-.152**	-.186**	.139*	.256**	-.282**	.248**	-					
MutResp.	.104	.022	.093	.158**	-.125*	-.084	.146**	-.133*	-.170**	-				
SocInt.	.038	-.015	.156**	.188**	-.035	.109*	.124*	-.101	.108	.263**	-			
RespMas.	.066	.027	.231**	.333**	-.116*	-.005	.285**	-.221**	.004	.446**	.407**	-		
ModSES	.084	-.074	-.056	.018	-.047	-.070	.078	-.103	-.250**	.124*	.008	.046	-	
LowSES	-.049	.090	-.009	.006	-.106	.001	-.093	.085	.170**	.025	.239**	.112*	-.302**	-

Note. Ethn. = Ethnicity; Eff. = Academic Self-efficacy; Mas. = Mastery Goal Orientation; Pap. = Performance-approach Goal Orientation; Pav. = Performance-avoidance Goal Orientation; Inv. = Involved Engagement; Dis. = Disruptive behavior; Perform. = Performance classroom goal structure; MutResp. = Promoting Mutual Respect; SocInt. = Promoting Social Interaction; RespMas. = Respectful Mastery Classroom Goal Structure; ModSES = Moderate SES school; LowSES = Low SES school.

* $p < .05$; ** $p < 0.01$, *** $p < .001$ level (2-tailed).

Middle school students. In regards to the Classroom Social Environment constructs at the middle school level (see Table 21), Performance Classroom Goal Structure was negatively associated with Promoting Mutual Respect ($r = -.170, p < .01$). Promoting Mutual Respect was positively correlated with Promoting Social Interaction ($r = .263, p < .01$) and Respectful Mastery Classroom Goal Structure ($r = .446, p < .01$). Promoting Social Interaction was positively associated with Respectful Mastery Classroom Goal Structure ($r = .407, p < .01$).

The Classroom Social Environment constructs at the middle school level were also correlated with various additional variables. Specifically, Performance Classroom Goal Structure was negatively associated with gender ($r = -.176, p < .01$), Academic Self-efficacy ($r = -.152, p < .01$), Mastery Goal Orientation ($r = -.186, p < .01$), Moderate SES School ($r = -.250, p < .01$), and Involved Engagement ($r = -.282, p < .01$). Performance Classroom Goal Structure was also positively correlated with Performance-approach Goal Orientation ($r = .139, p < .05$), Performance-avoidance Goal Orientation ($r = .256, p < .01$), Low SES School ($r = -.170, p < .01$), and Disruptive Behavior ($r = .248, p < .01$). Promoting Mutual Respect was positively associated with Mastery Goal Orientation ($r = .158, p < .01$), Moderate SES School ($r = .124, p < .05$), and Involved Engagement ($r = .146, p < .01$). Promoting Mutual Respect was also negatively associated at the $p < .05$ level with Performance-approach Goal Orientation ($r = -.125$) and Disruptive Behavior ($r = -.133$). Promoting Social Interaction was positively associated with Academic Self-efficacy ($r = .156, p < .01$), Mastery Goal Orientation ($r = .188, p < .01$), Performance-avoidance Goal Orientation ($r = .109, p < .05$), Low SES School ($r = .239, p < .01$), and Involved Engagement ($r = .124, p < .05$). Respectful Mastery Classroom Goal Structure

was positively associated with Academic Self-efficacy ($r = .231, p < .01$), Mastery Goal Orientation ($r = .333, p < .01$), Involved Engagement ($r = .285, p < .01$) and Low SES School ($r = .112, p < .05$ level.). Respectful Mastery Classroom Goal Structure was also negatively associated with Performance-approach Goal Orientation ($r = -.116, p < .05$) and Disruptive Behavior ($r = -.221, p < .01$).

Additional moderate to large significant correlations ($r > .50$) among the variables include positive relations between Mastery Goal Orientation and Academic Self-efficacy ($r = .524, p < .01$) as well as Involved Engagement and Mastery Goal Orientation ($r = .543, p < .01$). Additionally, there was a large negative correlation between Disruptive Behavior and Involved Engagement ($r = -.610, p < .01$).

Similar to the elementary students and to previous research, middle school students perceived teacher-promoted Mutual Respect and Social Interaction as associated with Mastery Classroom Goal Structure (Meece, 1991; Patrick et al., 2001). In accordance with previous findings, Performance Classroom Goal Structure was associated with more maladaptive student beliefs and behaviors (Performance-approach Goal Orientation, Performance-avoidance Goal Orientation and Disruptive Behavior) and was associated with lower levels of adaptive beliefs and behaviors (Mastery Goal Orientation, Academic Self-efficacy, and Involved Engagement; Kaplan & Midgley, 1999; Polychroni et al., 2012; Wolters, 2004). Conversely, Mastery Classroom Goal Structure, Promoting Mutual Respect and Promoting Social Interactions were associated with higher levels of adaptive beliefs and behaviors and lower levels of maladaptive beliefs and behaviors (Bergsmann et al., 2013; Rolland, 2012; Stewart, 2014; Urdan & Midgley, 2003;). At the middle school level, both Moderate and Low SES School were

related to higher perceptions of teacher practices that built peer relationships.

Elementary and middle school teachers. The teacher-reported Classroom Social Environment constructs had few significant inter-correlations and correlations with additional variables (see Table 22). Specifically, Interactive Mastery was positively correlated with Promoting Student Engagement ($r = .306$) and Evaluation ($r = .289$) at the $p < .05$ level. Interactive mastery was also positively correlated with Teacher Self-efficacy ($r = .339, p < .05$). Moderate SES School was positively associated at the $p < .01$ level with Evaluation ($r = .390$) and Promoting Student Engagement ($r = .392$). Promoting Mutual Respect was positively correlated with Low SES School ($r = .305, p < .05$). Finally, teacher age and experience ($r = .519$) were found to be significantly related at the $p < .01$ level. These findings indicate that teachers who reported creating classroom environments with high levels of respectful mastery had higher levels of self-efficacy, were more likely to promote student engagement, and to reward student effort and performance. These results align with previous observational research of teacher-practices, as well with teacher-self reported belief studies (Chong et al., 2010; Gibson & Dembo, 1984; Meece, 1991; Patrick et al., 2001; Slaavik & Slaavik, 2007).

Table 22

Elementary and Middle School Teachers Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
ModSES	-													
LowSES	-.363*	-												
Eval.	.390**	-.210	-											
RespPerf.	.028	-.045	.204	-										
IntMas.	.208	.165	.289*	.165	-									
PStEn	.392**	.054	.182	.230	.306*	-								
MutResp.	-.158	.305*	-.067	.064	-.093	-.146	-							
Gender	.007	-.193	.065	.085	.145	.271	-.046	-						
Ethn.	.204	-.055	.261	-.013	-.063	.006	-.053	-.135	-					
Exp.	.128	-.138	.028	-.122	.044	.089	-.175	.204	.167	-				
Age	-.069	-.097	-.036	.070	-.140	-.046	-.140	.194	-.107	.519**	-			
TSE	-.098	-.042	.057	-.191	.339*	.078	-.130	.005	-.135	.144	-.138	-		
Aut.	-.024	.013	-.039	-.096	.026	-.048	.107	.196	-.094	-.064	-.283	.147	-	
GenTE	.084	.127	.190	.027	.094	.246	.056	.062	-.315*	-.232	.002	-.219	-.112	-

Note. ModSES = Moderate SES school; LowSES = Low SES school; Eval. = Evaluation; ResPerf. = Respectful performance; IntMas. = Interactive mastery; PStEn. = Promoting student engagement; MutResp. = Promoting Mutual Respect; Gen = Gender; Ethn. = Ethnicity; Exp. = Experience; TSE = Teacher Self-efficacy; Aut. = Autonomy; GenTE = General Teacher Efficacy.

* $p < .05$; ** $p < 0.01$, *** $p < .001$ level (2-tailed).

Research Question 4

Multiple regression analyses were conducted to determine which teacher demographics and belief variables, as well as class-wide student variables, explained elementary and middle school teachers' perceptions of their Classroom Social Environment. Classroom Social Environment constructs included: Interactive Mastery, Respectful Performance, Promoting Student Engagement, Promoting Mutual Respect, and Evaluation practices. This section includes a description of the separate multiple regression analyses for School SES, teacher demographics, teacher beliefs, student/classroom demographics, student/classroom behavior, and student beliefs for each of the Classroom Social Environment constructs. A summary of findings of these analyses is provided at the end of this section.

Interactive mastery. The associations between teacher and classroom variables and elementary and middle school teachers' perceptions of their Interactive Mastery practices (included items from mastery goal structure and social interaction original scales) were examined. See Table 23 for results of the multiple regression analyses.

The regression model for the association between School SES and elementary and middle school teachers' perceptions of Interactive Mastery practices was non-significant ($F [2, 45] = 2.776, p = .073$), with an R^2 of .110. Moderate and low SES accounted for 11% of the variance explained in teacher interactive mastery. Results indicated a significant positive relationship for Moderate SES School ($\beta = .308, p < .05$). The finding suggests teachers in the Moderate SES School reported higher levels of Interactive Mastery practices than teachers in the High and Low SES School.

The regression model for the association between teacher demographics and teachers' perceptions of Interactive Mastery practices was non-significant ($F [5, 41] = 1.073, p = .389$),

with a R^2 of .116. Moderate SES School was included based on previous parameter estimates. Teacher gender, ethnicity, years of experience, age, and Moderate SES School accounted for 11.6% of the variance explained for teacher Interactive Mastery. No teacher demographic variables were positively associated with teacher Interactive Mastery.

The regression model for the association between teacher beliefs and teachers' perceptions of Interactive Mastery practices was significant ($F [4, 43] = 2.656, p < .05$), with an R^2 of .198. Moderate SES School was included based on previous parameter estimates. Teacher Self-efficacy, Autonomy, General Teacher Efficacy, and Moderate SES accounted for 19.8% of the variance in teacher-reported Interactive Mastery practices. Teacher Self-efficacy ($\beta = .398, p < .01$) had a significant positive association with teacher-reported Interactive Mastery practices, indicating that teachers who reported higher levels of self-efficacy also reported higher levels of Interactive Mastery practices. Teacher Autonomy, General Teacher Efficacy, and Moderate SES School were non-significant.

The regression model for the association between student demographics and teachers' perceptions of Interactive Mastery practices was significant ($F [4, 43] = 5.881, p < .01$), with an R^2 of .354. Teacher self-efficacy and Moderate SES School were included based on previous parameter estimates. Student/Classroom gender, ethnicity, Teacher Self-efficacy, and Moderate SES School accounted for 35.4% of the variance in teacher-reported Interactive Mastery practices. Teacher Self-efficacy ($\beta = .333, p < .05$) continued to be a significant positive predictor. Student ethnicity ($\beta = .427, p < .01$) had a significant positive association, indicating that in classrooms with higher proportions of minority students, teachers reported utilizing more Interactive Mastery practices. Student gender and Moderate SES School were non-significant.

The regression model for the association between student behavior and teachers' perceptions of Interactive Mastery practices was significant ($F [5, 42] = 5.441, p < .001$), with an R^2 of .393. Teacher Self-efficacy, Moderate School SES, and student ethnicity were included in this model based on previous parameter estimates. Student Involved Engagement, Disruptive Behavior, Teacher Self-efficacy, Moderate SES School, and student ethnicity accounted for 39.3% of the variance in teacher-reported Interactive Mastery practices. Teacher Self-efficacy ($\beta = .327, p < .05$), Moderate SES School ($\beta = .249, p < .05$), and student ethnicity ($\beta = .384, p < .01$) continued to be significant positive predictors. Neither behavior variables were significant.

The regression model for the association between student beliefs and teachers' perceptions of Interactive Mastery practices was significant ($F [7, 40] = 3.326, p < .01$), with an R^2 of .368. Teacher Self-efficacy, Moderate SES School, and student ethnicity were included in this model based on previous parameter estimates. Classroom Academic Self-efficacy, Mastery Goal Orientation, Performance-approach Goal Orientation, Performance-avoidance Goal Orientation, Teacher Self-efficacy, Moderate SES School, and student ethnicity accounted for 36.8% of the variance in teacher-reported Interactive Mastery practices. Teacher Self-efficacy ($\beta = .329, p < .05$) and student ethnicity ($\beta = .392, p < .01$) continued to be significant positive predictors. All student belief variables were non-significant.

Respectful performance. The associations between teacher and classroom variables and elementary and middle school teachers' perceptions of their Respectful Performance practices (included items from performance goal structure and mutual respect original scales) were examined. See Table 24 for results of the multiple regression analyses.

The regression model for the association between School SES and teachers' perceptions of Respectful Performance practices was non-significant ($F [2, 45] = .049, p = .952$), with an R^2

of .002. High, moderate, and low SES schools accounted for 0.20% of the variance in teacher-reported Respectful Performance practices. School SES was non-significant.

The regression model for the association between teacher demographics and teachers' perceptions of Respectful Performance practices was non-significant ($F [4, 42] = .568, p = .687$), with an R^2 of .051. Teacher gender, ethnicity, age, and years of experience accounted for 5.1% of the variance in teacher-reported Respectful Performance practices. All teacher demographic variables were non-significant.

The regression model for the association between teacher beliefs and teachers' perceptions of Respectful Performance practices was non-significant ($F [3, 44] = .636, p = .596$), with an R^2 of .042. Teacher Self-efficacy, Teacher Autonomy, and General Teacher Efficacy accounted for 4.2% of the variance in teacher-reported Respectful Performance practices. All teacher belief variables were non-significant.

The regression model for the association between student demographics and teachers' perceptions of Respectful Performance practices was non-significant ($F [2, 45] = 5.28, p = .593$), with an R^2 of 0.23. Student/Classroom gender and ethnicity accounted for 2.3% of the variance in teacher-reported Interactive Mastery practices. Neither variable was significant.

The regression model for the association between student behavior and teachers' perceptions of Respectful Performance practices was non-significant ($F [2, 45] = .225, p = .799$), with an R^2 of .010. Student Involved Engagement and Disruptive Behavior accounted for 1% of the variance in teacher-reported Respectful Performance practices. Student Involved Engagement and Disruptive Behavior were non-significant.

The regression model of the association between student beliefs and teachers' perception of Respectful Performance practices was non-significant ($F [4, 43] = 1.052, p = .392$), with an R^2

of .089. Classroom self-efficacy, Mastery Goal Orientation, Performance-approach Goal Orientation and Performance-avoidance Goal Orientation accounted for 8.9% of the variance in teacher-reported Respectful Performance practices. No student belief variables were significant.

Promoting student engagement. The associations between teacher and student variables and teachers' perceptions of their promotion of student engagement (which included items from mastery goal structure and social interaction original scales) were examined. See Table 25 for results of the multiple regression analyses.

The regression equation for the association between School SES and teachers' perceptions of Promoting Student Engagement was significant ($F [2, 45] = 5.545, p < .01$), with an R^2 of .198. Moderate and Low SES Schools accounted for 19.8% of the variance explained in teacher-reported Promotion of Student Engagement. Results indicated a significant positive relationship for Moderate SES School ($\beta = .474, p < .01$). The finding suggests teachers in Moderate SES schools reported higher levels of Promoting Student Engagement practices than teachers in the High and Low SES Schools.

The regression model for teacher demographics on teacher Promotion of Student Engagement was significant ($F [5, 41] = 2.498, p < .05$), with an R^2 of .234. Moderate SES School was included in this model based on previous parameter estimates. Teacher gender, ethnicity, age, years of experience, and Moderate SES School accounted for 23.4% of the variance in teacher reports of their Promotion of Student Engagement. Moderate SES School ($\beta = .387, p < .01$) continued to be a significant positive predictor. No teacher demographic variables were significant predictors; however, teacher gender had an unstandardized coefficient greater than .3 ($\beta = .485$).

Table 23

Teacher Interactive Mastery Parameter Estimates: Teacher and Student Variables

Teacher and Student Factors	Unstandardized		Standardized	F	df	R ²	
Interactive Mastery	<i>b</i>	SE	β				
School Socio-Economic Status							
Overall Model				2.776	45	2	.110
Moderate SES	.389	.190	.308*				
Low SES	.301	.164	.277				
Teacher Demographics							
Overall Model				1.073	41	5	.116
Gender	.237	.254	.142				
Ethnicity	-.161	.190	-.133				
Age	-.009	.006	-.242				
Years of Experience	.006	.009	.117				
Moderate SES	.268	.191	.213				
Teacher Beliefs							
Overall Model				2.656*	43	4	.198
Teacher Self-efficacy	.232	.082	.398**				
Autonomy	-.008	.125	-.009				
General Teacher Efficacy	-.158	.138	.161				
Moderate SES	.294	.173	.233				
Student Demographics							
Overall Model				5.881**	43	4	.354
Gender	.001	.003	.040				
Ethnicity	.011	.003	.427**				
Moderate SES	.292	.157	.232				
Teacher Self-efficacy	.194	.075	.333*				
Student Behavior							
Overall Model				5.441***	42	5	.393
Involved Behavior	.248	.265	.179				
Disruptive Behavior	.367	.226	.312				
Moderate SES	.314	.154	.249*				
Teacher Self-efficacy	.191	.073	.327*				
Student Ethnicity	.010	.003	.384**				
Student Beliefs							
Overall Model				3.326*	40	7	.368
Academic Self-efficacy	-.131	.164	-.121				
Mastery Goal Orientation	.057	.175	.043				
Performance-approach	-.088	.198	-.070				
Performance-avoidance	.084	.209	.062				
Moderate SES	.311	.164	.246				
Teacher Self-Efficacy	.192	.076	.329*				
Student Ethnicity	-.010	.003	.392**				

Note. *SE* = standard error; *df* = degrees of freedom; *N* = 48.

* $p < .05$; ** $p < 0.01$, *** $p < .001$ level (2-tailed)

Table 24

Teacher Respectful Performance Parameter Estimates: Teacher and Student Variables

Teacher and Student Factors	Unstandardized <i>b</i>	Standardized β	F	df	R ²	
Respectful Performance						
School Socio-Economic Status						
Overall Model			.049	45	2	.002
Moderate SES	.020	.232				.014
Low SES	-.050	.200				-.040
Teacher Demographics						
Overall Model			.568	42	4	.051
Gender	.214	.300				.111
Ethnicity	.088	.222				.063
Age	.008	.007				.189
Years of Experience	-.014	.009				-.241
Teacher Beliefs						
Overall Model			.636	44	3	.042
Teacher Self-efficacy	-.124	.102				-.185
Autonomy	-.074	.155				-.071
General Teacher Efficacy	-.024	.172				-.021
Student Demographics						
Overall Model			.528	45	2	.023
Gender	-.002	.004				-.069
Ethnicity	-.004	.004				.141
Student Behavior						
Overall Model			.225	45	2	.010
Involved Behavior	-.167	.371				-.105
Disruptive Behavior	-.209	.315				-.155
Student Beliefs						
Overall Model			1.052	43	4	.089
Academic Self-efficacy	-.232	.213				-.187
Mastery Goal Orientation	.146	.230				.096
Performance-approach	-.201	.257				-.140
Performance-avoidance	-.346	.270				.222

Note. SE = standard error; df = degrees of freedom; N = 48.

* p < .05; **p < 0.01, ***p < .001 level (2-tailed).

Table 25

Teacher Promotion of Student Engagement Parameter Estimates: Teacher and Student Variables

Teacher and Student Factors	Unstandardized <i>b</i>	Standardized <i>SE</i>	Standardized β	F	df	R ²	
Student Engagement							
School Socio-Economic Status							
Overall Model				5.545**	45	2	.198
Moderate SES	.636	.193	.474*				
Low SES	.261	.166	.226				
Teacher Demographics							
Overall Model				2.498*	41	5	.234
Gender	.484	.254	.271				
Ethnicity	-.071	.190	-.055				
Age	-.004	.006	-.101				
Years of Experience	.002	.009	.046				
Moderate SES	.521	.191	.387**				
Teacher Beliefs							
Overall Model				3.572**	42	5	.298
Teacher Self-efficacy	.110	.083	.178				
Autonomy	-.089	.129	-.092				
General Teacher Efficacy	.236	.140	.225				
Moderate SES	.519	.175	.386**				
Teacher Gender	.485	.236	.271*				
Student Demographics							
Overall Model				5.514**	43	4	.339
Gender	.009	.003	.337**				
Ethnicity	.002	.003	.087				
Moderate SES	.593	.169	.441**				
Teacher Gender	.481	.223	.269*				
Student Behavior							
Overall Model				6.063***	42	5	.419
Involved Behavior	-.282	.289	-.191				
Disruptive Behavior	.171	.254	.137				
Moderate SES	.646	.161	.481*				
Teacher Gender	.521	.222	.292*				
Student Gender	.007	.003	.258*				
Student Beliefs							
Overall Model				4.331**	40	7	.431
Academic Self-efficacy	-.339	.164	-.294*				
Mastery Goal Orientation	.029	.176	.020				
Performance-approach	-.419	.198	-.316*				
Performance-avoidance	.015	.235	.010				
Moderate SES	.595	.166	.443**				
Teacher Gender	.438	.215	.245*				
Student Gender	.009	.004	.352*				

Note. N = 48.

p < .05, **p < .01**, ***p < .001 (2-tailed).

The regression model for the association between teacher beliefs and teacher-reported Promotion of Student Engagement was significant ($F [5, 42] = 3.572, p < .01$), with an R^2 of .298. Moderate SES School and teacher gender were included in this model based on previous parameter estimates. Teacher Self-efficacy, Autonomy, General Teacher Efficacy, Moderate SES School, and teacher gender accounted for 29.8% of the variance in teacher-reported Promotion of Student Engagement. Moderate SES School ($\beta = .386, p < .01$) and teacher gender ($\beta = .271, p < .05$) were significantly associated with teacher-reported Promotion of Student Engagement, indicating that teachers in Moderate SES Schools teachers reported higher levels of Promotion Student Engagement than in High or Low SES schools. Additionally, female teachers reported higher levels of Promotion Student Engagement. No teacher beliefs variables were significant.

The regression model for the association between student demographics and teachers' perceptions of Promotion of Student Engagement was significant ($F [4, 43] = 5.514, p < .01$), with an R^2 of 0.339. Moderate SES School and teacher gender were included in this model based on previous parameter estimates. Student/Classroom gender, student/classroom ethnicity, Moderate SES School and teacher gender accounted for 33.9% of the variance in teacher-reported Promotion of Student Engagement. Moderate SES School ($\beta = .441, p < .01$) and teacher gender ($\beta = .269, p < .05$) continued to be positively associated with teacher Promotion of Student Engagement. Student gender ($\beta = .337, p < .01$) was also significantly positively associated with teacher Promotion of Student Engagement, indicating that teachers in classrooms with a greater proportion of female students reported higher levels of Promotion of Student Engagement. Ethnicity was non-significant.

The regression model for the association between student behavior and teachers' perception of Promoting Student Engagement was significant ($F [5, 42] = 6.063, p < .001$), with

an R^2 of .419. Moderate SES School, teacher gender, and student/classroom gender were included in this model based on previous parameter estimates. Student Involved Engagement, Disruptive Behavior, Moderate SES School, student/classroom gender and teacher gender accounted for 41.9% of the variance in teacher-reported Promotion of Student Engagement. Moderate SES School ($\beta = .481, p < .001$), teacher gender ($\beta = .292, p < .05$), and student/classroom gender ($\beta = .258, p < .05$) continued to be significantly associated with Promoting Student Engagement. No behavior variables were significant.

The regression model for the association between student beliefs and teachers' perception of Promoting Student Engagement was significant ($F [7, 40] = 4.331, p < .01$), with an R^2 of .431. Moderate SES School, teacher gender, and student/classroom gender were included in this model based on previous parameter estimates. Classroom Academic Self-efficacy, Mastery Goal Orientation, Performance-approach Goal Orientation, Performance-avoidance Goal Orientation, Moderate SES School, teacher gender, and student/classroom gender accounted for 43.1% of the variance in teacher-reported Promotion of Student Engagement. Moderate SES School ($\beta = .443, p < .01$), teacher gender ($\beta = .245, p < .05$), and student/classroom gender ($\beta = .352, p < .05$) continued to be significantly associated with Promoting Student Engagement. Student/Classroom Academic Self-efficacy ($\beta = -.294, p < .001$) and Performance-approach orientation ($\beta = -.316, p < .05$) had significant negative associations with teacher Promotion of Student Engagement. These findings indicate that teachers in classrooms where students reported lower-levels of Academic Self-efficacy and Performance-approach Goal Orientations reported higher levels of Promoting Student Engagement. Student/Classroom Mastery and Performance-avoidance were non-significant.

Promoting Mutual Respect. Regression analyses for Promoting Mutual Respect were not conducted due to the low reliability of this measure.

Teacher evaluation practices. The associations between classroom level variables and teacher Evaluation practices (which included items from the mastery and performance original scales) were also examined. See Table 26 for results of the multiple regression analyses.

The regression equation for the association between School SES and teachers' perceptions of Evaluation practices was significant ($F [2, 45] = 4.202, p < .05$), with an R^2 of .157. Moderate and Low SES Schools accounted for 15.7% of the variance explained in teacher-reported Evaluation practices. Moderate SES Schools ($\beta = .361, p < .05$) had a significant positive association with teacher-reported Evaluation practices, indicating that teachers in Moderate SES Schools reported higher levels of Evaluation practices than teachers in High and Low SES schools. Low SES School was non-significant.

The regression model for the association between teacher demographics and teachers' perception of Evaluation practices was non-significant ($F [5, 41] = 2.100, p = .085$), with an R^2 of .204. Moderate SES School was included in this model based on previous parameter estimates. Teacher gender, ethnicity, age, years of experience, and Moderate SES School accounted for 20.4% of the variance in teacher-reported Evaluation practices. Moderate SES School ($\beta = .364, p < .05$) continued to be significantly associated with teacher-reported Evaluation practices. All teacher demographic variables were non-significant.

The regression model for the association between teacher beliefs and teachers' perception of Evaluation practices was significant ($F [4, 43] = 2.606, p < .05$), with an R^2 of .195. Moderate SES School was included in this model based on previous parameter estimates. Teacher Self-efficacy, Autonomy, General Teacher Efficacy, and Moderate SES School accounted for 19.5%

of the variance in teacher-reported Evaluation practices. Moderate SES School ($\beta = .387, p < .01$) continued to be significantly associated with teacher-reported Evaluation practices. Teacher Self-efficacy, Autonomy, and General Teacher Efficacy were non-significant.

The regression model for the association between student demographics and teachers' perceptions of Evaluation practices was significant ($F [3, 44] = 3.301, p < .05$), with R^2 of .184. Moderate SES School was included in this model based on previous parameter estimates. Student/Classroom gender, student/classroom ethnicity, and Moderate SES School accounted for 18.4% of the variance in teacher-reported Evaluation practices. Moderate SES School ($\beta = .386, p < .01$) continued to be significantly associated with teacher-reported Evaluation practices. Student/Classroom gender and ethnicity were non-significant.

The regression model for the association between student behavior and teachers' perception of Evaluation practices was significant ($F [3, 44] = 4.017, p < .05$), with an R^2 of .215. Moderate SES School was included in this model based on previous parameter estimates. Student Involved Engagement, Disruptive Behavior, and Moderate SES School accounted for 21.5% of the variance in teacher-reported Evaluation practices. Moderate SES School ($\beta = .391, p < .01$) continued to be significantly associated with teacher-reported Evaluation practices. Involved Engagement and Disruptive Behavior were non-significant, although they had unstandardized parameter estimates larger than .3 (.964 and .791, respectively).

The regression model for the association between student beliefs and teachers' perception of Evaluation practices was significant ($F [4, 43] = 2.914, p < .05$), with an R^2 of .196. Moderate SES School, student/classroom Involved Engagement and Disruptive Behavior were included in this model based on previous parameter estimates. Classroom self-efficacy, Mastery Goal Orientation, Performance-approach Goal Orientation, Performance-avoidance Goal Orientation,

Moderate SES School, student/classroom Involved Engagement and Disruptive Behavior accounted for 19.6% of the variance in teacher-reported Evaluation practices. Moderate SES School ($\beta = .325, p < .05$) continued to be significantly associated with teacher-reported Evaluation practices. All student belief variables were non-significant.

Summary of findings. For school SES, Moderate SES was a significant predictor for Interactive Mastery practices, Promotion of Student Engagement, and Evaluation practices, indicating that teachers in Moderate SES schools report more teacher practices in these domains than teachers in High and Low SES schools. Student ethnicity was an important predictor for teacher reports of their classroom Interactive Mastery practices. In classrooms with a higher proportion of minority students, teachers reported more Interactive Mastery practices. Female teachers and teachers in classrooms with higher proportions of female students were associated with more teacher-reported Promotion of Student Engagement.

Overall, student factors appeared to have greater influence on teacher perception than teacher factors. Student self-efficacy and goal-orientation beliefs were associated with teacher practices that promoted student engagement. Higher proportions of female and minority students were also associated with teacher reports of their mastery- oriented and student engagement practices. Teacher self-efficacy and gender (female) were also associated with mastery and student engagement practices. School SES was associated with mastery, engagement, and evaluation practices. No variables were associated with performance-oriented practices.

Table 26

Teacher Evaluation Parameter Estimates: Teacher and Student Variables

Teacher and Student Factors Evaluation	Unstandardized β	SE	Standardized β	F	df	R ²	
School Socio-economic							
Overall Model				4.202*	45	2	.157
Moderate SES	.841	.342	.361*				
Low SES	-.159	.295	-.079				
Teacher Demographics							
Overall Model				2.100	41	5	.204
Gender	.320	.449	.103				
Ethnicity	.502	.336	.223				
Age	.003	.011	.041				
Years of Experience	-.010	.016	-.106				
Moderate SES	.851	.337	.364*				
Teacher Beliefs							
Overall Model				2.606*	43	4	.195
Teacher Self-efficacy	-.150	.153	.140				
Autonomy	-.050	.231	-.030				
General Teacher Efficacy	-.235	.256	.185				
Moderate SES	.902	.321	.387**				
Student Demographics							
Overall Model				3.301	44	3	.184
Gender	.001	.006	-.016				
Ethnicity	.008	.006	.179				
Moderate SES	.899	.322	.386**				
Student Behavior							
Overall Model				4.017*	44	3	.215
Involved Behavior	.910	.315	.391				
Disruptive Behavior	.791	.457	.364				
Moderate SES	.910	.315	.391**				
Student Beliefs							
Overall Model				2.914*	43	4	.196
Academic Self-efficacy	-.058	.394	-.029				
Mastery Goal Orientation	.226	.330	.093				
Performance-approach Goal Orientation	-.524	.370	-.288				
Performance-avoidance Goal Orientation	-.488	.418	.195				
Moderate SES	.777	.318	.325*				
Student Involved Engagement	.733	.601	.287				
Student Disruptive Behavior	.904	.473	.416				

Note: $N=48$.* $p < .05$, ** $p < .01$, *** $p < .001$ (2-tailed).

Research Question 5

To determine the association between student and teacher variables and students' perceptions of the Classroom Social Environment, a series of design-based multi-level path analyses for each Classroom Social Environment construct were conducted. At the elementary and middle school levels, each level had separate but parallel aggregated classroom constructs, including: Respectful Mastery Classroom Goal Structure, Performance Classroom Goal Structure, Promoting Social Interaction, and Promoting Mutual Respect. Variables entered in the analysis separately at both the elementary and middle school level included School SES, student demographics (i.e., gender and ethnicity), student behavior (i.e., Involved Engagement and Disruptive Behavior), student beliefs (i.e., Academic Self-efficacy, Mastery, Performance-approach, and Performance-avoidance Goal Orientations), teacher demographics (gender and ethnicity), teacher background (i.e., age and years of experience), and teacher beliefs (i.e., Teacher Self-efficacy, Autonomy, and General Teacher Efficacy). This section reviews the results for the regression models when all variables were included simultaneously for each of the four student Classroom Social Environment constructs at the elementary and middle school levels. Results from eight separate path analyses models will be reviewed. First, the elementary school regression model results will be discussed for each of the four constructs, followed by the discussion of the four constructs for the middle school student sample. A summary of the findings is presented at the end of this section. Results from the all the chi-square indices and the fit indices at the elementary and middle school level indicate that the models were just identified. Thus, model fit could not be assessed (Hu & Bentler, 1999; Steiger, 2007). Refer to Tables 27 and 28 for the parameter estimates for the variables at the elementary level and Tables 29 and 30 for the middle school level.

Elementary school. The section below describes the results of the elementary students' multiple regression analyses to determine which student and teacher factors influence student perceptions of the Classroom Social Environment.

Respectful mastery classroom goal structure. At the elementary level, there were no significant associations between student demographics and student beliefs on student perceptions of Respectful Mastery Classroom Goal Structure. Similar findings emerged for teacher demographics and teacher beliefs, as well as for School SES. All variables explained 5.4% of the variance for Respectful Mastery Classroom Goal Structure.

Performance classroom goal structure. There were no significant associations between student demographic and student beliefs on student perceptions of the Performance Classroom Goal Structure. Similar findings emerged for teacher demographics and teacher beliefs. Moderate SES School had a significant negative association ($\beta = -.162, p < .05$), indicating that students in the High SES School reported higher levels of teacher practices that emphasize a performance classroom goal structure than teachers in Low and Moderate SES Schools. All the variables explained 19% of the variance in Performance Classroom Goal Structure.

Promoting social interaction. When assessing student variables' parameter estimates on student perceptions of Promoting Social Interaction, student gender ($\beta = .142, p < .05$) had a significant positive association, indicating that female students perceived their teacher as promoting higher levels of Social Interactions among classmates. School level variables revealed that Low SES Schools ($\beta = -.224, p < .05$) had a significant negative association, indicating that students in the High SES school reported higher levels of teacher-promoted Social Interaction than teachers in Low and Moderate SES Schools. For teacher variables, Autonomy ($\beta = -.136, p < .05$) had a significant negative association, whereas General Teacher Efficacy ($\beta = .310, p <$

.01) had a significant positive association. These findings suggest that students in classrooms where teachers reported low levels of autonomy and high levels of general teacher efficacy reported high levels of teacher-promoted social interaction. No other student, teacher, or school variables had significant associations with student perceptions of Promoting Social Interaction. All predictor variables explained 18.6% of the variance in student perceptions of Promoting Social Interaction.

Promoting mutual respect. There were no significant associations between student demographics and student beliefs on students' perceptions of Promoting Mutual Respect. Similar findings emerged for School SES. For teacher variables, teacher years of experience ($\beta = .195, p < .01$) and Autonomy ($\beta = .210, p < .01$) had significant positive associations indicating that students in classrooms where teachers had more years of experience and reported higher levels of autonomy reported higher levels of Promoting Mutual Respect. Additionally, Teacher Self-efficacy ($\beta = -.267, p < .05$) had a significant negative association, indicating that classrooms where teachers reported low levels of teacher self-efficacy, students reported higher levels of Promoting Mutual Respect. All predictor variables explained 16.7% of the variance in student perceptions of Promoting Mutual Respect.

Summary of findings. Overall, student demographics and beliefs had a minimal influence on elementary students' perceptions of their Classroom Social Environment, with the exception of gender on Promoting Social Interaction, where female students reported significantly higher levels. Teacher demographics and background had no associations with any Classroom Social Environment constructs, with the exception of years of experience on Promoting Mutual Respect, where students in classrooms with more experienced teachers perceived higher levels of Promoting Mutual Respect. Teacher beliefs were associated with

Promotion of Social Interaction, where students in classrooms with teachers who report low levels of autonomy and high levels of general teacher efficacy reported high levels of teacher-promoted student social interaction. Additionally, for Promoting Mutual Respect, students in classrooms where teachers had higher levels of autonomy and lower levels of self-efficacy perceived higher levels of teacher-promoted Mutual Respect. Finally, for school SES, students in the High SES School reported higher levels of performance-oriented teacher practices and higher levels of teacher-promoted student social interaction than students in Low and Moderate SES Schools.

Middle school. The section below describes the results of the middle school students' multiple regression analyses to determine which student and teacher factors influence student perceptions of the Classroom Social Environment.

Respectful mastery classroom goal structure. When assessing student demographic parameter estimates on student perceptions of Respectful Mastery Classroom Goal Structure (which included items from the mastery and mutual respect original scales), Mastery Goal Orientation ($\beta = .281, p < .001$) and Involved Engagement ($\beta = .161, p < .05$) had a significant positive association with student perceptions of Respectful Mastery Classroom Goal Structure. Student Performance-approach Goal Orientation ($\beta = -.136, p < .05$) had a negative association with Respectful Mastery Classroom Goal Structure. For teacher variables, teacher age had a positive association ($\beta = .157, p < .05$), while teacher experience had a negative association ($\beta = -.165, p < .05$). No other student, teacher, or school variables had significant associations with student perceptions of Respectful Mastery Classroom Goal Structure. All predictor variables explained 19.4% of the variance in student perceptions of Respectful Mastery Classroom Goal Structure. These findings indicate that students who reported higher levels of a Mastery Goal

Orientation and Involved Engagement reported higher levels of teacher-promoted Respectful Mastery Classroom Goal Structure practices, while students who reported higher levels of a Performance-approach goal orientation reported lower levels of Respectful Mastery Classroom Goal Structure practices. Additionally, in classrooms with older teachers and teachers with less experience, students reported lower levels of Respectful Mastery Classroom Goal Structure practices.

Performance classroom goal structure. When assessing student variable parameter estimates on student perceptions of Performance Classroom Goal Structure, Performance-avoidance ($\beta = .195, p < .01$) had a significant positive association, while Involved Engagement ($\beta = -.157, p < .05$) and gender ($\beta = -.110, p < .05$) had a significant negative association. School level predictors revealed that Moderate School SES ($\beta = -.176, p < .01$) also had a significant negative association. No other student, teacher, or school variables had significant associations with student perceptions of Performance practices. All predictor variables explained 23.7% of the variance in student perceptions of Performance practices. Results indicate that students with higher levels of a performance-avoidance goal orientation reported higher levels of a teacher-promoted performance classroom goal structure. Conversely, male students, and students with lower levels of engagement reported higher levels of teacher-promoted performance classroom goal structure. Additionally, students from High SES schools, reported higher levels than students from Low and Moderate SES schools.

Promoting social interaction. When assessing student variables parameter estimates on student perceptions of Promoting Social Interaction, ethnicity ($\beta = .110, p < .05$) and Performance-avoidance ($\beta = .175, p < .01$) had significant positive associations. School level predictors revealed that Low SES School ($\beta = .259, p < .01$) also had a significant positive

association. No other student, teacher, or school variables had significant associations with student perceptions of Promoting Social Interaction. All predictor variables explained 16.1% of the variance in student perceptions of Promoting Social Interaction. These findings indicate that minority students, students with higher levels of a performance-avoidance goal orientation and students from Low SES schools reported higher levels of teacher practices that promote social interaction among classmates.

Promoting mutual respect. When assessing student variables parameter estimates on student perceptions of Promoting Mutual Respect, student ethnicity ($\beta = .073, p < .05$) had a significant positive association and Performance-approach Goal Orientation ($\beta = -.121, p < .05$) had a significant negative association. For teacher variables, ethnicity ($\beta = -.102, p < .05$) and teacher years of experience ($\beta = -.181, p < .05$) had a negative association with student perceptions of Promoting Mutual Respect. School level predictors revealed that Moderate School SES ($\beta = .171, p < .01$) had a significant positive association. No other student, teacher, or school variables had significant associations with student perceptions of Promoting Mutual Respect. All predictor variables explained 9.4% of the variance in student perceptions of Promoting Mutual Respect. These findings indicate that minority students, students with lower levels of a Performance-approach Goal Orientation, and students from Moderate SES schools reported higher levels of teacher practices that promote mutual respect among classmates. Additionally, students in classrooms with Caucasian teachers and teachers with less teaching experience reported higher levels of teacher promotion of mutual respect.

Summary of findings. Overall, for middle school students' perceptions of the Classroom Social Environment, student demographics and beliefs had significant associations. Males perceived higher performance-oriented teacher practices and minority students perceived more

teacher-promoted social interaction and mutual respect. Students who reported higher levels of involved engagement perceived higher levels of respectful-mastery teacher practices and lower levels of performance-oriented teacher practices. Students who reported higher levels of a mastery goal orientation perceived higher levels of respectful-mastery oriented teacher practices.

Students who reported higher levels of a performance-approach goal orientation tended to report lower perceptions of respectful-mastery oriented teacher practices and teacher-promoted mutual respect. Students who reported higher levels of a personal performance-avoidance goal orientation perceived more performance-oriented teacher practices and more teacher-promoted social interaction. Teacher beliefs had no significant associations with any Classroom Social Environment constructs. For teacher demographics and background, students with Caucasian teachers reported more teacher-promoted mutual respect and students with older teachers reported more respectful-mastery oriented teacher practices. Students with teachers with less years of experience reported more teacher-promoted mutual respect and more respectful-mastery oriented teacher practices. For school level variables, students in the High SES schools reported more performance-oriented teacher practices than their peers in Low and Moderate SES schools, while students in Low SES schools reported more performance-oriented teacher practices and more teacher-promoted social interaction than their peers in Moderate and High SES Schools.

Table 27

Elementary Parameter Estimates: Respectful Mastery and Performance

Predictor Variables	Respectful Mastery Classroom Goal Structure			Performance Classroom Goal Structure			
	Standardized β		p value	R ²	Standardized β		p value
	Est.	SE			Est.	SE	
			.054				.190
School Variables							
Moderate SES	.289	.160	.071	-.162	.077	.034*	
Low SES	-.269	.243	.269	.131	.179	.464	
Student Variables							
Gender	-.033	.135	.806	-.051	.066	.438	
Ethnicity	.098	.171	.586	-.020	.053	.704	
Involved Engagement	.057	.138	.681	-.082	.083	.326	
Disruptive Behavior	.014	.085	.871	-.045	.052	.383	
Academic Self-efficacy	.007	.121	.951	-.126	.077	.103	
Mastery Goal Orientation	-.140	.115	.225	.065	.070	.352	
Performance-approach	.021	.087	.808	-.041	.089	.642	
Performance-avoidance	-.049	.089	.579	.066	.065	.311	
Teacher Variables							
Gender	-.204	.131	.120	.203	.162	.212	
Ethnicity	.049	.110	.659	-.006	.142	.964	
Age	.121	.128	.346	.298	.165	.070	
Years of Experience	.047	.066	.479	.074	.086	.390	
Teacher Self-efficacy	.065	.087	.452	-.099	.124	.426	
Autonomy	.079	.112	.484	.058	.120	.630	
General Teacher Efficacy	.153	.123	.215	-.190	.121	.117	

Note: N= 196

* p < .05; **p < 0.01, ***p < .001 level (2-tailed)

Table 28

Elementary Parameter Estimates: Promoting Social Interaction and Promoting Mutual Respect

Effect	Promoting Social Interaction			R ²	Promoting Mutual Respect			R ²
	Standardized		p value		Standardized		p value	
	Est	SE			Est	SE		
				.186				.167
	School Variables							
Moderate SES	.113	.967	.094		.061	.206	.766	
Low SES	-.224	.099	.023*		-.444	.215	.039	
	Student Variables							
Gender	.142	.059	.016*		.009	.063	.885	
Ethnicity	.043	.046	.353		.050	.061	.413	
Involved Engagement	.027	.088	.762		.146	.137	.288	
Disruptive Behavior	.149	.095	.119		-.061	.111	.582	
Academic Self-efficacy	-.002	.089	.981		.008	.063	.902	
Mastery Goal Orientation	-.046	.080	.562		.197	.103	.056	
Performance-approach	.012	.092	.893		-.013	.068	.848	
Performance-avoidance	-.049	.089	.578		-.110	.090	.224	
	Teacher Variables							
Gender	-.210	.133	.115		-.050	.070	.482	
Ethnicity	.064	.103	.531		-.195	.120	.105	
Age	.097	.118	.411		.051	.090	.571	
Years of Experience	.014	.059	.811		.195	.059	.001*	
Teacher Self-efficacy	.006	.063	.923		-.267	.089	.003*	
Autonomy	-.136	.065	.036*		.210	.081	.009*	
General Teacher Efficacy	.310	.109	.005*		-.049	.068	.473	

Note: N =196

* p < .05; **p < 0.01, ***p < .001 level (2-tailed)

Table 29

Middle School Parameter Estimates: Respectful Mastery and Performance Goal Structure

Effect	Respectful Mastery Classroom Goal Structure			Performance Classroom Goal Structure		
	Standardized Est	SE	p value	Standardized Est	SE	p value
			.194			.237
	School Variables					
Moderate SES	.100	.058	.085	-.176	.058	.002**
Low SES	.119	.065	.068	.063	.057	.271
	Student Variables					
Gender	-.012	.065	.857	-.110	.043	.011*
Ethnicity	.005	.058	.927	.104	.054	.054
Involved Engagement	.161	.081	.047*	-.157	.068	.021*
Disruptive Behavior	.013	.070	.874	.067	.080	.400
Academic Self-efficacy	.007	.061	.912	-.048	1.021	.307
Mastery Goal Orientation	.281	.059	.000***	-.021	.074	.779
Performance-approach Goal Orientation	-.136	.062	.028*	.044	.055	.420
Performance-avoidance Goal Orientation	.065	.069	.349	.195	.057	.001**
	Teacher Variables					
Gender	-.117	.065	.071	-.062	.090	.486
Ethnicity	-.025	.060	.675	-.074	.056	.190
Age	.157	.073	.032*	.017	.070	.875
Years of Experience	-.165	.075	.028*	-.001	.069	.991
Teacher Self-efficacy	.061	.065	.350	.003	.059	.961
Autonomy	.078	.067	.241	-.054	.063	.393
General Teacher Efficacy	-.016	.046	.738	.035	.041	.392

Note: Respectful Mastery Classroom Goal Structure N= 313; Performance Classroom Goal Structure N =312.

* p < .05; **p < 0.01, ***p < .001 level (2-tailed).

Table 30

Middle School Parameter Estimates: Promoting Social Interaction and Mutual Respect

Effect	Promoting Social Interaction (N= 314)		R ²	Promoting Mutual Respect (N= 316)		R ²
	Standardized Est	SE	p value	Standardized Est	SE	p value
			.161			.094
	School Variables					
Moderate SES	.052	.067	.437	.171	.064	.007**
Low SES	.259	.076	.001**	.111	.072	.126
	Student Variables					
Gender	-.015	.078	.843	.048	.073	.514
Ethnicity	.110	.048	.023*	.073	.036	.042*
Involved Engagement	.007	.082	.930	.019	.081	.817
Disruptive Behavior	-.025	.081	.757	-.033	.085	.696
Academic Self-efficacy	.070	.063	.262	.022	.060	.712
Mastery Goal Orientation	.154	.095	.107	.108	.058	.061
Performance-approach Goal Orientation	-.107	.066	.105	-.121	.054	.024*
Performance-avoidance Goal Orientation	.175	.060	.004**	.007	.063	.913
	Teacher Variables					
Gender	.068	.075	.364	.017	.063	.801
Ethnicity	.064	.054	.237	-.102	.043	.017*
Age	-.099	.099	.315	.172	.094	.069
Years of Experience	.159	.100	.112	-.181	.092	.049*
Teacher Self-efficacy	.082	.067	.222	.137	.096	.153
Autonomy	-.086	.078	.270	-.072	.082	.385
General Teacher Efficacy	.020	.047	.668	-.039	.054	.464

Note: Promoting Social Interaction N = 316; Promoting Mutual Respect N = 314.

* p < .05; **p < 0.01, ***p < .001 level (2-tailed).

Chapter V: Discussion

The current study examined the relationships between teacher and student perceptions of the Classroom Social Environment in elementary and middle schools. The main purpose of the study was to determine the degree of convergence between elementary and middle school student and teacher perceptions, as well as to determine school, classroom, and individual factors that influence these perceptions. Exploratory factor analyses, multiple regressions, and path analyses findings provided initial support for differences in student and teacher perceptions, as well as the influence of school, classroom, and individual factors on teachers' and students' perceptions of the Classroom Social Environment. This chapter summarizes the key findings, implications for school psychologists, the contributions of the study, as well as limitations and recommendations for future research for each research question.

Research Question 1

Comparison between elementary and middle school student perceptions. Findings from exploratory factor analyses indicate a parallel four-factor structure of the Classroom Social Environment between elementary and middle school students at the individual/within level (Respectful Mastery Classroom Goal Structure, Performance Classroom Goal Structure, Promoting Social Interaction, and Promoting Mutual Respect). These four factors align with previous research, but a few notable differences exist (Midgley et al., 1996; Patrick et al., 2003; Patrick & Ryan, 2005; Ryan & Patrick, 2001). For example, in the current study, students perceived some overlap of Promoting Mutual Respect and Social Interaction scales with the

Mastery Classroom Goal Structure, and perceived Performance Classroom Goal Structure as a distinct construct. This finding aligns with previous research. Patrick and colleagues (2011) noted that constructs aimed to measure respect, social interaction, and mastery-orientation focus on the quality of relationships within the classroom and thus, some overlap is to be expected. Performance-based items, on the other hand, focus more on academic components. Furthermore, research indicates significant associations among mastery classroom goal structure, mutual respect, and social interaction for elementary and middle school student populations (Patrick et al., 2011). In the current study, Promoting Mutual Respect emerged as a critical component of a Mastery Classroom Goal Structure, providing support for the premise that social relationships are intertwined with the classroom goal structure for elementary and middle school students (Patrick & Ryan, 2008; Patrick et al., 2011; Turner et al., 2002). Therefore, despite the differences in school contexts and expectations (Eccles, 1993), feeling valued and respected by one's classmates is a central component of the students' perception of the Classroom Social Environment.

The consistency of Promoting Social Interaction and Promoting Mutual Respect between elementary and middle school student participants underscores the importance of encouraging positive interactions and respect towards classmates as an important characteristic of a responsive or positive classroom (Battisch et al., 1997; Pianta et al., 2011; Skinner & Belmont, 1993; Wentzel et al., 2010). Extant research indicates that students attend to teachers' affective and pedagogical approaches when they perceive a mastery classroom goal structure, and that this remains true for students from ethnically and economically diverse populations (Patrick & Ryan, 2008; Turner et al., 2002). Specifically, students have indicated that successful learning

environments encompass student participation and interaction and highlight students' effort and improvement (Patrick et al., 2001).

An interesting finding that emerged from the student exploratory factor analysis was the minor differences between elementary and middle school students' perceptions of teacher-promoted Mutual Respect. For elementary students, items only focused on rules that prevent student disrespect (e.g., My teacher does not let us make fun of someone who gives the wrong answer), while middle school students' items encompassed both proactive and preventive teacher strategies (e.g., My teacher wants us to respect each other's opinions). Differences may be due to disparities in student cognitive developmental changes as well as school structural changes.

Developmental theorists argue that younger students require explicit, concrete examples and expectations to guide their cognitive and behavioral processes, while adolescents can internalize and apply more abstract concepts (Piaget, 1983). According to the moral development theory proposed by Kohlberg, students in late elementary may be guided by the punishment-and-obedience orientation in the preconventional moral development level. Students with this orientation are guided by cultural rules and by their need to avoid punishment (Kohlberg & Hersh, 1977). Conversely, early adolescents' behaviors and worldview are guided by fairness, mutual gain, and reciprocity and may be more centered on creating an atmosphere where students proactively value each other's opinions and differences. These developmental differences may suggest teachers utilize different approaches across elementary and middle school when attempting to promote a climate of mutual respect. Research examining teacher expectations for student behavior across school levels indicated that elementary and middle school teachers perceive cooperation (e.g. gets along with peers that are different and listens to peers' presentations) as important for student success, but that elementary teachers perceived

self-control skills (e.g. controls temper when in peer conflicts) as more important to success than middle school students (Lan et al., 2010).

Differences in expectations may be reflected in teacher classroom management practices across school context. Elementary teachers' focus on self-control may manifest in teachers' approaches to establishing classroom social interaction rules and expectations (focus on classroom don'ts), which may not be as evident in middle school classrooms. Additionally, differences in school structures between elementary and middle school can further explain differences in student perceptions. Middle school academic structure and schedule requires students to be in direct contact with a variety of teachers and peer groups on a daily basis, each with their own expectations and norms for peer interaction, whereas elementary school students spend the majority of the day with a single teacher and peer group (Midgley & Edelin, 1998). Due to frequent changes in teacher expectations, middle school teachers may need to be more explicit about the behaviors that constitute respectful peer interactions in conjunction with behaviors that constitute disrespect in order for students to meet behavioral expectations.

Differences in conceptualization of the Classroom Social Environment constructs also exist when examining the classroom/between level of analysis across elementary and middle school samples. At the elementary level, Collaborative Performance and Cooperative Learning emerged as the two factor structures, while at the middle school only Classroom Motivational and Social Context emerged from the exploratory factor analysis. For the elementary students, the Cooperative Learning factor reflected teacher promotion of social interaction and a mastery approach to instruction. This factor demonstrated alignment with previous observational research, which states that in classrooms where students perceived high levels of mastery, teachers promoted student involvement and interaction (Patrick et al., 2001). The second factor

at the elementary school level, Collaborative Performance, included performance approaches to instruction, teacher promotion of mutual respect and social interaction, as well as mastery approaches to instruction. This finding diverges from the majority of literature on classroom motivational goal structures that suggests a distinction between performance-oriented practices and practices that promote social relationships in the classroom (Midgley et al., 1996; Patrick et al., 2011; Rolland, 2012). However, other research suggests that is possible for classrooms to have high levels of performance-oriented practices and for students to feel a sense of community and connection to other students (Ciani et al., 2010). Furthermore, research has suggested that is possible for performance and mastery oriented practices to occur simultaneously in classroom contexts (Patrick et al., 2001) and that although these classroom goal structures are contrasted, they are not inversely related (Ciani et al., 2010; Karabenick, 2004; Wolters & Daughtery 2007). At the middle school level, only one factor emerged that incorporated all classroom motivational and social environment constructs. This finding may provide further support for the existence of positive correlations between positive peer relationships, performance, and mastery motivational goal structures and the interwoven nature of these practices in classrooms (Ciani et al., 2010; Turner et al., 2003).

Implications for practice. Prior research indicates that adolescents desire to form relationships with peers and non-familial adults, and that when their environment is responsive to their development needs, their motivation and mental health are enhanced (Eccles & Midgley, 1989; Eccles, 2004, 2014; Eccles & Roeser, 2011; Roeser et al., 2000). Thus, in order for students to experience high levels of motivation and positive social adjustment teachers should promote a positive and interactive classroom environment. Findings that both elementary and middle school students perceive mutual respect and peer social interaction as important

components of a mastery classroom goal structure suggest that school psychologists and school-based coaches can consult with teachers at both levels to develop classroom routines and expectations that foster student interaction, respect, and cooperative learning, as well as teacher practices that recognize student effort and persistence. Furthermore, school-wide behavioral and mental health curriculum/supports should emphasize mutual peer respect with the aim of permeating this expectation across classrooms and manifesting in teachers' daily practices. However, how these supports and curricula are implemented may differ between elementary and middle school contexts. Educators and service providers in elementary schools may focus on explicitly stating and reinforcing acceptable behaviors, while as students enter and advance further into middle school, supports may focus on discussions and activities that allow students to understand the importance of equality and reciprocal respect (Shapiro, Friedberg & Bardenstein, 2006). Additionally, given that mastery and performance oriented practices can co-exist within a classroom environment (Patrick et al., 2001), it is important for administrators to reinforce teachers' use of the mastery practices to promote positive Classroom Social Environments. Teachers should be praised and acknowledged for providing opportunities for students to engage in cooperative learning, for incorporating topics and activities that are meaningful to students, and for continuously focusing on student effort and growth.

Contributions, limitations, and future research. The current study utilized multi-level exploratory factor analysis and attempted to utilize structural equation modeling to determine whether individual classroom social environment measures were verified at the classroom level and represented shared student perceptions. Results from the individual/within level analyses contribute to the literature by proposing and verifying a four latent factor model that encompassed motivational and social aspects to explain the Classroom Social Environment for

elementary and middle school students. Specifically, the current study highlights the need to consider not only practices that support student achievement, but also practices that foster positive peer relationships. These findings extend the literature on our understanding of the various dimensions of the Classroom Social Environment and calls for further research that explores a more comprehensive approach to examining the myriad of components that contribute to a positive classroom environment. These studies should seek to incorporate items that address academic goals, peer and teacher relationships, as well as how students are evaluated and recognized in the classroom. Furthermore, investigations should aim to reveal which components are most salient to students' perceptions of their Classroom Social Environment. Deepening our understanding of the components that students perceive as important in creating a positive classroom environment may allow for further development of best practices to support student engagement and adjustment.

Additionally, this study provided some insight to the differences and similarities between elementary and middle school students' perceptions of their classroom environment. The differences noted, perhaps due to cognitive and environmental variations, and the importance of stage-environment fit suggest that these factors should be taken into consideration when assessing Classroom Social Environments across school contexts. Furthermore, given the root of these differences, and that the study occurred immediately prior to and after the transition to middle school, further research should consider examining how students' perceptions evolve over the 6th grade year, or as they proceed further in middle school where expectations, relationships, and cognitive processes change. Moreover, given the potentially detrimental effects of transitions across school contexts to student motivation and school connectedness,

future research should investigate students' perceptions of their Classroom Social Environment during the transition from middle to high school.

The contributions of the current study also extend to the results from the classroom/between level analyses. Findings indicated that the factor structures at the classroom level were significantly above the SRMR Between criterion and different from the individual/student level analysis suggesting minimal agreement among students in classrooms about the motivational and social environment. However, given the small number of classrooms in the current study these results should be interpreted with caution. Nonetheless, previous research has demonstrated mixed results about the reliability of classroom-level goal structures for mastery and performance classroom goal structures (Lam et al., 2015; Miller & Murdock, 2007; Stuhlman, Downer, Schweig, & Martínez, 2013). Although some studies have found evidence for the existence of shared classroom perceptions (Miller & Murdock, 2007; Molin et al., 2014), other studies, similar to the current study, have obtained poor model fit at the classroom level despite adequate model fit at the individual student level (Stuhlman, Downer, Schweig, & Martínez, 2013; Lam et al., 2015). Thus, the findings from the current study provide additional support for the use of hierarchical or multi-level approaches to assess the reliability of utilizing aggregated classroom scores to investigate students' perceptions of the Classroom Social Environment (Miller & Murdock, 2007). Future studies should extend the current literature and utilize hierarchical or multi-level approaches with a variety of student populations to determine the generalizability of classroom perceptions across students from varying grade levels and ethnic backgrounds.

Research Questions 2 and 3

Comparison between student and teacher perceptions. Due to differences in factor structures between classroom and teacher perceptions, no statistical comparisons were conducted. This section will discuss interpretations based on comparison of themes emerged from the exploratory factor analyses across student (classroom and individual levels) and teacher factor structures.

Findings from the current study indicated that when themes from individual student level and teacher factor structures are compared, some similarities between the constructs emerged (i.e., Performance Classroom Goal Structure and Promoting Mutual Respect). However, when themes are examined at the classroom level, minimal similarities exist. This suggests that teachers conceptualized Classroom Social Environment constructs differently than their class. A scarcity of research exists that examines the convergence between classroom level student perceptions and teacher perceptions (Miller & Murdock, 2007). The majority of studies that have investigated the convergence between teachers and students measure student perception based on individual level student responses rather than adjusting for the nested structure of the data and assessing reliability at the individual and classroom level (Lam et al., 2015; Miller & Murdock, 2007).

Additionally, findings from these studies indicate varying degrees of teacher-student convergence depending on the aspect of the classroom domain examined. For example, when examining social aspects of the classroom, Poulou (2009) found that teacher and student reports agreed about the degree to which teachers promoted mutual respect, inclusion, and cooperative learning. Furthermore, recent research using hierarchical linear modeling analyses revealed a small level of convergence between student and teacher perceptions of teacher-promoted student

collaboration and interaction (Wang & Eccles, 2014). The contrasting results from these studies may result from the use of single versus multilevel analyses to assess components of the Classroom Social Environment. Moreover, the similarity between the latter finding and the current study may suggest that the degree of student-teacher convergence is reduced when perceptions are examined at a classroom level. Further research is needed to determine how differences in research methodology affect the degree of convergence between teacher and student perceptions of the social aspects of the Classroom Social Environment. Future studies should consider comparing the degree of convergence between teacher and student perceptions when single versus multilevel approaches are utilized and how these statistical approaches differentially impact student outcomes at the classroom and individual levels.

As it relates to classroom motivational goal structure a significant gap in the research exists. Current literature suggests that non-significant, small correlations between student and teacher perceptions exist regarding the extent to which either mastery or performance practices were utilized in the classroom (Urduan 2004; Urduan et al., 1998). Urduan (2004) postulates that this lack of convergence may exist because teachers and students do not often reflect on the classroom goal structure, and that teachers rarely explain the motives and reasons behind their classroom practices to their students. The failure to discuss the “why” or make the purpose of classroom activities explicit in the classroom may result in varying interpretations of the classroom motivational goal structures. Other researchers have postulated that differences examined at the individual level reflect that teachers’ perceptions of the learning environment may be based on their beliefs and ideals about teaching and learning rather than their actual practices, whereas students’ perceptions may be based on their educational experiences and individual factors (Elen & Lowyck, 1999; Konings et al., 2014; Trigwell et al., 1999; Wang &

Eccles, 2014; Wentzel et al., 2010). The current study's poor model fit at the classroom level and low ICC scores from the multi-level analysis may provide support for the strong impact of individual factors on students' perceptions of teacher practices, particularly when beliefs and reasons are not explicitly communicated to students (Lam et al., 2014).

Although students and teachers may not agree on the extent to which performance and mastery-oriented practices occur in the classrooms, the current study underscored the notion that both teachers and individual students (within-level) perceive Mastery and Performance Classroom Goal Structures as distinct components of their Classroom Social Environment (Patrick et al., 2011; Wolters, 2004; Wolters et al., 2011). Additionally, teacher and students agreed that promoting mutual respect was an important component of classroom goal structures. Among these three constructs (mastery, performance, and mutual respect), however, Performance Classroom Goal Structure had the highest degree of item overlap. The fact that teachers and students had high item overlap related to emphasizing comparison and competition in the classroom may be a product of the current wider educational context (Center on Educational Policy, 2012).

Current national and state educational and assessment practices emphasize a performance goal structure as states, schools, and teachers are provided rewards or sanctions based on their performance or ability to demonstrate competency as educators. Research indicates that teachers report recent accountability and assessment policies have deteriorating effects on their classroom practices and classroom environments (Valli & Buese, 2007). Specifically, they report deteriorated quality in student-teacher relationships, reduction in instructional time due to excessive testing, and heightened stress levels (Valli & Buese, 2007). These accountability practices also impact students as they are rewarded with promotion and punished with retention

when they fail to meet state proficiency standards (Abrams, 2004). Given that the current educational context saliently communicates a culture of competition and comparison and a concentration on demonstrating competence, it is not surprising that elementary and middle school teachers, as well as their students, perceive performance goal classroom structures as an integral part of the classroom motivational context.

Previous research has suggested that although performance goal structures are conceptualized as distinct concepts, they can co-occur with mastery oriented classroom structures. Research conducted by Patrick and colleagues (2001) indicate that performance practices can be present even in classrooms deemed as high mastery. Observations in high mastery classrooms noted that students received public acknowledgement or distribution of student performance and the dissemination of rewards to selected students for answering questions correctly (Patrick et al., 2001). This further suggests that even in classrooms where teachers practice behaviors that promote student engagement, interaction, mutual respect and a variety of instructional methods and assignments, some practices that fuel competition and emphasize demonstrating competition still occur. Furthermore, in schools where leadership communicates and fosters competition among staff and students, teachers reported engaging in more performance-oriented practices in their classroom (Slaavik & Slaavik, 2013b). This underscores the influence of the current educational context, where even teachers who believe and practice mastery approaches are influenced by their system and schools' focus on performance and meeting standards and thus engage in some practices that reflect a performance orientation. The strong presence of a performance goal structure is concerning as this goal structure is often associated with negative student outcomes (Guthrie & Davis, 2003; Holas & Huston, 2012). Classroom environments that emphasize competition and social comparison

increase the risk of disengagement and dissatisfaction, disrupt social networks, and emphasize lower-level cognitive strategies (Eccles et al., 1993; Guthrie & Davis, 2003; Holas & Huston, 2012; Kearney & Peters, 2013; Roeser et al., 2000).

Implications for practice. Given the research on negative student outcomes for students in performance classroom goal structures, school psychologists, advocates, and researchers can help school administrators and leaders understand the importance of a mastery classroom goal structure, where focus on effort, goal setting, and continuous improvement has been shown to lead to positive outcomes including improved academic performance and behavioral adjustment (Anderman & Midgley, 2004; Kaplan & Midgley, 1999; Linnenbrink 2005; Turner et al., 2002; Wentzel, 1998). Furthermore, greater emphasis needs to be placed on providing student autonomy, interaction, and respect to help combat the negative effects of a performance-oriented educational context and maximize the benefits of a mastery oriented context. To advocate for such practices, researchers and educators need to provide professional development and disseminate research to policy makers about the differential student outcomes based on the goal structure emphasized in classrooms. Additionally, teachers need to frequently communicate to their students the purpose and relevancy of curricula activities and assignments, as well as to explicitly link them to their overall learning goals and objectives in order to build and foster student mastery orientations.

Contributions, limitations, and future research. The current study utilized parallel teacher and student measures to compare their perceptions of the Classroom Social Environment. However, initial examination of the confirmatory factor analysis and reliability data suggested poor model fit for the hypothesized four factor structures for teachers. Subsequent exploratory factor analyses revealed a five factor model to explain teachers' perceptions of the classroom

environment: Respectful Performance, Interactive Mastery, Promoting Mutual Respect, Promoting Student Engagement, and Evaluation. Cronbach alphas indicated moderate level of reliability for the majority of these constructs, with the exception of Promoting Mutual Respect, which was influenced by minimal variance (ceiling effect) in teachers' responses. Reviews of previous research have indicated that teacher perceptions of their instructional practices or approaches to learning have been significantly understudied. The current study modified a valid and reliable measure based on students' perceptions to understand how teachers perceive their classroom environment, and how these perceptions differ from their students. The utilization of this new measure not only extends the measure development research on teachers' perceptions, but also adds to the body of literature to help understand the Classroom Social Environment constructs that are important to teachers.

Although the current study did not conduct statistical analyses to determine differences in student and teacher perceptions, the findings suggest differences in how aspects of the Classroom Social Environment are conceptualized by teachers. Particularly, teachers in the current study perceived promoting mutual student respect to be an integral component of a Performance Classroom Goal Structure. Additionally, evaluating student progress and performance, as well as promoting student engagement appear to be important components in understanding their perceptions of the Classroom Social Environment. These findings extend the current literature and calls for future research to develop measures that accurately capture teachers' perceptions of the Classroom Social Environment yet still align with student perceptions. The initial reliability results of the modified teacher measure and the differences in the selected versus the proposed factor structure indicates that further research is needed to develop and refine teacher classroom perception measures. These activities should include qualitative and observation research

conducted with teachers to deepen our understanding of their classroom perceptions. Additionally, researchers need to further refine the differences in the factor structures between teacher and student perceptions so that measures can be developed that address factors that students and teachers mutually perceive as important, but also highlight and acknowledge their varying roles and experiences in the classrooms. Furthermore, it is important to deepen the understanding of the effects of high and low convergence between student and teachers, for measures that they deemed as mutually important. Understanding how teachers' perceptions of the classroom practices align and differ from their students can help educators determine what teacher practices efficiently and effectively address students' needs and minimize practices that are associated with negative student outcomes. Examining the factors that are uniquely relevant to teachers and students provide perspective on school and district practices that can be implemented to ensure that the needs of both participants in the Classroom Social Environment are met.

Research Question 4

Examining influences on teacher perceptions. The current study examined the individual, classroom, and school level factors that were associated with teacher perceptions of the Classroom Social Environment. Findings from the multiple regression analyses indicate that school level predictors had a significant impact on several domains of teacher perceptions. Specifically, teachers who worked in Moderate SES Schools -where the percentage of students receiving free and reduced lunch averaged 30% - reported engaging in higher levels of practices that promoted student engagement, fostered an atmosphere of collaboration and developing competence, and rewarded student progress and performance. In contrast, Low SES Schools did not have a significant impact on teacher perceptions. Minimal research exists that examines the

associations between School SES and teacher perceptions of their classroom environment. However, the current study conducted analyses with only two schools within each category of School SES, thus generalizations about the effects or impact of these school contexts on teacher perceptions of the Classroom Social Environment should not be made at this time. It is possible that moderate SES schools may have unique school contexts or mediating factors that explain differences in teacher perceptions, but future research is needed to determine whether these relations are evident in samples with larger numbers of schools.

Research has examined how School SES impacts teacher beliefs and expectations, and given the relationship between beliefs and practices, research in this area can help to understand the relationship between School SES and teacher perceptions. School socio-economic composition has been linked to general teacher efficacy and teacher beliefs about handling student misbehavior where teachers in higher SES schools reported more positive beliefs (Belfi et al., 2003; Tsouloupas et al., 2014). Furthermore, research has indicated that teachers in Low SES schools reported educational attitudes that reflected a greater degree of external control and fewer opportunities for student autonomy, student engagement, and cooperative activities (Solomon et al., 1996). Conversely, research findings revealed no link between School SES to teachers' perceptions of skills that are important for student success, specifically cooperation, assertion, and self-control (Lane et al., 2010). Extant literature suggests that additional school factors such as school social capital (quality of relationships between teachers, parents, and students), school academic achievement, and ethnic compositions may play a mediating role in the relationship between School SES and teacher beliefs (Belfi et al., 2003). However, most of the research that examines these relationships has compared High to Low SES Schools or examined SES on a continuum, and thus have not examined the direct influence of Moderate

SES Schools. More research is needed first to determine whether this current study's findings are replicated with larger school samples. Should future studies find similar results, then subsequent research should focus on understanding the unique context in Moderate SES schools, as well as how school SES may impact teacher perceptions of the Classroom Social Environment.

As it relates to classroom factors, classroom ethnic composition was related to Interactive Mastery practice and classroom gender composition was associated with Promoting Student Engagement. Analyses revealed that in classrooms with higher proportions of minority students, teachers reported more Interactive Mastery practices. This is in contrast with previous research indicating minority students are often at risk for experiencing negative school and classroom environments (Fan et al., 2011; Koth et al., 2008; Mitchell et al., 2010). It is possible what when teachers recognize that their classroom has a higher proportion of minority students, they make greater efforts to engage in more practices that facilitate student interaction, and emphasize effort in order to combat minority students' risk for negative classroom perceptions. Furthermore, although different from research at the school level, which suggests that a higher proportion of minority students is related to lower teacher expectations for student success (Brault et al., 2014), the findings may suggest teachers' high expectations for learning success for minority students in their classroom, with whom they have direct daily contact.

Results for gender classroom composition appear to align more with previous research. The current study's findings indicated that classrooms with higher proportions of female students were associated with more teacher-reported practices that promote student engagement, which aligns with previous findings indicating that female students perceived higher levels of teacher-promoted collaboration, autonomy support, and social support than boys (Wentzel et al., 2010; Wang & Eccles, 2014). Previous research also suggests student engagement is linked to teacher

classroom practices and to teachers' beliefs about gender and engagement (Marks, 2000; Stroet et al., 2013). Research has shown that teachers tend to have a more positive view of female students and their ability to comply with behavioral expectations than their male counterparts (Marks, 2000), and that female students perceive these higher teacher behavioral expectations (Butler, 2012). This suggests that teachers may be promoting greater levels of student engagement in female-dominated classrooms based on the belief that female students are less likely to engage in disruptive behavior, are more diligent and hardworking, and possess more traits that enable student success (Hartley & Sutton, 2013; Heyder & Kessels, 2015; Krahe et al., 2007). However, the findings from the current study are preliminary. Additional research is needed to examine the associations between classroom composition and teacher-reported classroom practices.

When the relationship between individual teacher factors and teacher perceptions were examined, being a female teacher was predictive of teacher-reported practices that promote student engagement, while teacher self-efficacy was associated with interactive mastery. These findings converge with previous research that states being female and having high self-efficacy are strong predictors of teacher behavior, including engaging students in learning, utilizing more innovative, student-centered instructional strategies, and creating environments that foster mastery-oriented learning (Chong et al., 2010; Deemer, 2004; Gibson & Dembo, 1984; Onafowora, 2005; Retelsdorf et al., 2010; Saabe & Aeltermann, 2007).

Implications for practice. Results of the current study can contribute to our understanding of the school, classroom, and individual factors that influence teacher perceptions and can provide guidance on practices that facilitate a positive classroom environment. Findings suggest that as school psychologists, coaches, and administrators attempt to collaborate and

consult with teachers on effective student engagement and mastery practices, they should take into consideration the school environment, the gender and ethnic composition of the classroom, as well as teacher gender and self-efficacy beliefs. Consultants can continue to communicate with teachers regarding the risks for minority and male students to experience a negative classroom climate, as well as provide specific teaching and classroom management practices that address their unique needs and improve their chances of experiencing a positive classroom environment. Furthermore, educators need to persist in gathering climate and connectedness data from school stakeholders to deepen their understanding of their unique school context and how these factors may be impacting teacher perceptions of their classroom environment. Understanding which individual and contextual factors predict teacher practices can guide school psychologists and administrators in providing school-wide and individual teacher professional development to improve teacher practices.

Contributions, limitations, and future research. This study contributes to the literature through its approach of simultaneously examining school, classroom, and individual factors that influence teacher perceptions, as well as through its use of novel predictor variables. At the school level, analyses included Moderate SES School, which may have a nuanced effect on teacher perceptions that have not been previously addressed in the literature. However, the low number of schools necessitates extreme caution when interpreting the findings. Thus, additional research is needed in understanding the unique contextual characteristics of Moderate SES schools and their associations with teacher perceptions. Of particular note was the use of classroom level demographics (proportion of males and minorities), student behavior (average levels of involved engagement and disruptive behaviors), and student beliefs (average levels of academic self-efficacy, mastery, performance-approach, and performance-avoidance). Despite

the limitation of a small teacher sample size and the failure to utilize model-based multi-level modeling to determine the school-level influence, this study provides important information regarding the role of classroom composition on teachers' perceptions of the Classroom Social Environment. As our schools and classrooms become increasingly diverse (Howard, 2007), it is important for educational researchers and practitioners to understand how differences in school and classroom composition impact teacher-reported classroom practices. Thus, future research that includes larger sample sizes and utilizes model-based multi-level modeling can help to deepen our understanding of teachers' perceptions.

Research Question 5

Examining influences on student perceptions. The aim of research question five was to examine the influence of school, classroom (teacher), and individual factors on student perceptions of the Classroom Social Environment at the elementary and middle school levels. Findings indicate differences regarding how these factors affected elementary and middle school student perceptions.

When the influence of school-level factors on elementary students' perceptions was examined, results revealed that High SES School was related to higher levels of perceived performance classroom goal structure. Given the high levels of teacher expectations for student success, and the higher levels of student achievement in High SES schools (Brault et al., 2014; Lan et al., 2010), it is not surprising that school high socio-economic status is associated with higher levels of performance classroom goal structure. This finding may underscore the importance of school-level factors for elementary students as student demographics and beliefs had a minimal influence on students' perceptions. Gender was the only student variable that had a significant association. Individual student (gender), teacher demographics (age), and teacher

beliefs (self-efficacy, autonomy, and general teacher efficacy) impacted students' perceptions of the social aspects of the classroom (i.e., Promoting Social Interactions and Promoting Mutual Respect). Specifically, in agreement with previous research, female students reported higher levels of teacher-promoted Social Interaction. However, in contrast with numerous studies, no other individual student variables seemed to influence elementary students' perceptions (Butler, 2012; Kaplan & Midgley 1999; Wang & Eccles, 2014; Wentzel et al., 2010). Many of these studies were conducted with middle and high school students, thus these findings may suggest that school context and teacher variables may have a substantial effect on elementary students' perception of the Classroom Social Environment. This may be a reflection of the structure of elementary schools where students' daily practices and beliefs are guided primarily by a single teacher and have been associated with more positive student–teacher relationships (Feldlaufer et al., 1988; Midgley & Edelin, 1998). Thus, the beliefs of elementary teachers may have more powerful effects on students' perceptions of their classroom environment.

In contrast to the elementary school sample, middle school students' demographic and belief variables had significant influences on their perceptions of the Classroom Social Environment. In alignment with previous research, the current study found that male students perceived higher performance-oriented teacher practices, providing additional support for the notion that males are at-risk for perceiving more negative classroom climates, perhaps due to teachers' expectations about male performance and classroom behaviors (Hartley & Sutton, 2013; Heyder & Kessels, 2015; Krahe et al., 2007). Although contrary to current literature (Fan et al., 2011; Koth et al., 2008; Mitchell et al., 2010), the finding that minority students perceived more teacher-promoted social interaction and mutual respect aligns with teacher reports in the current study of engaging in more interactive mastery practices. This alignment may suggest that

minority students are able to acknowledge and identify when their teachers make concerted efforts to improve the social and interpersonal aspects of the classroom environment for their diverse students.

The current study's findings regarding the influence of adaptive characteristics such as student engagement and goal orientation on students' perception of a Respectful Mastery Goal Structure aligns with previous research, where students with higher levels of these characteristics perceived a more positive classroom goal structure (Bergsmann et al., 2013; Urdan & Midgley, 2003; Wentzel et al., 2010). Conversely, students with less adaptive goal orientations (performance-approach and performance-avoidance) viewed their classroom goal structure to be more performance-oriented (Kaplan et al., 2002; Rolland, 2012). Interestingly, students who reported less adaptive goal orientations still noted high levels of teacher-promoted mutual respect and social interaction, indicating that despite perceiving their classrooms as promoting competition and comparison, they may still perceive their teachers to emphasize practices that promote a positive social environment (Ciani et al., 2010).

Findings from the current study also highlight the association between teacher individual characteristics and students' perceptions. Analyses revealed that students with Caucasian, older, and less experienced teachers reported more teacher-promoted social interaction and mutual respect as well as a more mastery-oriented classroom context. Extant research suggests that Caucasian teachers experience more positive school climates (Bevan et al., 2007; Wilson et al., 1987). These positive feelings about their work environment may translate into practices that create a more positive environment for students. However, there have been mixed findings related to the effects of teacher age and experience (Peterson 2012; Wolters et al., 2011; Wolters & Daugherty, 2007) suggesting that there may be external school factors that mediate this

relationship.

When school level variables were examined, High and Low SES Schools were associated with performance-oriented teacher practices. Low SES schools are often targeted for school reform efforts to meet proficiency standards (Battistich et al., 1995; Caldas & Bankston, 1997 Rutter & Maughan, 2002), while High SES schools are associated with higher expectations and pressure (Brault et al., 2014; Herland & Golan, 1991). Therefore, students may perceive the academic pressures placed upon the administrators and teachers for students to meet or exceed proficiency standards. Research has shown that school motivational context and goal structure influence students' perceptions of their teachers' practices (Skaalvik & Skaalvik, 2013).

Implications for practice. The difference in factors that predict elementary and middle school students' perceptions may call for different approaches to improve their perceptions of the Classroom Social Environment. At the elementary level, helping to shape teacher beliefs can prove to have an effect on student perceptions. Given the effect of self-efficacy, autonomy, and general teacher efficacy, efforts should be made to provide more continuous positive feedback to teachers regarding their efforts and performance, to provide teachers more opportunities to make decisions regarding curricula and evaluation procedures, and to educate teachers on a variety of evidence-based practices that are effective for diverse student populations. Conversely, in middle schools placing more emphasis on changing or shaping students' individual achievement goal orientation and engagement may prove beneficial in influencing student perceptions. This may involve helping students set goals, recognizing their progress, and connecting learning with meaningful and relevant topics.

Results from this study may suggest that despite their risk, minority students may experience positive classroom environments when their teachers encourage student interactions

and mutual respect. Administrators, school psychologists, and school-based coaches can provide support to teachers in implementing culturally responsive classroom practices that promote and include students from diverse backgrounds in order to improve their perceptions of their classroom environment and reduce the adverse outcomes associated with negative perceptions (Eccles, 1991; Eccles, 2004). Additionally, given that students with minority, younger, and more experienced teachers report more negative classroom environments, district and school leaders can provide proactive support and consultation to these teachers to implement practices to create a more positive classroom environment.

Contributions, limitations, and future research. The current study has added to the body of the literature that seeks to explain the factors that influence student perceptions through examining the influence of teacher beliefs on students' perceptions of the classroom. Given that teachers are the primary decision-makers and cultivate the atmosphere of the classroom environment, it is important to understand how their beliefs translate into behaviors that affect students' perceptions of their classroom environment. Despite the limitations of utilizing a design-based path analysis approach which does not propose a factor structure at the between level, the results of the study provide additional support for the influence of students' personal goal orientations on their perceptions of the classroom social environment. Thus, further examination into the contextual influences and early school experiences that shape personal goal orientations is needed.

Conclusion

The current study examined the convergence between teacher and student perceptions of the Classroom Social Environment and investigated the school, classroom, and individual factors that influenced these perceptions. Findings indicate differences between teacher and student

conceptualization of the Classroom Social Environment and emphasize the need for measures that adequately measure teacher and student perceptions at the classroom level. Furthermore, the study revealed that factors at all levels of analysis (school, classroom, and individual) had varying effects on different dimensions of the Classroom Social Environment. These findings call for additional research to determine which factors are most salient in shaping and influencing both teacher and student perceptions of the Classroom Social Environment. Furthermore, given the differences in perceptions of classroom practices across student groups, the findings from the current study highlight the need for schools to utilize a variety of classroom practices that can motivate and engage diverse student populations in the learning process and that foster positive peer relationships.

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Appendices

Appendix A: Demographics Form

The Adolescent Motivation and Development Study



XXX Elementary School

Fall, 2009

Print Name: _____

Student Demographics

Survey ID: _____

Gender:

Male

Female

Race (choose one):

Asian American

White or European American

Hispanic or Latino, including Mexican American, Central American, and others

Black or African American

Mixed; Parents are from two different ethnic groups

Caribbean with African Ancestry

Caribbean with Indian (South Asian) Ancestry

Caribbean with Asian Ancestry (e.g. Chinese)

American Indian or Native Alaskan

10 Native Hawaiian or other Pacific Islander

11 Other: _____



Stop!!! Do not continue until told to do so.

Appendix B: Classroom Social Environment

5 Point Likert Scale (1 = not at all true, 3 = somewhat true, 5 = very true)

Classroom Mastery Goals

My teacher wants us to understand our work, not just memorize it

My teacher really wants us to enjoy learning new things

My teacher recognizes us for trying hard.

My teacher gives us time to really explore and understand new ideas.

Classroom Performance Goals

My teacher points out those students who get good grades as an example to all of us.

My teacher points out those students who get poor grades as an example to all of us.

My teacher lets us know which students get the highest scores on a test.

My teacher tells us how we compare to other students.

My teacher lets us know which students get the lowest scores on a test.

Promotes Social Interaction (PALS, Ryan & Patrick ,2001)

My teacher often allows us to discuss our work with classmates.

My teacher encourages us to share ideas with one another in class.

My teacher lets us ask other students when we need help with our work.

My teacher encourages us to get to know all the other students in class.

In our classes, we are supposed to be quiet all the time. (Reverse item)

Promotes Mutual Respect

My teacher wants us to respect each others' opinions.

My teacher does not allow students to make fun of other students' ideas in class.

My teacher makes sure that students don't say anything negative about each other class.

My teacher does not let us make fun of someone who gives the wrong answer.

My teacher wants all students to feel respected.

Appendix C: Personal Achievement Goals (My Goals at School, PALS)

5 Point Likert Scale (*1 = not at all true of me, 3 = somewhat true of me, 5 = very true of me*)

Mastery Goal Orientation

I like schoolwork that I'll learn from, even if I make a lot of mistakes.

I like schoolwork best when it really makes me think.

An important reason I do my schoolwork is because I want to improve my skills.

An important reason I do my schoolwork is because I'm interested in it.

An important reason I do my schoolwork is because I like to learn new things.

Performance-Approach Goal Orientation

I would feel really good if I were the only one who could answer the questions in my classes

I would feel successful if I did better than most of the other students in my classes.

An important reason I do my schoolwork is because I'd like to show the teacher that I'm smarter than the other students in my class.

Doing better than other students in my class is important to me.

An important reason I do my schoolwork is because I want to do better than other students in my class.

Performance-Avoid Goal Orientation

An important reason I do my schoolwork is so that I won't embarrass myself.

An important reason I do my schoolwork is so the teacher doesn't think I know less than others.

An important reason I do my schoolwork is so I don't look dumb.

One reason I might not participate in class is to avoid looking dumb.

Appendix D: Academic Self-efficacy, Classroom Engagement, and Disruptive Behavior

5 Point Likert Scale (1 = not at all true of me, 3 = somewhat true of me, 5 = very true of me)

Academic Efficacy (PALS, Midgley et al., 2000)

I'm certain I can master the skills taught in school this year.

I can do even the hardest schoolwork if I try.

Even if my schoolwork is hard, I can learn it.

I'm certain I can figure out even the most difficult schoolwork.

Involved Engagement (Midgley, et al., 2000)

I listen carefully in class.

I try very hard in school.

The first time my teachers talk about a new topic I listen very carefully.

I pay attention in my classes.

Disruptive Behavior (PALS) (Skinner & Belmont, 1993).

I sometimes get into trouble in my classes.

I always follow the classroom rules.

I sometimes behave in a way that annoys my teachers.

I sometimes don't follow the teachers' directions.

Appendix E: Example of Elementary School Parental Consent Forms

Dear Parent or Caregiver:

This letter provides information about a research study that will be conducted at C Elementary School by Sarah Kiefer, a professor from the University of South Florida. My goal in conducting the study is to examine how students' motivation changes over time, and how it relates to students' social and academic adjustment in school. The purpose of the study is to gain a better understanding of motivation during early adolescence in order to help all students function well socially, be engaged in school, and perform up to their academic potential.

Who I Am: I am Sarah Kiefer, Ph.D., a professor in the College of Education at the University of South Florida (USF). I am planning the study in cooperation with the principal and administrators of C Elementary School to ensure the study provides information that will be helpful to the schools.

Why I am Requesting Your Child's Participation: This study is being conducted as part of a project entitled, "The Adolescent Motivation and Development Study." Your child is being asked to participate because he or she is a student at C Elementary School.

Why Your Child Should Participate: We need to learn more about what motivates students what leads to school success during the teenage years! The information that I collect from students may help increase our overall knowledge of what motivates students in school and how teachers and schools can support students' success in school. In addition, information from the study will be shared with the teachers and administrators at C Elementary School in order to increase their knowledge of what motivates students to be successful academically and socially in school. Information from this study will provide a foundation from which to improve the schooling experiences of students at C Elementary School. Please note neither you nor your child will be paid for your child's participation in the study. However, all students who participate in the study will be given a small gift and those students who return completed parental consent forms will be entered into a drawing for a gift certificate.

What Participation Requires: If your child is given permission to participate in the study, he or she will be asked to complete several paper-and-pencil questionnaires. These surveys will ask about your child's thoughts, behaviors, and attitudes towards school. Completion is expected to take your child about 40 minutes. I will personally administer the questionnaires at C Elementary School along with a trained team of researchers from USF during regular school hours. Questionnaires will be administered in classrooms to students who have parent permission to participate. Participation will occur during one class period this Spring semester, and again in the Fall and Spring semesters in sixth grade at Middle School E or Middle School D. In total, participation will take about 120 minutes of your child's time for the three semesters. If your student will attend a middle school that is not participating in the study, he or she will participate in the study this Spring semester only. In addition, students' school records will be reviewed for indications of academic achievement (GPA and FCAT) and if on reduced lunch status.

Please Note: Your decision to allow your child to participate in this research study must be completely voluntary. You are free to allow your child to participate in this research study or to

withdraw him or her at any time. If you choose not to participate, or if you withdraw at any point during the study, this will in no way affect your relationship with C Elementary School, Middle School E, Middle School D, USF, or any other party.

Confidentiality of Your Child's Responses: There is minimal risk to your child for participating in this research. I will be present during administration of the questionnaires, along with a team of trained researchers, in order to provide assistance to your child if he or she has any questions or concerns.

Additionally, school guidance counselors will be available to students in the unlikely event that your child becomes emotionally distressed while completing the measures. Your child's privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, and the USF Institutional Review Board may inspect the records from this research project, but your child's individual responses will not be shared with school system personnel or anyone other than us and our research assistants. Your child's completed questionnaires will be assigned a code number to protect the confidentiality of his or her responses. Only I will have access to the locked file cabinet stored at USF that will contain: 1) all records linking code numbers to participants' names, and 2) all information gathered from school records. Please note that although your child's specific responses on the questionnaires will not be shared with school staff, if your child indicates that he or she intends to harm him or herself, I will contact district mental health counselors to ensure your child's safety.

What I'll Do With Your Child's Responses: I plan to use the information from this study to inform educators and psychologists about students' motivation in school, as well as to construct a plan for improving students' motivation and success in school during adolescence. The results of this study may be published. However, the data obtained from your child will be combined with data from other people in the publication. The published results will not include your child's name or any other information that would in any way personally identify your child.

Questions? If you have any questions about this research study, please contact Dr. Sarah Kiefer at (813) 974-0155. If you have questions about your child's rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at (813) 974-9343.

Want Your Child to Participate? To permit your child to participate in this study, complete the attached consent form and have your child turn it in to his or her first period teacher.

Sincerely,
Sarah Kiefer, Ph.D.
Assistant Professor of Educational Psychology
Department of Psychological and Social Foundations

Consent for Child to Take Part in this Research Study

I freely give my permission to let my child take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

Printed name of child

Signature of parent of child taking
part in the study

Printed name of parent Date

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

Signature of person
obtaining consent

Printed name of person Date

Appendix F: Example of Middle School Parental Consent Forms

Dear Parent or Caregiver:

This letter provides information about a research study that will be conducted at Sergeant Smith Middle School by Sarah Kiefer, a professor from the University of South Florida. My goal in conducting the study is to examine how students' motivation changes over time, and how it relates to students' social and academic adjustment in school. The purpose of the study is to gain a better understanding of motivation during early adolescence in order to help all students function well socially, be engaged in school, and perform up to their academic potential.

- ✓ Who I Am: I am Sarah Kiefer, Ph.D., a professor in the College of Education at the University of South Florida (USF). I am planning the study in cooperation with the principal and administrators of Sergeant Smith Middle School to ensure the study provides information that will be helpful to the schools.
- ✓ Why I am Requesting Your Child's Participation: This study is being conducted as part of a project entitled, "The Adolescent Motivation and Development Study." Your child is being asked to participate because he or she is a student at Sergeant Smith Middle School.
- ✓ Why Your Child Should Participate: We need to learn more about what motivates students what leads to school success during the teenage years! The information that I collect from students may help increase our overall knowledge of what motivates students in school and how teachers and schools can support students' success in school. In addition, information from the study will be shared with the teachers and administrators at Sergeant Smith Middle School in order to increase their knowledge of what motivates students to be successful academically and socially in school. Information from this study will provide a foundation from which to improve the schooling experiences of students at Sergeant Smith Middle School. Please note neither you nor your child will be paid for your child's participation in the study. However, all students who participate in the study will be given a small gift and those students who return completed parental consent forms will be entered into a drawing for a gift certificate.

What Participation Requires: If your child is given permission to participate in the study, he or she will be asked to complete several paper-and-pencil questionnaires. These surveys will ask about your child's thoughts, behaviors, and attitudes towards school. Completion is expected to take your child about 40 minutes. I will personally administer the questionnaires at Sergeant Smith Middle School along with a trained team of researchers from USF during regular school hours. Questionnaires will be administered in classrooms to students who have parent permission to participate. Participation will occur during one class period in the Fall and Spring semesters in sixth grade at Sergeant Smith Middle School. In total, participation

- ✓ will take about 80 minutes of your child's time. In addition, students' school records will be reviewed for indications of academic achievement (GPA and FCAT) and if on reduced lunch status.
- ✓ Please Note: Your decision to allow your child to participate in this research study must be completely voluntary. You are free to allow your child to participate in this research study or to withdraw him or her at any time. If you choose not to participate, or if you withdraw at any point during the study, this will in no way affect your relationship with Sergeant Smith Middle School, USF, or any other party.
- ✓ Confidentiality of Your Child's Responses: There is minimal risk to your child for participating in this research. I will be present during administration of the questionnaires, along with a team of trained researchers, in order to provide assistance to your child if he or she has any questions or concerns. Additionally, school guidance counselors will be available to students in the unlikely event that your child becomes emotionally distressed while completing the measures. Your child's privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, and the USF Institutional Review Board may inspect the records from this research project, but your child's individual responses will not be shared with school system personnel or anyone other than us and our research assistants. Your child's completed questionnaires will be assigned a code number to protect the confidentiality of his or her responses. Only I will have access to the locked file cabinet stored at USF that will contain: 1) all records linking code numbers to participants' names, and 2) all information gathered from school records. Please note that although your child's specific responses on the questionnaires will not be shared with school staff, if your child indicates that he or she intends to harm him or herself, I will contact district mental health counselors to ensure your child's safety.
- ✓ What I'll Do With Your Child's Responses: I plan to use the information from this study to inform educators and psychologists about students' motivation in school, as well as to construct a plan for improving students' motivation and success in school during adolescence. The results of this study may be published. However, the data obtained from your child will be combined with data from other people in the publication. The published results will not include your child's name or any other information that would in any way personally identify your child.
- ✓ Questions? If you have any questions about this research study, please contact Dr. Sarah Kiefer at (813) 974-0155. If you have questions about your child's rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at (813) 974-9343.

- ✓ Want Your Child to Participate? To permit your child to participate in this study, complete the attached consent form and have your child turn it in to his or her first period teacher.

Sincerely,

Sarah Kiefer, Ph.D.
Assistant Professor of Educational Psychology
Department of Psychological and Social Foundations-

Consent for Child to Take Part in this Research Study

I freely give my permission to let my child take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

Printed name of child

Signature of parent Date _____
Printed name of parent of child taking part in study

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

Signature of person Date

Printed name of person obtaining consent

Appendix G: Teacher Demographic Data and Background

Teacher Demographics (NICHHD)

GEN	Gender
AGE	Age
RAC	Ethnicity

Teacher Background

How many years have you worked as a FULL-TIME elementary or secondary teacher in the PUBLIC SCHOOLS?

How many years have you worked as a PART-TIME elementary or secondary teacher in the PUBLIC SCHOOLS?

Do you have a bachelor's degree?

Do you have a master's degree?

Have you earned any other degrees?

What other degree(s) have you earned?

What type of certificate do you hold in this field?

Are you currently in a program to obtain certification in your MAIN teaching field in this state?

Appendix H: Teacher Reported Classroom Social Environment (PALS)

5 Point Likert Scale (Strongly disagree, somewhat agree, strongly agree)

In my classroom:

Mastery Classroom Goal Structure

I make a special effort to recognize students' individual progress, even if they are below grade level.

During class, I often provide several different activities so that students can choose among them.

I consider how much students have improved when I give them report card grades.

I give a wide range of assignments, matched to students' needs and skill level.

Performance Classroom Goal Structure

I give special privileges to students who do the best work.

I display the work of the highest achieving students as an example.

I help students understand how their performance compares to others.

I encourage students to compete with each other.

I point out those students who do well as a model for the other students

Promotes Social Interaction

I often allow students to discuss their work with classmates.

I encourage students to share ideas with one another in class.

I encourage students to get know all the other students in the class.

I let students ask other students when they need help with their work.

In my class, students are supposed to be quiet all the time. (REVERSE)

Promotes Mutual Respect

I want students to respect each others' opinions.

I want all students to feel respected.

I do **NOT** allow students to make fun of other students' ideas in class.

I make sure that students don't say anything negative about each other in class.

I do **NOT** let students make fun of someone who gives the wrong answer.

Appendix I: Teacher Self efficacy

9 Point Likert-Scale (nothing, very little, some influence, quite a bit, a great deal)

Instructional Self- Efficacy (Bandura; NIHCD) (7 items)

How much can you do to get through to the most difficult students?

How much can you do to promote learning where there is lack of support from the home?

How much can you do to keep students on task on difficult assignments?

How much can you do to motivate students who show low interest in schoolwork?

How much can you do to get students to work together?

How much can you do to overcome the influence of adverse community conditions on students' learning?

How much can you do to get students to do their schoolwork?

Disciplinary Self-Efficacy (3 items)

How much can you do to get children to follow classroom rules?

How much can you do to control disruptive behavior in the classroom?

How much can you do to prevent problem behavior on the school grounds?

Efficacy to create a positive school environment (5 items)

How much can you do to make the school a safe place?

How much can you do to make students enjoy coming to school?

How much can you do to get students to trust teachers?

How much can you do to help other teachers with their teaching skills

How much can you do to get students to believe they can do well in school work?

Appendix J: General Teaching Efficacy and Teacher Autonomy

General Teaching Efficacy- Preparing Students to Achieve (NICHD)

How much of a problem are the factors below in preparing children in your class to succeed academically? (Fill in one for each factor.)

Home/family life

Parent cooperation/support

Low intelligence

Cultural differences

English proficiency

Non-standard English

Special learning problems

Behavior problems (disruptive)

Inadequate supplies

Student-teacher ratio

Students **NOT** ready socially

Students **NOT** ready academically

Students have attention problems Student tardiness/absenteeism

Other: Other (please specify): _____

Teacher Autonomy: Perceived Control over Planning and Teaching (NICHD)

4 Point Likert scale (no control, complete control)

At this school, how much control do you feel you have IN YOUR CLASSROOM over each of the following areas of your planning and teaching?

Selecting contents, topics, and skills to be taught

Evaluating and grading students

Determining the amount of homework to be assigned

Appendix K: Administrator Handbook

Student Verbal Assent Script

Introduction

Hello my name is _____. I am a student/teacher at the University of South Florida. Right now, I'm trying to learn about students' motivation and success in school. I would like to ask you to help me by being in a study, but before I do, I want to explain what will happen if you decide to help me. (*While one person discusses informed consent, the other person can write the survey example on the board and pass out the teacher survey and student surveys.*)

Informed Consent

I will ask you to fill out a survey. Filling out this survey is voluntary. If at any point you want to stop or skip a question that is ok. For survey questions, there are no right or wrong answers; we just want your opinions. By being in the study, you will help me understand students' motivation and success in school.

- Your survey is confidential. This means that your parents, teacher, and classmates will not know what you have written on your survey. When I tell other people about the study, I will not use your name, and no one will be able to tell who I'm talking about.
- Your mom/dad says it's okay for you to be in the study. But if you don't want to be in the study, you don't have to be. What you decide won't make any difference with your grades or about how people think about you. No one will be upset if you don't want to be in the study. If you want to be in the study now but change your mind later, that's okay. You can stop at any time. If there is anything you don't understand you should tell me so I can explain it to you.
- You can ask me questions about the study. If you have a question later that you don't think of now, you can call me (*or Dr. Kiefer*) or ask your parents or teacher to call or email me (*or Dr. Kiefer*).

Do you have any questions for me about the survey?

Would you like to be in the study and fill out the survey?

NOTE TO RESEARCHER: The student should answer “Yes” or “No.” Only a definite “Yes” may be taken as assent to participate. Look for students saying yes, nodding of heads, thumbs up.

Student Survey Instructions

Please PRINT your first and last name on the front cover. After you have printed your name, turn to the next page. Fill in the bubble that corresponds to your gender. Lastly, fill in the appropriate bubble that best describes your racial/ethnic group. **Please do not start the survey yet. I have a few things to tell you about survey questions:**

1. For survey questions, there are no right or wrong answers; we just want your opinions.
2. If you have any questions raise your hand.
3. I will read the questions out loud. With these types of questions we are interested in your first reaction to the questions. Don't spend too much time on any one question.
4. Some of the survey questions will sound similar. We ask you an idea several different ways so that we can make sure that we really know your opinion about things.

Example of survey question (have this on board at the beginning of the session).

I like pepperoni pizza

1	2	3	4	5
not	somewhat		very	
true	true		true	

Ask class:

1. How many of you would pick 1 – why? Right because you don't like it, that is not true for you. So you would circle 1 on your survey.
2. How many of you would pick 3 – why? Right you think it is ok, this is sort of true for you. So you would circle 3 on your survey.

3. How many of you would pick 5 – why? Right because you love it, it is very true for you. So you would circle 5 on your survey.

Recap:

- The 2 is for when you are between a 1 and 3 and the 4 is for when you are between 3 and 5.
- Be sure to use all the numbers to tell us exactly how you feel about the survey items.
- On the survey the exact meaning of 1-5 will change but it is the same idea, you'll see.

Turn to the next page and begin.

Student Survey Procedure

General Points

- *Many students will go ahead on their own and that is fine, but don't encourage or mention this.*
- *When reading the survey, emphasize key words in items. Keep a steady tempo. Don't get too carried away but convey enthusiasm and read with some zip to keep students attentive.*
- *Find a student in the class who is a little slower and watch for them to look up after each item to make sure you are not going too fast. Check with students a few times – am I going too fast??*
- *In the beginning point out what the likert scale means. You do not need to say this every time though. Point out when meaning of likert scale changes.*
- *“OK, at the top of page 1, question 1 is ‘How important...’ #1 means not at all important, #3 means somewhat important, and #5 means very important ... question 2 ‘For me...’ #1 means not at all important, #3 means somewhat important, and #5 means very important. Then just read questions for the rest of this set. When get to next set...*

question 6 'How good...' now for this set #1 means not at all good, #3 means somewhat good and #5 means very good"

- *One administrator reads the survey, the other person (if there is a 2nd person) should walk around and make sure students are filling it out properly and answer any individual questions.*

Friendship and Peer Nominations

- *Ask students to PRINT the FIRST and LAST names of students in the SIXTH GRADE at their school. If they can't spell the last name, ask them for the first initial of the last name, or to do the best that they can.*
- *Emphasize that students should think about friends and classmates in their own GRADE.*
- *Students may not want to nominate a peer that they admire. Tell students: This may be a student that you respect or would like to be like, or that they admire something specific about that person.*

When Surveys are Completed:

- One person can pick up surveys & pencils - check that students' names are on front page!
- One person can pass out highlighter/pens.
- Be sure to pick up teacher survey, ask teacher if there are any absent students today.

Appendix L: IRB Approval and Certification of Completion



RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-7091

1/8/2014

Sarah Kiefer, Ph.D.
Psychological and Social Foundations
4202 East Fowler Ave, EDU 105
Tampa, FL 33620

RE: **Expedited Approval for Amendment**
IRB#: Ame1_107783
Title: The Adolescent Motivation and Development Study

Dear Dr. Kiefer:

On 1/8/2014, the Institutional Review Board (IRB) reviewed and **APPROVED** your Amendment. The submitted request has been approved for the following:

- Keri Stewart added to key personnel.

This research involving children continues to be approved under the minimal risk category 45 CFR 46.404: Research not involving greater than minimal risk.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

A handwritten signature in black ink that reads "John A. Schinka, Ph.D." in a cursive script.

John Schinka, Ph.D., Chairperson
USF Institutional Review Board

Certificate of Completion

Keri Stewart

Has Successfully Completed the Course in

CITI Social / Behavioral Investigators and Key Personnel