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# The Mediating Role of Classroom Social Environment between Teacher Self-efficacy and Student Adjustment

Keri Stewart
*University of South Florida*, skk@mail.usf.edu

The Mediating Role of Classroom Social Environment

between Teacher Self-Efficacy and Student Adjustment


by


Keri Stewart


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Co-Major Professor:  Sarah Kiefer, Ph.D.
Co-Major Professor: Kathy Bradley- Klug Ph.D.
John Ferron, Ph.D.


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**Abstract**

The purpose of this study is to investigate whether students' perceptions of the classroom social environment mediate the relations between teacher self-efficacy and student adjustment. Research suggests that early adolescents often experience decreases in engagement and motivation during the middle school years, which can put individuals at risk for academic failure and school dropout (Eccles, Lord, & Midgley, 1991). This occurs due to a mismatch between the individuals' developmental needs and the environment (Eccles et al., 1993). Whether early adolescents remain engaged in school is largely dependent on how they perceive the classroom environment promoted by their teacher (Erikson, 1950; Masten & Coatsworth, 1998; Roeser, Eccles & Sameroff, 2000). Additionally, the type of environment teachers promote is based on their assessments of their own teaching abilities (Ashton & Webb, 1986; Guskey, 1988; Hall et al., 1992). Therefore, this study describes a model proposing that the classroom social environment (i.e., teacher support, teacher-promoted social interaction and mutual respect) mediates the relation between teacher self -efficacy and student adjustment (i.e., academic and social self-efficacy, classroom engagement, and disruptive behavior). This model was tested via single-level structural equation model with 358 middle school students from an economically and racially diverse sample. This study utilized a single data point from a larger, longitudinal quantitative study which examined student motivation and adjustment across the transition from elementary school into middle school. The study aimed to determine: (1). What is the impact of

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teacher self-efficacy on students' perception of the classroom social environment? (2).What is the impact of the classroom social environment on students' academic and social self- efficacy, involved behavior, and disruptive behavior? (3). To what extent does the classroom social environment mediate the relation between teacher self-efficacy and student adjustment (i.e., academic and social self-efficacy and involved and disruptive behavior). Findings suggest that teacher self-efficacy had minimal impact on classroom social environment and student adjustment variables, and thus may not play a mediating role between these variables. However, findings did indicate a significant, moderate impact of the classroom social environment on student adjustment. This finding aligns with previous research which suggests when the classroom environment provides opportunities for students to develop their academic and social competencies, and when students feel cared for and supported, school adjustment is enhanced (Eccles, Wigfield, & Schiefele, 1998; Roeser et al., 2000). The overall impact of the classroom social environment on student adjustment in this study highlights the need for school psychologists to advocate for the development of middle school environments that meet early adolescents' developmental and basic needs.

## Chapter I: Introduction

### Statement of the Problem

The current status rate for high school drop out in the United States is 7.9 percent. This means that approximately 3,098,150 sixteen through twenty four year-olds are not enrolled in school and have not earned a high school credential (National Center for Educational Statistics 2010). A major challenge for school professionals has been building and sustaining high levels of student engagement in school and learning (Finn, 1993). Research indicates that 25–60% of U.S. students are disengaged from school (Klem & Connell, 2004). Many students have already disengaged from their education before they enter high school (Orthner, Cook, Rose, & Randolph, 2002). Disengaged students are more likely to struggle academically, to drop out of school, and to have problem behaviors (Finn, 1993; Fredricks, Blumenfeld, & Paris, 2004; Klem & Connell, 2004). Thus, it is important for educators and policy makers to increase engagement and reduce disengagement among young adolescents.

Early adolescents often experience decreases in engagement and motivation during the middle school years, which can put individuals at risk for academic failure and school dropout (Eccles, Lord, & Midgley, 1991).Whether early adolescents stay engaged and perform well in school, develop positive peer relationships, and feel positive about themselves and their future is largely based upon whether they feel able to meet the challenges presented to them, perceive purpose and value in classroom activities, and feel safe and cared for by others in school (Eccles

& Midgley, 1989; Erikson, 1950; Masten & Coatsworth, 1998; Roeser, et al., 2000). Therefore, research is needed to uncover the specific educational environments that contribute to positive outcomes related to early adolescents' self-efficacy, school-related engagement and behavior (Eccles et al., 1991).

Teachers play a pivotal role in shaping the classroom environment. The extent to which teachers feel confident about their abilities as educators has great impact on students' connection to school and their engagement (Dembo & Gibson, 1985; Rosenfeld, Richman, & Bowen, 2000). Although teachers shape the educational environment, teachers' self-efficacy is affected by aspects of the educational environment. Research indicates that secondary teachers have significantly less confidence in their abilities to influence students' learning than do their colleagues in elementary schools (Eccles et al., 1993). Secondary teachers often believe students need more discipline and control while students report that secondary teachers are less supportive and friendly than previous elementary school teachers (Eccles & Midgley, 1989). These differences between secondary teachers and elementary teachers exist due to differences in secondary school environments which are characterized by an increase in teacher-student ratio, interactions with several primary teachers, new subjects with new academic demands, and a more bureaucratic atmosphere with a higher emphasis on performance and social comparison (Eccles et al., 1993). Teacher support and student self-system processes (perceived control, autonomy orientation, and sense of relatedness) are significant predictors of behavioral and emotional engagement (Elffers, Oort, & Karsten, 2012; Skinner, Furrer, Marchand & Kindermann, 2008; Sook-Lee, 2012). Brookover et al. (1979), using schools as the unit of analysis, found negative correlations between teachers' self-efficacy and students' self-concept of ability and self-reliance. Thus, if secondary school teachers foster environments that are more

restrictive and provide low levels of support, students' opportunities to feel confident about themselves as well as connected and engaged may be reduced.

Teachers also play a significant role in fostering the classroom social environment. The classroom social environment and students' perceptions of their teachers and classmates are key factors in shaping teaching effectiveness as well as student learning and engagement (Brophy, 1998; Cornelius-White, 2007; Davis, 2003; Pianta, 1999). How teachers provide support to students and facilitate peer relations in the classroom has effects on students' academic and social outcomes (Merrit et al., 2012; Patrick, Ryan, & Kaplan, 2007; Sakiz, Pape, & Woolfolk Hoy, 2012). Teachers can enhance student engagement and self-efficacy in the classroom by reinforcing adolescents' perceptions of competence through scaffolded skill development and feedback, by framing the value and purposes of activities, and by providing emotional support and encouragement throughout the learning process (Roeser et al., 2000). When the classroom environment is not responsive to the unique psychological needs of adolescents, the stage-environment fit theory predicts a decline in self-efficacy, motivation, interest, performance, and behavior as they move into this environment (Eccles, 1991, 2004). Thus, it is crucial for educators to foster a classroom social environment that meets the developmental needs of early adolescents in order to promote positive self-perceptions and engagement.

**Definition of Key Terms**

*Teacher Self-efficacy*

Teacher self-efficacy refers to a teacher's belief in his/her capability to perform specific teaching tasks in a given specified situation (Dellinger et al., 2008). In this study teacher self-efficacy encompasses instructional efficacy, disciplinary efficacy, and efficacy to promote a positive environment. Instructional efficacy refers to a teacher's expectation of his/her ability to

deliver effective instruction and engage students in the learning process, including those students who are disruptive or lack motivation (Guskey & Passaro, 1994). Disciplinary self-efficacy refers to a teacher's expectation of his/her ability to engage in effective classroom management practices, enforce class rules, and prevent disruptive behavior. Efficacy to promote a positive environment refers to a teacher's expectation of his/her ability to create a trusting atmosphere and make school enjoyable for students. Teachers who demonstrate a high sense of teacher self-efficacy devote more class time to academic activities, help students who experience learning difficulties improve, and focus less on discipline as a prerequisite to student learning (Chong et al., 2010; Gibson & Dembo, 1984; Onafowora, 2005).

### *Classroom Social Environment.*

The classroom social environment involves two dimensions of teacher support (e.g., emotional and academic), as well as teacher-promoted student social interaction and mutual respect. Classrooms with a positive social environment tend to foster students' sense of belongingness, enjoyment, enthusiasm, and respect towards others (Wentzel et al., 2010). Teacher emotional support refers to students' perception that the teacher cares about them and likes them as a person, whereas teacher academic support refers to students' perception that the teacher cares about how much they learn and wants to help him or her learn (Johnson & Johnson, 2003). When students perceive teachers as highly supportive and have positive, high quality relationships with their teachers, they are more likely to be engaged in school and do better academically (McNeely& Falci, 2004).

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). Social interaction may include classmates sharing ideas with each other during whole-

class lessons, working together in small-group activities, or informal help-seeking and help-giving during individual seatwork. Classrooms high in regard for student social interactions, where teachers personally engage students in the learning process by promoting autonomy and expression of their ideas, have been found to be strong predictors of student engagement over time (Skinner et al., 2008).

Teacher promotion of mutual respect refers to the extent to which students perceive teachers as encouraging respect among classmates (Ryan & Patrick, 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 and mastery, performance-approach, intimacy, and responsibility goals (Nelson & DeBacker &, 2008; Pajares, 1996; Wentzel, 1993).

### Student Adjustment

***Student Self-efficacy***. Two aspects of student self-efficacy are included in this study: academic and social self-efficacy. Academic self-efficacy represents a student's  confidence that he/she can successfully execute academic tasks at selected levels, based on his/her abilities, attitudes, and previous experiences (Lorsbach & Jinks, 1999; Schunk, 1991). High academic self-efficacy can lead to more engagement and, subsequently, to more learning and better achievement (Linnenbrink & Pintrich, 2003). Social self-efficacy beliefs refer to a students' confidence that he/she can successfully make new friends, form positive peer relationships, be accepted by peers, and behave appropriately in school (Patrick et al., 1997). Social self-efficacy is has been shown to be associated with children's subsequent social and emotional adjustment (Galanki & Kalanztzi-Azizi, 1999).

***Classroom Engagement.*** Two aspects of classroom engagement are included in this study: 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 (Sook-Lee, 2012). 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 significantly differentiates unsuccessful school completers, successful school completers and school drop- outs (Klem & Connell, 2004).

**Significance of the Current Study**

Research has shown that student self-efficacy and engagement are key precursors to motivation and academic growth (Ferla et al., 2010; Mercer et al., 2011; Nasiriyan et al.,2011). Adolescents' perception of their classroom social environment may have a significant impact on the development of these precursors (Bishop & Pflaum 2005; Greene et al., 2004; Patrick et al., 2007). Teachers play a key role in shaping the classroom social environment and thus have a unique ability to support students' academic and social self-efficacy as well as their classroom engagement. Without confidence in their own ability to instruct, execute effective classroom management strategies, and promote a positive learning environment for students, teachers may be less equipped to provide students with opportunities to develop academically and socially (Bagaka 2011; Eccles et al., 1993; Ross, 1998). Despite this, little research has examined associations among teacher self-efficacy, student perceptions of the classroom social environment, and student adjustment in tandem. Examining these variables together may provide insight as to how educators can directly/indirectly improve student outcomes and provide a

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deeper understanding of the role of teachers and classroom factors in shaping student adjustment in middle school.

Examining teacher self-efficacy, the classroom social environment, and student adjustment is crucial for school psychologists who work in middle schools as they may encounter teachers with low levels of self-efficacy as well as interact with students whose engagement and self-efficacy are declining and classrooms that do not create positive social environments (Eccles et al., 1993). This study may have implications for educators, school administrators, policy makers, and teacher educators regarding the importance of enhancing teacher self-efficacy and providing teachers with ongoing support in developing the knowledge and skills necessary to create supportive classroom social environments. Furthermore, understanding the dimensions of the classroom social environment that affect student adjustment will allow school psychologists via professional development, to educate teachers about practices that foster a positive classroom social environment. This knowledge can lead to the implementation of school policies that facilitate the development of developmentally responsive environments and reduce the number of students who experience poor academic and social adjustment.

**Purpose Statement and Research Questions**

The purpose of this study is to determine whether the classroom social environment mediates the relation between teacher self-efficacy and student adjustment. The primary research questions for this study are listed below.

1. What is the impact of teacher self-efficacy on students' perception of the classroom social environment?

2. What is the impact of the classroom social environment on students' academic and social self- efficacy, involved behavior, and disruptive behavior?

3. To what extent does the classroom social environment mediate the relation between teacher self-efficacy and student adjustment (i.e., academic and social self-efficacy and classroom engagement)?

**Contributions to the Literature**

To date few research studies have investigated the associations among teacher self-efficacy, student perceptions of the classroom social environment, and student adjustment in tandem. Even fewer studies have examined these associations using rigorous statistical methods with middle school students from urban and diverse backgrounds. Thus, the current study provides several unique contributions to the literature regarding factors that may enhance early adolescent adjustment.

## Chapter II: Literature Review

This chapter provides a review of relevant literature and theoretical foundations for teacher self-efficacy, the classroom social environment, and student adjustment. The first section begins with a review of Bandura's social cognitive theory and how it relates to teacher self-efficacy followed by a discussion of how teacher self-efficacy is defined and measured in the present literature. Influences on teacher self-efficacy and the associated outcomes of this construct as well as gaps in the current research are also addressed. In the next section, theoretical perspectives, components, outcomes, and areas for further research regarding the classroom social environment are reviewed. In the third section, student adjustment variables are discussed including the various definitions, measurement scales, associated factors and outcomes for student academic and social efficacy as well as student engagement. Lastly, a discussion regarding the associations among the key variables, and a summary of study's current aims are presented.

### Bandura's Social Cognitive Theory

Social cognitive theory conceptualizes human functioning as a dynamic and interactive process. This theory ascribes a central role to cognitive processes in which the individual can observe others and the environment, reflect on that in combination with his or her own thoughts and behaviors, and alter his or her own self-regulatory functions accordingly (Burney, 2007).

Personal, contextual, and self-processes all interact in a triadic reciprocal relationship to influence motivation and behavior. Bandura (1986) viewed individuals as agents actively involved in their own development, human learning, and functioning. Individuals are also viewed as being able to consider modifications to their social environment in order to influence processes and competencies that improve performance and well-being.

Social-cognitive theories within the field of education emphasize that teaching and learning are highly social activities. Students' cognitive and affective development is influenced by interactions with teachers, peers, and instructional materials in the classroom. Throughout the learning process, these interactions have the potential to support improved performance and/or frame individual cognition and intellect (Kim & Baylor, 2006). Contextual classroom factors and self-processes go hand-in- hand for students to develop into academically responsible and socially competent young adults (McTigue & Liew, 2011).

*Self-efficacy.*

An important personal factor in the social cognitive theory is self-efficacy as it affects individuals' behavior. Self-efficacy is a judgment of one's capability to accomplish a specific task at a certain level of performance and is assumed to be situated and contextualized (Linnenbrick & Pintrich, 2002). People judge their level of skill and competence differently across domains, settings, activities, or circumstances. Domain specific efficacy is determined by the level of skills one possesses under situation-specific demands such as academic and social self-efficacy. This study focuses on two types of self-efficacy, namely academic and social self-efficacy. Academic self-efficacy represents an individual's confidence that he/she can successfully execute academic tasks at selected levels, based on abilities, attitudes, and previous experiences (Lorsbach & Jinks, 1999; Schunk, 1991). Social self-efficacy can be defined as an

individual's confidence that he/she can successfully make new friends, form positive peer relationships, be accepted by peers, and be able to behave appropriately in school (Patrick et al., 1997).

Self-efficacy is a significant determinant of performance and operates partially independent from an individual's underlying skills (Schunk, 1984). Bandura (1986) stipulates that individuals do not perform optimally even when they possess the relevant knowledge and skills. Rather, an individual's self-beliefs mediate the relationship between knowledge and action (Bandura, 1986). Using this model, performance would be seen as depending upon one's perception of self-efficacy and agency (Burney, 2007). Self- efficacy includes having knowledge of one's skills and abilities, involves one's perception of the environment as well as the anticipated outcome of one's actions. How individuals act or perform differently in a range of circumstances depends on skill level as well as a series of interactions between cognitive, social, and behavioral sub-skills (Bandura, 1986). Discrepancies between self-efficacy judgment and performance arise when expectations and skill involved for tasks are ambiguous. When aims are clear and required skill level is discernible, individuals are able to make better decisions, as self-efficacy judgments and performance converge. Thus, how an individual performs academically or how they interact with their peers is dependent upon their actual skills in these areas, the clarity of the goal, and their level of self-efficacy. Factors that influence an individual's self-efficacy of perceptions of their academic and social skills are discussed in further detail in subsequent sections.

***Factors that Influence Self-efficacy.*** Bandura (1986) outlines four main factors that shape self-efficacy: performance attainment, vicarious experiences, social influences or verbal persuasions, and physiological states. Performance attainment has the greatest influence on self-

efficacy as it provides direct feedback about one's skill level. When the outcome of an individual's behavior is based on authentic mastery experiences, it provides accurate information about an individual's ability to perform a task. When an individual achieves authentic success with a task, one receives information that he/she can efficaciously execute a task and subsequently, self-efficacy increases. However, when failure occurs due to a lack of skill, self-efficacy diminishes. Importantly, Bandura (1986) underscored that once self-efficacy is established, it generalizes to other situations, in that those who experience success or failure in past experiences may predict similar performance outcomes in future situations.

Vicarious experiences provide indirect feedback about what one may be capable of achieving. This type of information tends to more salient when there is uncertainty about one's level of skill (Bandura, 1986). Vicarious learning allows the learner to observe the success of whatever strategy is being modeled and determine whether or not this is desirable or likely to be successfully imitated. The perceived similarity of the model to the learner and relevance of behavior are factors likely to be important in determining whether or not the behavior will be tried by the learner (Bandura, 1986).

Verbal statements refer to information given by others that attempt to convince an individual that they possess the skills necessary to achieve the desired tasks. Feedback about one's performance from people in the environment (e.g., parents, teachers, peers) plays a significant role in one's self-evaluation. However, Bandura (1986) clearly delineates that the extent to which outside sources affect one's self-appraisals is dependent upon the level of confidence in the persuader's credibility and expertise. The more confidence we have in the persuader the more likely judgments of personal efficacy are to change.

Bandura (1997) hypothesized that students interpret emotional and physiological indexes such as anxiety, stress, fatigue, and mood when judging their competence. High arousal during stressful or taxing situations is a sign that failure is possible. High levels of arousal can cause elevated levels of fear and distress and result in poor performance. Lower levels of arousal reduce fear-provoking thoughts and heighten self-efficacy and performance. Bandura (1997) suggested that people tend to function optimally when their physiological arousal is neither too high nor too low; that is, physiological arousal may have a curvilinear relation to self-efficacy.

*Role of Attribution in Self-efficacy.* Bandura (1997) stipulates that cognitive processing of efficacy information involves two separable functions, selective attention and attributions, which are indicators of personal self-efficacy. The extent to which people alter their perceived efficacy through performance experiences will depend on the difficulty of the task, the amount of effort they expend, the amount of external aid they receive, the circumstances under which they perform, and the temporal pattern of their successes and failures. Bandura noted that similar performance success may increase, fail to affect, or diminish perceived self-efficacy depending on how various personal and situational contributions are interpreted.

Efficacy is increased when success occurs and is diminished in the presence of failure, especially early, repeated failure. The effect of a single success or failure on an individual's self-esteem is determined by the causal attribution associated with the outcome (Weiner, 1986). Once a person has decided on the cause of an outcome, this knowledge will affect their emotional reaction to success and failure, and their expectations regarding future outcomes, which in turn, influences appraisals of future task situations or self-efficacy (Boeakearts, et al., 2003). According to Weiner's theory of causal attribution (1986), attributions can be classified along three dimensions including locus, stability, and controllability. Self-efficacy is diminished when

individuals believe that failure is a result of internal, stable factors that are within their control and is at its highest when successes are similarly attributed. Self-efficacy is also more likely to stay intact when a failure is attributed to external, unstable, uncontrollable circumstances. It is the individual's focus on why success or failure occurred that explains specific psychological outcomes such as self-efficacy (Weiner, 1986).

*Relevance to the Current Study.* An adaptive level of self-efficacy is usually one where individuals slightly over-estimate their skill level, as "such self-appraisals lead people to undertake realistically challenging tasks and provide motivation for progressive self-development of their capabilities," (Bandura, 1986, p. 394). People with adaptively high levels of self-efficacy set challenges that enlist their interest in activities and intensify their efforts when their performances fall short. This engagement, motivation, and persistence are critical for academic and social success in school. As students continue through school, tasks become more challenging and require more effort and higher skill levels. Individuals experience many changes as they progress into adolescence. Some of these changes include evolving of self-identity, navigating new social groups, as well as forming and maintaining friendships. Additionally, engaging in behavior that is acceptable to peer groups becomes more complicated (Eccles et al., 1993; Patrick et al., 1997). High academic self-efficacy is adaptive for school learning and achievement as well as other academic enablers, while high social self -efficacy is imperative for healthy socio-emotional and psychological development (Linnenbrink & Pintrich, 2002). Thus, educators should seek to develop positive academic and social self-efficacy beliefs in students.

There is growing consensus on how instructional practices can enhance students' self-efficacy, help students assume control over their own learning, and learn to value learning (Davis, 2003; Merrit et al., 2012; Reyes et al., 2012). Effective instructional practices also result

in students developing positive achievement goals and relating well to teachers and peers in the classroom (Patrick, Kaplan & Ryan, 2001; Patrick, Ryan, & Kaplan, 2007; Wentzel & Wigfield, 2007). McTigue and Liew (2011) outline principles of building self-efficacy and demonstrate that they can be seamlessly integrated within learning and instruction for adolescent learners. These principles involve creating a safe and democratic classroom environment while integrating social and emotional learning into curriculum. Teachers can monitor and assess students' self-efficacy and provide opportunities for students to experience credible models of self-efficacy, provide effective feedback, and facilitate self-evaluation and goal-setting. Schools and educators can use the social cognitive theory of learning as a framework to enhance student self-beliefs (personal factors), academic skills, self-regulation and engagement (behaviors), and the classroom context (environment) to facilitate positive student engagement, development, and adjustment (Burney, 2007).

By the middle school years students' view of their ability is highly complex and affects attributions for success, goal orientation, effort, and motivation (Burney, 2007). The shift from the personalized environment of elementary school to the more impersonal, institutional environment of middle school as well as the exposure to social comparison and competition in school classrooms and peer groups leaves many early adolescents struggling to reestablish their sense of self and their academic self-beliefs (Eccles, 1999; Eccles & Midgley, 1989). This transition marks a critical time for researchers to examine how sources of self-efficacy unique to middle school influence the development of students' self-beliefs and subsequent achievement (Usher & Pajares, 2006).

**Teacher Self-efficacy**

*Definitions*

Teacher self-efficacy refers to teachers' personal assessments of their own teaching abilities (Abu-Tineh, 2001). Tschannen-Moran and Hoy (2001) define teacher self- efficacy as "a judgment of his/her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated" (p. 783). Slaavik and Slaavik (2007) expand upon this definition and describe teacher self-efficacy as individual teachers' beliefs in their own abilities to plan, organize, and carry out activities required to attain given educational goals. Teacher self-efficacy emphasizes the concept of internal control despite challenges and is seen as a context-specific and malleable belief about what an individual teacher can accomplish given the limitations caused by factors outside of his/her control. This concept is independent from what Slaavik and Slaavik (2007) describes as external control and general teacher-efficacy which is conceptualized as a general and relatively stable belief about limitations to what can be achieved through education and teachers' ability to counteract any negative influences in students' backgrounds.

*Measurement*

The construct of teacher self-efficacy has been examined from multiple approaches. Among these approaches is the personal approach which attempts to measure teachers' perceptions of their ability to help difficult or unmotivated students to learn effectively (Guskey & Passaro, 1994). A general or external control approach measures teachers' perceptions of their teaching ability to counteract any negative influences in students' backgrounds (Tschannen-Moran & Woolfolk Hoy, 2001). To address the differentiation of these two approaches, Gibson and Dembo (1984) developed a 30-item measure of teacher efficacy. Through conducting a

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factor analysis, they confirmed the existence of two factors, personal teaching efficacy assumed to reflect self-efficacy, and general teaching efficacy. Another scale that incorporates both approaches is the 22 item Teacher Self-Efficacy Scale instrument developed by Woolfolk and Hoy (1990) which utilizes a four-point Likert scale. Scales that include these two factors have been quite popular in teacher efficacy research but there has been a lack of clarity about how these two factors are conceptualized and the components included in each factor. Other researchers have chosen to focus on personal self-efficacy and its relation to teacher and student outcomes. For example, Schwarzer, Schmitz, and Daytner (1999) measure teacher self-efficacy from a single approach. They developed a 4-point scale instrument where teachers responded to 10 statements in order to measure teacher self-efficacy as it relates to content knowledge, parent interactions, meeting student needs, and managing system restraints.

More recent research has revealed that teacher self-efficacy is a multidimensional concept that encompasses a myriad of factors. Several instructional factors that determine teacher self-efficacy include the ability to deliver high quality instruction, adapt education to individual student's needs, as well as motivate and engage students in the learning process. Environmental and social factors include teachers' ability to execute effective classroom management and procedures, maintain discipline, promote a positive learning environment, cooperate with colleagues and parents, and cope with changes and challenges (Bandura, 1997; Patrick & Ryan, 2007; Slaavik & Slaavik, 2007; Tschannen-Moran & Woolfolk Hoy, 2001).

Taking into consideration the complex nature of teacher-self-efficacy, Bandura (1997) stipulated that through utilizing multifaceted teacher self-efficacy scales, researchers will be able to select dimensions that align with the focus of their investigation. Slaavik and Slaavik (2007) further stipulate that despite the importance of a multi-faceted approach, it is critical to

understand that not all dimensions are equally central to teachers' daily work. To examine teachers' assessments of their competence across the wide range of activities and tasks they are asked to perform, Bandura (1997) developed a 30-item, 9-point scale instrument with seven subscales. These scales included efficacy to influence decision making, efficacy to influence school resources, instructional efficacy, disciplinary efficacy, efficacy to enlist parental involvement, efficacy to enlist community involvement, and efficacy to create a positive school environment.

Using a similar multi-faceted approach, Tschannen-Moran and Woolfolk Hoy (2001) developed a 24-item Teachers' Sense of Efficacy Scale consisting of three dimensions: instructional strategies, classroom management, and student engagement. By the same token, Slaavik and Slaavik (2007) develop a 24-item, 5 point scale consisting of six subscales: instruction, adapting education to individual students' needs, motivating students, keeping discipline, cooperating with colleagues and parents, and coping with changes and challenges. Recent research continues to support Bandura's use of multi-dimensional scales to measure teacher self-efficacy. The current research utilizes components from Bandura's original multi-faceted measure of teacher self-efficacy.

In past studies that have undertaken a multi-faceted approach, three key components of teacher self-efficacy that have been examined simultaneously include teachers' ability to provide high quality instruction, maintain discipline, and promote a positive learning environment. Providing high quality instruction refers to teachers' expectations of their ability to instruct students, explain subject matter, advise students in their work, and answer questions to improve students' understanding (Slaavik & Slaavik, 2007). Teachers' efficacy related to discipline refers to teachers' expectations about their ability to oversee classroom activities such as learning,

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social interaction, and student behavior and to maintain order and discipline in the classroom, throughout the learning process (Martin, Yin & Baldwin, 1998). Efficacy to promote a positive environment refers to teachers' expectations of their ability to create a trusting atmosphere and make school enjoyable for students (Bandura, 1997). These three dimensions of teacher self-efficacy (i.e., instructional strategies, classroom management, and creating a positive learning environment) are of crucial importance as they focus on teacher self-efficacy within the classroom context.

### *Influences on Teacher Self-efficacy*

Prior research has examined both teacher and school based factors that may influence teacher self-efficacy. However, much of this research has been inconclusive. Teaching experience may be one teacher characteristic that is related to teacher self-efficacy, but findings have been inconsistent due to minimal studies conducted examining differences in efficacy among teachers with varying levels of experience, including those still engaged in teacher preparation programs. For example, pre-school teachers with more years of experience tended to have lower scores of self-efficacy (Guo, 2011). Contradictory findings emerged for elementary school teachers perhaps due to the difference in school environment, expectations, and task demands compared to pre-school teachers. Pre-service and novice elementary teachers with less teaching experience scored significantly lower in teaching self-efficacy than did experienced teachers, perhaps due to mastery experiences that result in effectively interpreting and assessing performances and increased efficacy (Putman, 2012).

School based factors such as school type, environment, policy, and relationships with colleagues have also shown to impact teacher self-efficacy. Teachers in schools where students consistently met academic goals were more efficacious compared to teachers in regular schools,

where there is a greater range of student ability groupings and where students did not consistently meet academic benchmarks (Chong et al., 2010). Additionally, Raudenbush, Rowan, & Cheong (1992) reported that high school teachers who work in highly collaborative schools have an elevated sense of efficacy. Guo (2011) reported a significant interaction effect between pre-school teachers' perceptions of collaboration and children's engagement in predicting teachers' reported self-efficacy. A higher level of children's engagement was associated with a higher level of teacher self-efficacy when teachers worked in pre-schools with high levels of staff collaboration. Slaavik and Slaavik (2007) found that elementary and middle school teachers' feelings of having to organize teaching in ways they did not believe was best practice were negatively related to self-efficacy. Additionally, conflict with parents was negatively related to teacher self-efficacy.

Teacher self-efficacy can be enhanced through mentorship and professional development. LoCasale-Crouch et al. (2012) found that novices' mentor-related experiences (e.g., team teaching classes, co-observing lessons taught by master teachers, and reflecting on videotaped instructional practice) were significantly positively related to self-efficacy at the end of the year. Novice teachers who participated in more mentor-facilitated professional development activities reported higher positive changes in feelings of self-efficacy at the end of the academic year. Results from Gotshall and Stefanou (2011) also suggest consulting with other colleagues was a critical factor in affecting teacher reported self-efficacy in relation to teaching students with disabilities.

*Outcomes*

Research indicates teacher self-efficacy beliefs are strong predictors of teacher behavior. Teachers' perceived efficacy is related to their classroom behaviors including the use of

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instructional strategies, classroom management and discipline techniques, engaging students in learning (Chong et al., 2010). Gibson and Dembo (1984) found that teachers who demonstrate a high sense of self-efficacy devoted more class time to academic activities and focused less on discipline as a prerequisite to student learning. Teachers' efficacy beliefs also relate to the effort they invest in teaching, the goals they set, and their level of aspiration. Low self-efficacy may be particularly stressful for teachers because it may be accompanied by expectations of disciplinary problems and lower student performance, as well as possible conflict with parents and school principals and eventual teacher burn-out (Slaavik & Slaavik, 2007). The current study examines three aspects of teacher self-efficacy, including facilitating instruction, classroom discipline, and promoting a positive learning environment. These three aspects are discussed below.

*Facilitating Instruction*. Teachers with a high self-efficacy regarding instruction considered implementing innovative instructions as more congruent with their present practices, less difficult to implement, and valuable (Ghaith & Yaghi, 1997). These teachers are often able to reach students having difficulty and create mastery experiences (Onafowora, 2005). Confidence in one's instructional abilities is related to more humanistic attitudes about classroom control and a greater tendency to support student autonomy in problem solving (Woolfolk, Rosoff, & Hoy, 1990). Additionally, when teachers feel efficacious about their capability to promote learning and instruction, they are more likely to perceive high expectations, standards, and pressure from the school leadership, parents, and are more likely to expect students to achieve academic success (Chong et al., 2010).

*Classroom Management and Maintaining Discipline.* A strong relationship exists between teachers' efficacy regarding classroom management and a proactive approach to managing teacher–student conflict (Morris-Rothschild & Brassard, 2006). Efficacious teachers

judge themselves as able to cope effectively with environmental stressors, such as conflicts with students, and engage in conflict management strategies that are beneficial for both themselves and their students (Bandura, 1980). Teachers with high levels of disciplinary teaching efficacy have been found to devote more time to students' needs and praise their accomplishments readily (Gibson & Dembo, 1984). In contrast, teachers who are preoccupied with their own inadequacies may doubt their ability to motivate disruptive students. Teachers with lower disciplinary self-efficacy may allow disruptive students to ignore classroom rules and remain off-task during instruction. Teachers may also fail to encourage disruptive students in the same way they encourage other students in the class (Abu-Tineh, 2011). Ashton and Webb (1986) showed that behaviors and beliefs of teachers with low disciplinary efficacy were associated with control-oriented discipline techniques, use of positional authority, and use of verbal embarrassment and removal of students from class.

*Promoting a Positive Learning Environment.* Teachers with higher self-efficacy in promoting a positive learning environment are more apt to promote student motivation and learning (Bandura, 1993; Onafowora, 2005). Associations have been found between higher teacher self-efficacy and positive teacher behaviors, attitudes, and interactions with students (Ashton & Webb, 1986; Guskey, 1984, 1988; Hall et al., 1992). Teachers who are more confident in their ability to get students engaged in learning reported greater use of instructional practices consistent with a mastery goal classroom structure as well as those associated with a performance approach structure (Wolters & Daugherty, 2007). High teaching efficacy to promote a positive learning environment has been associated with less student referrals to special education (Soodak & Podell, 1993) and the ability to assist the development of positive interpersonal relationships among students (Rich, Lev, & Fisher, 1996).

***Student Outcomes Associated with Teacher Self-efficacy.*** Research indicates teachers with higher self-efficacy have students with higher levels of overall achievement, motivation, and academic self-efficacy (Ross, 1992). Higher levels of teacher self-efficacy were associated with higher levels of vocabulary gains within classrooms characterized by high levels of emotional support (Guo, 2010). This study also found that teacher self-efficacy has a significant and positive main effect on pre-school children's language and literacy gains. Teacher efficacy beliefs have an impact on all students but seem to be extremely important for low-achieving students. By the end of seventh grade, low-achieving adolescents who had moved from high- to low-efficacy math teachers suffered a dramatic decline in confidence in their ability to master mathematics (Eccles et al., 1993). Teacher self -efficacy also promotes student's sense of efficacy and fosters student engagement and perseverance (Ross, 1998). Teacher efficacy plays a role in shaping students' attitudes toward school, the subject matter being taught, and even the teacher. For example, students of teachers with a higher self-efficacy gave more positive evaluations of their teachers (Woolfolk, Rosoff, & Hoy, 1990).

**Relevance to Current Study and Gaps**

Various approaches have been taken to understand teacher self-efficacy. The majority of studies reviewed revealed that among the various approaches, three components of self-efficacy have been highlighted, including fostering instruction, classroom management and discipline, and promoting a positive learning environment. However, not all three components are always examined in tandem. An examination of these three components will allow for a more comprehensive approach of teacher self-efficacy with activities that occur daily within the classroom context. Assessing these three components to evaluate overall teacher self-efficacy

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may result in notable and perhaps valuable differences in this study's results compared to existing literature.

Most of the research examining teacher-self-efficacy has sought to determine its effects on teacher behavior and outcomes including teachers' willingness to teach a variety of students, to implement innovation, execute classroom management techniques, as well as levels of teacher stress (Tschannen- Moran & Woolfolk Hoy, 2001). Research has mainly focused on student achievement as it relates to student outcomes. Few studies have examined associations between teacher self-efficacy and student self-efficacy and overall adjustment. Further, minimal research currently exists regarding how teacher self-efficacy affects teachers' ability to facilitate a positive classroom social environment for students. Lastly, there is a dearth of research examining the impact of teacher-self efficacy on student engagement and disruptive behavior.

More research with larger and more diverse samples is needed, along with the use of more sophisticated techniques such as structural equation modeling, in order to assess how teacher self-efficacy, the classroom environment, and student outcomes are related. This could lead to a better understanding of the role of teacher efficacy for both teacher practices and student adjustment. The extent to which teacher self-efficacy is associated with student outcomes for a more representative population must be determined (Thoonen et al., 2011). Implications for teachers and school psychologists are discussed.

**Classroom Social Environment Section**

This section provides a general overview of two foundational theoretical perspectives related to the classroom social environment: the Stage-Environment Fit theory postulated by Eccles and Midgley (1989) and the Self-Determination Theory proposed by Deci and Ryan (1985). How these theories relate to adolescent development is briefly discussed, followed by

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how classroom social environment has been conceptualized and measured in empirical studies. Lastly, the components of the classroom social environment, their impact on student adjustment, and areas for further research are reviewed.

**Stage-Environment Fit Theory**

According to the stage-environment fit theory, the fit between the developmental needs of an individual and the characteristics of the social environment influence students' motivation, behavior, and mental health (Eccles & Midgley, 1989). The stage-environment fit theory posits that educational environments should not only consider student characteristics but also take into account the importance of the variations in developmental change, with the overall aim of enhancing development (Eccles, 2004; Eccles et al.,1993).

This perspective highlights the need to examine the fit between early adolescents' developmental needs and the opportunities afforded them in middle school environments. Eccles and Midgley (1989) seek to explain the decline in motivation that many individuals experience during early adolescence and postulate that this decline may result from a mismatch between students' needs and their educational environment. As students make the transition from elementary school to middle or junior high school, they experience changes in their individual biological and psychological development, as well as experience vast changes in the type of educational environment they are exposed to. A mismatch between the early adolescent and the classroom or school environment increases the risk of disengagement and school problems, especially for students who are already experiencing academic challenges (Eccles, 1999). To maximize students' motivation and adjustment, adolescents need an environment that provides a zone of comfort as well as challenging new opportunities for growth (Eccles et al, 1993; Simmons & Blyth, 1987).

Middle school environments that are not responsive to adolescents' developmental needs may decrease student decision making and choice, disrupt social networks, and emphasize lower-level cognitive strategies (Eccles et al, 1993; Rounds & Osaki, 1982). Additionally, developmentally non-responsive schools are often characterized as having a culture that emphasizes competition, social comparison, and ability self-assessment (Eccles et al, 1993; Roeser et al., 2000). These environments are non-responsive to early adolescents' developmental needs that include an increased desire for autonomy and peer orientation, and increasingly abstract and sophisticated cognitive abilities, which significantly reduces adolescents' opportunities for healthy development (Eccles, 1999; Eccles et al.,1993). Adolescents' motivation, well-being, and school adjustment is enhanced when the school environment provides opportunities for them to develop their academic and social competencies, exercise autonomy over aspects of their learning, and feel cared for and supported (Eccles, Wigfield, & Schiefele, 1998; Roeser et al., 2000).

**Self-Determination Theory**

The self-determination theory focuses on three psychological needs, including the need for competence, relatedness, and autonomy (Ryan & Deci, 1985). Deci and colleagues (1991) describe these basic needs and highlight the importance of promoting intrinsic motivation. Competence refers to having the skills and efficacy to attain various external and internal outcomes. Competence often develops when individuals are given optimal challenges and receive positive feedback on their performance (Deci et al., 1991). Relatedness involves developing secure and satisfying connections with others in one's social environment (Ryan & Deci, 1985). This includes feelings of acceptance through building positive interpersonal relationships with parents, teachers, and peers (Deci et al., 1991). Autonomy refers to self-

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initiation and self-regulation of one's behavior (Ryan & Deci, 1985). Autonomy supportive environments often focus on behaviors individuals self-select and refrain from controlling situations that emphasize required behaviors or an external locus of control. When these basic psychological needs are met, motivation, and adjustment are maximized (Ryan & Deci, 2000). When social environments fail to address these needs, motivation is diminished, adjustment is impaired, and alienation and poor performance ensues (Deci et al., 1991).

Self-determination has been linked to various positive educational outcomes and well-being. Successful adolescent development is facilitated by the need for trusting and caring relationships, the need for autonomous self-expression, and the development of competence (Deci & Ryan, 1985; Eccles et al., 1993). Students who have greater intrinsic motivation show more positive emotions in the classroom as well as higher classroom engagement and achievement (Fortier, Vallerand & Guay, 1995). If the social context fails to satisfy these basic psychological needs, student motivation may diminish, resulting in poorer levels of engagement, efficacy, and performance (Deci et al., 1991). The self-determination theory provides a sound theoretical foundation for understanding the relationship between student classroom environment and engagement. When students are provided with autonomy through peer interactions, are connected to the teacher and classmates, and their competence is enhanced via positive feedback, student's motivation to participate and invest in classroom activities will increase (Ryan & Deci, 2000). Together, the stage-environment fit theory and Self Determination Theory provide a robust theoretical framework to examine the extent to which adolescents' basic and developmental needs are met within the classroom social environment.

**Classroom Social Environment**

*Definitions*

The classroom is a primary context in which students and teachers interact and form relationships in school, and is also an environment that may be responsive to adolescents' basic and developmental needs. 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). Most research distinguishes between negative and positive classroom social environments. Classrooms with a positive social environment are characterized as having high levels of teacher support and where students and teachers experience a sense of emotional connection, respect, and enjoyment (Pianta, LaParo, & Hamre, 2008). Classrooms with a negative social environment are characterized as having teachers provide students with minimal support, and teachers and students regularly disregard and disrespect one another (Reyes et al., 2012).

Three facets that have been specifically delineated in the literature as important in evaluating the quality of the classroom social environment include student perceptions of teacher support, teacher promotion of social interaction, and teacher promotion of mutual respect (Patrick et al., 2007). Teacher support refers to the degree to which students perceive their teacher as providing  help, a sense of safety, as well as academic and emotional support (Wentzel, Battle, Russell, & Looney, 2010). Teachers who demonstrate high levels of support are aware of students' emotional and academic needs and respond to students by providing activities that encourage self-expression, cater to students' interests, and promote positive student-student interaction (Reyes et al., 2012).

Teacher support includes both emotional and academic support, and is frequently assessed using students' perceptions. Teachers who are emotionally supportive are characterized as warm and kind, sensitive to the social and emotional needs of each student, and thoughtful about the way they respond to students (Merritt et al., 2012). These teachers demonstrate that they value and care about each of their students, connect well and build relationships with them, treat them fairly, and interact with students in a calming manner (Yan et al., 2011). Thus, student perceptions of teachers' emotional support refer to the belief that the teacher cares about and likes the student as a person (Johnson & Johnson, 1983). Teachers who are academically supportive show an awareness of students who need extra support or attention, match their support to students' needs and abilities, and address students' problems and concerns (Pianta, LaParo, & Hamre, 2008). These teachers care and take time to help students learn to master skills and ensure that they have what they need for school (Suldo et al., 2009). Academic support is defined as consisting of direct interventions that involve spending time with students and providing assistance, materials, and help (Johnson & Johnson, 1983; Mercer, 2011).

Teacher promotion of social interaction refers to the extent that students perceive teachers as encouraging students to interact with one another during academic activities (Patrick et al., 2007). Students describe teachers who promote social interaction as those who encourage cooperation and collaboration by having students share ideas, work together in small group activities, or engage in informal help seeking and help giving during individual seatwork (Wang & Holcombe, 2010). When teachers promote student interaction, students are less likely to become more disruptive. Additionally, teacher-promoted student social interaction is related to positive changes in student motivation and engagement (Ryan & Patrick, 2001).

Teacher promotion of mutual respect refers to the extent to which students perceive teachers as encouraging mutual respect among classmates (Ryan & Patrick, 2001). Students believe that teachers who foster mutual respect expect all students to value one another and their contributions, require students to be considerate of others' feelings, and prohibit students making fun of each other (Patrick et al., 2007). Research suggests that when students are in an environment where their ideas and efforts are respected, their academic efficacy and self-regulation of school work increases and they devote more cognitive resources to engaging in the task at hand (Ryan & Patrick, 2001). Overall, teacher-promoted social interaction and mutual respect help create a positive classroom social environment in which students perceive their classmates as involved in the learning setting and experience a sense of belonging and respect in the classroom (Nelson & Debacker, 2008).

*Measurement*

Most research has conceptualized and operationalized the classroom social environment as being multi-faceted. The quality of the classroom social environment is determined by the extent to which teachers are perceived to execute desired behaviors and characteristics in their interactions with students and in their teaching and classroom management styles. Three main measures for the classroom social environment are discussed. The Classroom Assessment Scoring System (CLASS; Pianta, LaParo, & Hamre, 2008) is one of the most prominently used scales to measure the classroom social environment. The CLASS assesses three domains of the classroom social environment: *emotional support*, *classroom organization*, and *instructional support* (Pianta et al., 2008). This scale measures emotional support by examining positive environment, negative environment, teacher sensitivity, and teachers' regard for student perspectives. It examines the level of respect, warmth, enjoyment, and emotional connection as

well as the level of disrespect, anger, hostility, or aggression exhibited by teachers and/or students. Additionally, it evaluates teachers' consistency and effectiveness in responding to students' academic and emotional needs and determines the degree to which activities encourage student autonomy and emphasize students' interests, motivations, and points of view. The Classroom Organization subscale examines teachers' effectiveness in monitoring, preventing, and redirecting misbehavior; how consistently learning is maximized with clear activities and routines and how well materials, modalities, and activities are used to engage students in learning. The Instructional Support subscale refers to the degree to which activities and discussion promote higher order thinking skills and cognition and the teachers' consistency in providing specific, process oriented feedback to extend students' learning. Each subscale is a combination of three or four dimensions, which are scored on a 7-point scale based on the presence or absence, frequency, and quality of specific observable indicators.

The Classroom Environment Measure (Fisher & Fraser, 1983b; Moos, 1979; Moos & Trickett, 1987) is also a widely used and well-validated measure of students' perceptions of the classroom social environment. This 20-item measure was developed to determine students' perceptions of five classroom characteristics, including teacher expectations, promotion of cooperation, autonomy support, teacher social support, and teaching for meaning. The Teacher Expectation subscale assesses teacher's expectations for the success and achievement of individual students. The Promoting Collaboration subscale assesses students' perceptions of the extent to which their teacher promotes collaboration and interaction. The Autonomy Support subscale assesses students' perceived opportunities to make decisions related to academic tasks and interact with one another during class. The Teacher Social Support assesses students' perceived level of care and support from teachers. The Teaching for Meaning subscale assesses

the extent to which the curriculum and design of instruction are meaningful, relevant, and related to students' personal interests and goals.

More recently, researchers have been using various subscales from multiple measures to examine aspects of the classroom social environment. A scale that stems from Moos's (1979) original measure that is regularly employed by researchers is the Classroom Life Instrument (Johnson & Johnson, 1983). This scale includes two subscales of teacher support which aim to assess students' perceptions of support from teachers in school on a five point scale. The Teacher Emotional Support scale refers to student perceptions that the teacher cares about and likes the student as a person. The Teacher Academic Support scale refers to student perceptions that the teacher cares about how much the student learns and wants to help him or her learn. Similarly, measures developed by Ryan and Patrick (2001) related to teacher-promoted peer interaction within the classroom have received attention. Two subscales include teacher promotion of social interaction, which measures the extent to which students perceive teachers as encouraging interaction among peers around academic tasks, and teacher promotion of mutual respect, which measures the extent to which students perceive teachers as encouraging mutual respect among classmates. Together, these three scales (Teacher Support, Promotion of Social Interaction, and Promotion of Mutual Respect) are used to assess the classroom social environment. These measures have been shown to be both reliable and valid across different samples of adolescents (Kiefer et al., 2013; Patrick et al., 2007; Ryan & Patrick, 2001).

### *Impact on Student Adjustment*

Students' perceptions of the classroom environment plays an important role in their goals, motivation, engagement and achievement (Ames, 1992; Kiefer et al., 2013; Patrick et al., 2007; Reyes et al. 2012; Ryan & Patrick, 2001; Urdan & Schoenfelder, 2006). Positive

classroom social environments provide students with the mental space and confidence for learning to occur, enhance students' focus on mastery and feelings of efficacy, and facilitate engagement (Patrick et al., 2007; Skinner & Belmont, 1993). Students in academically and emotionally supportive classrooms report greater effort, interest, engagement, focus and investment in school, as well as a desire to comply with the teacher's wishes (Patrick, Ryan & Kaplan 2007; Rimm-Kaufman et al., 2005; Skinner & Belmont, 1993).When teachers create a positive classroom social environment that is responsive to students' basic and developmental needs, students are more likely to be engaged and achieve success (Reyes et al., 2012).

  ***Teacher Support.*** By providing emotional and academic support in the classroom, teachers can promote students' positive learning and development (Bodrova & Leong, 2007). High emotional and academic teacher support is beneficial for students' academic skill development, particularly for students who are at risk for school failure (Downer et al., 2007). Adolescent who perceive teachers as demonstrating care and respect show improved academic, social, and emotional functioning over time in middle school (Roeser et al., 2000). Students often perceive teacher academic and emotional support as intertwined, with both types of support having a positive, significant influence on students' learning and engagement in schoolwork (Patrick et al., 2007). Early adolescents who move from teachers perceived to be high in support to teachers perceived to be low in support during the middle school transition often experience a decline in academic value (Eccles et al., 1993). Teacher support also influences students' social behaviors and self-regulatory skills, regardless of socio-demographic risk factors. More specifically, higher levels of teacher emotional support are related to lower levels of aggression and higher levels of behavioral self-control in students (Merritt et al., 2012). Further, high quality teacher-student relationships are associated with positive peer interactions and peer acceptance

(Hughes & Kwok, 2006; Hughes et al., 2008), as students take cues from the teacher about how to interact with others in the classroom (Ryan & Shim, 2007).

   ***Teacher Promotion of Social Interaction.*** Teachers who create a positive classroom social environment value student perspectives and encourage positive interactions among classmates (Skinner & Belmont, 1993). Social interaction is a particularly salient element of the learning environment for adolescents. Many adolescents give priority to social activities with peers and peer acceptance rather than academic courses, which are often more significant predictors of their self-esteem (Eccles, 1999).  Social interaction among peers has the potential to promote student motivation, engagement, cognitive development, academic efficacy, self-regulated learning, and social goals (Keating, 1990; Kiefer et. al 2013; Patrick et al., 2007; Ryan & Patrick, 2001). Students are likely to perceive peer support when teachers promote social interaction on task-relevant classroom activities. Research indicates teacher promotion of social interaction results in higher student engagement and less disruptive behavior (Patrick et al., 2007; Ryan & Patrick, 2001). When students are encouraged to interact and exchange ideas with each other during class, opportunities to justify their own position and gain exposure to other possibilities increase (Durik, Vida & Eccles, 2006). Promoting student interaction among peers may also foster social development (Savin-Williams & Berndt, 1990). In a positive classroom social environment, interactions between and among teacher and students are characterized by a positive tone (Curby et al., 2009).

   ***Teacher Promotion of Mutual Respect.*** Classmates are likely to influence the classroom social environment via the norms that are modeled and valued by the teacher (Kinderman, McCollam, & Gibson, 1996). In a classroom with a positive environment, teachers encourage students to be kind and caring to one another (Merritt et al., 2012). Mutual respect is positively

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associated with students' academic and social efficacy, self-regulated learning strategies, and on-task interactions, and is negatively associated with disruptive behavior (Patrick et al., 2007; Ryan & Patrick, 2001). Students who perceive being supported by classmates are more likely to strive for popularity and intimacy goals among peers, and are less likely to endorse dominance goals and develop antisocial social goals during early adolescence (Kiefer et al., 2013). Additionally, adolescents who perceive being valued and respected by classmates are more likely to report adaptive achievement motivation, mastery, performance-approach, intimacy, and responsibility goals (Nelson & Debacker, 2008).

### *Relevance and Gaps*

Students spend the majority of their time at school in the classroom interacting with teachers and peers. As students progress into adolescence, the value they place on social interactions and their acceptance by those in their environments drastically increases (Eccles et al., 1993). Bandura (1986) states that personal, contextual, and self-processes all interact to influence motivation and behavior. Thus, the quality of the classroom social environment has strong implications for students' desire to be academically engaged and their confidence about their academic and social skills. However, little is known regarding the extent to which the classroom social environment influences student engagement as well as academic and social self-efficacy. Recent research has attempted to investigate how the social environment impacts students' goals, motivation, engagement and achievement (Patrick et al., 2007; Reyes et al. 2012; Ryan & Patrick, 2001; Urdan & Schoenfelder, 2006) and has found positive effects. On the other hand, much less is known about how the classroom social environment affects student academic and social self-efficacy (see Patrick et al., 2007 as an exception for social self-efficacy). There is a need for research to further investigate these relations in order to inform classroom-level

interventions designed to promote young adolescents' positive academic and social development (Merritt et al., 2012).

**Student Adjustment Section**

This section includes information related to student academic and social self-efficacy, classroom engagement and disruptive behaviors. For each variable, conceptualizations and operationalization across studies, influences and outcomes as well as current gaps in the research are discussed.

**Academic Self-efficacy**

*Definitions*

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). Academic self-efficacy has been conceptualized in various ways, including at a domain-specific level (e.g., general academic self-efficacy; Ferla, Valcke, & Schuyten, 2010) and at a task-specific level (e.g., self-efficacy for addition or subtraction).  As it relates to general academic self- efficacy, Mc Tigue and Liew (2011) describe this construct as a set of beliefs that refer to whether one is capable of mobilizing and maintaining the effort needed to achieve an academic goal. Wigfield and Wagner (2005) provide a similar description and define this construct as the belief that an individual can control their achievement outcomes. Regarding specific tasks, academic self-efficacy refers to students' confidence in their ability to master new skills and tasks in a specific academic domain (Midgley et al., 1998). Among these various conceptualizations, the consistent element is the belief about one's capabilities to be academically efficacious.

*Measurement*

How academic self-efficacy is operationalized depends on the purpose and goal of the research and the conceptualization of the construct. Studies whose main aim is to retrieve information regarding individual's perceptions of their overall self-efficacy often employ scales developed by Middleton and Midgley (1997). Greene, Miller, Crowson, Duke, and Akey (2004) had similar goals and developed the seven-item Academic Self-Efficacy Scale to measure the degree of confidence a student has that he or she can be successful learning at his or her current school.

Many studies that seek to investigate sources of self-efficacy have utilized measures founded on Bandura's theory of sources of self-efficacy. Studies that aim to investigate self-efficacy for learning and performance tend to employ "The Scale of Self-Efficacy Beliefs for Learning and Performance", a sub-scale of the "Motivated Strategies for Learning Questionnaire", which was developed by Pintrich, Smith, Garcia, and McKeachie in 1991. This scale includes six items to assess students' general sense of their capabilities in each domain and nine items to assess students' task-specific self-efficacy. This scale has also been used across academic domains.

Another commonly used measurement tool employed to assess student's academic self-efficacy that has proven to be reliable and valid is the Academic Self- Efficacy Scale from the Patterns for Adaptive Learning Survey developed by Midgley et al. (2000). The five-item measure of academic efficacy refers to students' judgments of their capability to complete their work successfully. This measure consists of a 5 point Likert Scale (*1 = not at all true of me, 3 = somewhat true of me, 5 = very true of me*) and focuses on items that determine whether a student believes he or she can learn and achieve success despite the difficulties or challenges of school.

*Factors that Affect Academic Self-efficacy*

Research has suggested that the factors that affect academic self-efficacy are similar to those that affect overall self-efficacy. For a review of the sources of self-efficacy postulated by Bandura, please refer to the "factors that influence self-efficacy" sub-heading in the self-efficacy section of this chapter.

*Outcomes of Academic Self-efficacy*

Academic self-efficacy is often viewed as an influential variable in students' achievement and especially important when facing task difficulties (Nasiriyan et al., 2011). Individuals who possess high levels of self-efficacy are likely to anticipate favorable outcomes whereas individuals with low levels of self-efficacy are likely to predict negative outcomes. Individuals are more likely to develop an interest in an activity they believe they are competent at (self-efficacy) and believe that performing the activity will produced valued outcomes (Lent et al., 1994). Self-efficacy is positively related to a host of positive school outcomes such as persistence, cognitive engagement, use of regulatory strategies, and academic achievement. In particular, students with high academic self-efficacy monitor their work time, are more efficient problem solvers, and show more persistence compared to equally able peers with low self-efficacy (Usher & Pajares, 2006). Self-efficacy has also been associated with increased persistence relating to engagement (Linnenbrick & Pintrich, 2002).

Research has emphasized the importance of students' self-efficacy to learning and success. Nasiriyan et al. (2011) investigated the influence of self-efficacy, achievement goals, task value and effort on 280 high-school students' mathematics achievement using a path analysis model. Results indicated students who reported having high self-efficacy had higher mastery and performance approach goal orientations while students who perceived themselves as

less competent were oriented towards failure and performance-avoidance goals. Additionally, self-efficacy had a direct effect on mathematics achievement, in that students' belief about their math ability was an important factor in their subsequent math achievement. Mercer (2011) investigated how self-efficacy influenced the academic skills of fifth- grade students in elementary school ($N = 193$). Academic self-efficacy was associated with academic performance at the beginning of the school year. Associations were also found between students who reported higher academic self-efficacy and those who demonstrated the strongest academic skills. However, academic self-efficacy did not explain unique variance in academic skill growth, possibly due to the short time interval (i.e., one academic year) of the current study.

### *Relevance and Gaps*

Based on their compilation of studies examining self-efficacy, Usher and Pajares (2008) identified certain factors for future research that have the potential to influence self-efficacy including race and culture as well as transitional academic periods. Theses authors state that the majority of investigations focusing on self-efficacy include Caucasian middle class students. In order to account for the dramatic changes in the cultural landscape of American schools, further investigation into the extent to which students' self-efficacy is a function of their cultural, ethnic, educational, and socioeconomic backgrounds is warranted. Further, future research of student academic self-efficacy needs to utilize more diverse student sample populations.

Given that self-beliefs that develop early in students' learning experiences persist, it is important for teachers to assist students in developing positive beliefs and behaviors as early as possible (Pajares, 2002). When students are provided with an educational environment that fosters high self-efficacy beliefs, they become self-efficacious individuals who can overcome problems they may face at further educational stages and in their future lives (Arslan, 2012).

Academic self-efficacy beliefs decline across the elementary school years and through the high school years (Wigfield et al., 2006). Specifically, early adolescents have lower perceptions of their competence for different school subjects than do their younger peers (Eccles & Wigfield, 2002). Concerning transitional academic periods, Usher and Pajares (2008) underscore that as individuals mature physically, cognitively, and emotionally, the way in which efficacy-relevant information is weighted and interpreted often changes. Thus, they recommend that a closer look at the transitional periods from elementary to middle school would provide information regarding the academic self-efficacy beliefs of early adolescents.

**Social Self-efficacy**

*Definitions*

Recent research refers to social self-efficacy as a student's confidence that he/she can successfully make new friends, form positive peer relationships, be accepted by peers, and behave appropriately in school (Patrick et al., 1997). Galanki and Kalanztzi-Azizi (1999) present a similar conceptualization of social self-efficacy as the belief that one has the skills for successful performance in specific social situations such as peer interactions. However, previous research differs as this construct is conceptualized as perceived social competence and self-efficacy for social interaction with peers. Seminal work by Wheeler and Ladd (1982) define self-efficacy for social interaction with peers as a child's evaluation of his or her ability to persuade his or her peers so as to influence their behavior and feelings in socially acceptable ways. Whether this construct is labeled as social self-efficacy, perceived social competence, or self-efficacy for social interaction with peers, high expectations about one's own success in interactions with others are an important dimension of social competence (Puckett, Aikins, & Cillessen, 2008).

*Measurement*

Social self-efficacy has been operationalized in a variety of ways. Two measures solely dedicated to assessing social self-efficacy are The Connolly (1989) Social Self-Efficacy Scale and the Wheeler and Ladd (1982) Self-Efficacy Scale. The Connolly Social Self-Efficacy Scale measures self-efficacy in interactions with peers via five dimensions: friendship, social assertiveness, social groups, social performance, and giving/receiving help, utilizing a 7 point scale ranging from "impossible to do" to "extremely easy to do" (Puckett et al., 2008). Additionally, the Wheeler and Ladd (1982) Self-Efficacy Scale consists of a statement describing a social situation, twelve items depict conflict situations, and 10 items depict non-conflict situations.

Social self-efficacy has often been operationalized using subscales from overall self-efficacy measures using 5 point Likert scales by several researchers (Coleman, 2003; Ladd & Price, 1986; Patrick, Ryan, & Kaplan, 2007). For instance, The Social Self-Efficacy subscale of the Children's Self-Efficacy Scale (CSES) designed by Bandura et al. (1996) contains four items that assess children's beliefs in their efficacy relative to interpersonal functioning (Coleman, 2003). Additionally, the Perceived Competence Scale for Children developed by Harter (1982) consists of a 28-item with four subscales, with one subscale designed to measure children's perceptions of social competence (Ladd & Price, 1986). A subscale measuring social self-efficacy that has been reliable and valid in previous studies of young adolescents is the Social-Self-Efficacy Subscale from the Patterns of Adaptive Learning Survey (Midgley et al., 1996). This measure contains four items designed to measure social efficacy with peers referred to as students' confidence that they can interact well with classmates and provides unique, specific information about peer relations within the classroom context (Patrick et al., 1997).

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*Factors that Influence Social Self-efficacy*

The quality of peer relationships and the social environment may influence social self-efficacy. For example, children's ability to cope with low quality peer relations impacts their social self-efficacy (Bandura, 1997). Research conducted by Galanaki and Besevegis (1996) indicated students who had passive and ineffective ways of dealing with loneliness tended to have less motivation to seek companionship in peers and tended to have lower levels of social self-efficacy. Additionally, children with low self-efficacy reported engaging in solitary activities such as watching TV, playing solitary and reading, seeking companionship in parents, attempting to forget loneliness, and crying more often than children with medium or high levels of social self-efficacy.

The level of social self-efficacy students report is not only impacted by peer relations but also by parental attachment. Coleman (2003) investigated the mediational role of social self-efficacy in directing the effects of parental attachment relationships on the quality of peer relations with fifth and sixth-grade students at an elementary school in a Caucasian, lower to middleclass Southeastern US community. Results showed that high social self-efficacy scores were associated with discordant attachment to parents. Attachment to fathers seemed to have greater effects for social self-efficacy with this population.  For males, there were significant positive associations between attachment to each parent and social self-efficacy.

*Outcomes of Social Self-efficacy*

 Students' social self-efficacy may make an important contribution to understanding both the development of social self-concept as well as the relationship between self-views and social behavior (Wheeler & Ladd, 1982). Social self-efficacy, social behavior, and social competence are strongly interrelated. An individual's high expectation about his/her own success in

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interactions with peers is an important dimension of social competence. Youth who are confident in their ability to be successful tend to achieve high status in the peer group (Puckett et al., 2008).

Social self-efficacy is also associated with children's subsequent social and emotional adjustment (Galanki & Kalanztzi-Azizi, 1999). There appears to be a negative correlation between social self-efficacy and social interaction as well as healthy psychological development. Children who exhibit poor social skills are aware of and openly admit their disadvantaged position and as a result exhibit a host of negative feelings and maladaptive adjustment. The child who expects a poor outcome in social interactions is likely to feel lonely and socially dissatisfied; these negative feelings reinforce the low social self-efficacy expectation and a sense of worthlessness in peer relations (Galanki et al., 1999).

Researchers have found evidence for the link between social self-efficacy and social anxiety in children and adolescents. Wheeler and Ladd (1982) found significant negative correlations between pro-social persuasive skills in peer interaction and anxiety for late elementary school students. Connoly (1989) found similar negative correlations, in that social self-efficacy expectation in the peer group had a significant negative correlation with teacher-reported withdrawal as well as negative associations with parent-reported anxiety and social withdrawal in high school students.

Puckett, Aikins, and Cillessen (2008) describe social self-efficacy as a sense of personal power or control in the social domain and the belief that one's social actions will be effective and view this construct as strongly related with flexibility, motivation, and resourcefulness. Puckett and colleagues examined associations among social self-efficacy, leadership, co-operation, peer sociability, and peer group status among relationally aggressive adolescents. Results indicated

relationally aggressive adolescents high in social self-efficacy, leadership, cooperation, and peer sociability were higher in status than relationally aggressive individuals with low levels of these characteristics. Finally, social self-efficacy, leadership, cooperation, and peer sociability had reciprocal relations and were also influenced by perceived popularity.

*Relevance and Gaps*

Developmental changes in children's social self-efficacy are open to question and thus it is of great importance to understand children's own perspectives on their social skills. High social self-efficacy provides protective factors for psychopathologies such as anxiety and depression. However, relatively few studies have attempted to investigate children's affective experiences and self-efficacy in relation to peer interactions (Galanki et al., 1999; Wheeler & Ladd, 1982). This is particularly true for early adolescents who transition from elementary to middle school, where the social environment is vastly different and may result in unique changes in social self-efficacy. More research is needed to discern how beliefs about the self in relation to others are potentially modified by information gained through non-parental relationships and actual positive and negative experiences in the social domain (Coleman, 2003). A crucial non-parental relationship is the teacher relationship which has great potential to influence how students evaluate their social competence. Future research should seek to investigate how teachers cultivate classroom social environments and how these environments influence students' social self-efficacy.

**Classroom Engagement**

*Definitions*

Classroom engagement is a multifaceted concept. Researchers have identified several components of student engagement including behavioral, emotional, and cognitive engagement

(Fredricks, Blumenfield, & Paris, 2004). Cognitive engagement refers to students' involvement in initiating and executing learning activities and incorporates motivation, effort, and strategy use. Emotional engagement refers to the students' sense of belonging at school and identification with school and includes interest, values, and emotions (Sook-Lee, 2012). Behavioral engagement refers to students' participation in academic and nonacademic activities at school as well as students' effort and perseverance in learning activities. This type of engagement encompasses a wide variety of behaviors such as initiation, concentrated attention, persistence, effort, avoidance, and following rules (Fredricks et al., 2004; Gonida et al., 2011; Skinner & Belmont, 1993). Recent research has given more attention to behavioral and emotional engagement compared to cognitive engagement.

Research examining behavioral engagement has included the concepts of involved and disruptive behavior. Involved behavioral engagement describes students' effort, attention, and persistence during the initiation and execution of learning activities (Skinner & Belmont,1993). Disruptive behavior can be seen as the inverse of adaptive levels of involved behavioral engagement. Disruptive behavior refers to students' behavior within the classroom that annoys the teacher or disrupts instruction or academic activities (Kaplan, Gheen, & Midgley, 2002). Disruptive behaviors include teasing, talking out of turn, getting out of one's seat, disrespecting others, and more seriously but less frequently, violence and vandalism (Kaplan & Maehr, 1999).

*Measurement*

Classroom engagement has been also been operationalized in the literature as consisting of the three dimensions highlighted by Fredricks and colleagues. One such measure is the Student Engagement and Disaffection in School — Student Report from the Rochester Assessment Package for Schools (RAPS) developed by Wellborn and Connell (1987).

Behavioral engagement on this scale measures students' attention, effort, and persistence during school work in their classroom and is measured using 28 items. Emotional engagement measures students' emotional reactions in the classroom such as enjoyment, curiosity, boredom, anxiety, and anger using 23 items. A similar scale used to evaluate both engagement dimensions is The School Engagement Subscale of the Drug Free Schools (DFSCA) Outcome Study Questions, developed by the U. S. Department of Education, Office of the Under Secretary. This subscale measures the extent to which students enjoy being at school, try to do their best work, complete homework, find class interesting, listen carefully and  get along with teachers and students.

Scales that examine adaptive and maladaptive engagement have also been developed. For instance, The Engagement vs. Disaffection scale (Furrer & Skinner, 2003) examines students' perceptions of their effort, interest, and enjoyment while initiating and sustaining learning activities. The Disaffection scale measures the occurrence of behaviors and emotions that reflect maladaptive motivational states such as passivity and withdrawal from participating in learning activities, as well as boredom, anxiety, and frustration in the classroom.

There are also scales that only seek to measure a single aspect of engagement such as the Involved Engagement Subscale created by Skinner and Belmont (1993). This subscale uses a four-point scale to assess students' effort, attention, and persistence during the initiation and execution of learning activities and is assessed via student's reports of their behavior and emotion in the classroom. Items on this scale include both positive and negative statements and scores are calculated by averaging the items (after reverse coding negative items). Higher scores indicate more active behavioral engagement and provide a unique insight into students' specific adaptive academic behaviors in the classroom.

Additionally, the Disruptive Engagement Subscale from the PALS (Midgley et al., 2000) and Kaplan and Maehr (1999) assess whether students engage in behavior that annoys the teacher or disrupts class.  This 5 item self-report measure attempts to operationalize students' perceptions of themselves as disruptive and therefore taps on self-perceptions in relation to classroom norms and regulations. The disruptive behavior scale is coded so that a high score means perceptions of high disruptive behavior. This scale provides a unique insight into students' specific maladaptive academic behaviors in the classroom.

*Associated Factors and Outcomes*

Classroom engagement is impacted by various aspects of the school context, including the students themselves, teachers, the classroom environment and classmates and class size (Anderman, 2003; Tinto, 1993). For instance, Archambault, Pagani, and Fitzpatrick (2013) evaluated the prospective developmental stability and relations between classroom engagement and teacher-student relations from first through fourth grade for a sample of 1,145 students. Results indicate previous engagement predicted future engagement, whereby first graders who participated in class, listened carefully and followed directions, and persisted and completed their work autonomously were more likely to remain more actively engaged in fourth grade. A positive correlation was also found between warm teacher-student relationships in first grade and fourth grade engagement over and above the contribution of kindergarten skills and second grade achievement. Skinner et al. (2008) also found that teacher support was a significant predictor of behavioral and emotional engagement in the classroom. High quality teacher-student relationships and a school environment with high levels of academic press (pressure toward academic excellence) were significant predictors of behavioral engagement measured by effort and perseverance in learning (Sook-Lee, 2012).

Similar effects have been found for the classroom environment. Using a multi-method, multilevel approach, Reyes et al. (2012) examined the link between classroom emotional environment and academic achievement, including the role of student engagement as a mediator. Data were collected from 63 teachers and 1,399 students in fifth and sixth-grade classrooms from 44 schools in a diverse school district in the Northeastern United States. Results revealed that student ratings of engagement mediated the relation between observed classroom emotional climate and year-end grades after controlling for the influences of school, teacher, student, and other classroom characteristics. In other words, classrooms scoring higher on emotional climate were more likely to promote student engagement in learning, which leads to greater academic achievement.

Students' perceptions of classroom peers may positively influence their academic engagement through an authentic community and leadership opportunities. Peers can also negatively affect student engagement through distraction and judgment (Bishop & Pflaum, 2005). Individual student engagement has also been found to be positively influenced by the engagement level of other members in their classroom peer network (Sage & Kinderman, 1999). Elffers et al. (2012) also stipulate that classmates should be considered as an important source of students' engagement in school, and that positive relationships with classmates may be particularly important for students who are from lower socioeconomic or ethnic minority backgrounds, or students with lower educated parents.

Classroom size has also been highlighted as another predictor of student engagement. Blatchford, Bassett, and Brown (2011) investigated the effects of class size on student classroom engagement and examined if effects varied by student attainment level and between primary and secondary school years. Systematic observations were carried out on 686 students in 49 schools.

Multilevel regression analysis revealed a tendency for higher levels of student engagement as class sizes decreased, and conversely less on task and more off task behavior as class sizes increased. However, this was affected by student's attainment group and also primary vs. secondary schools, where at secondary level it was only the students with lower levels of attainment who showed more classroom engagement.

The school and classroom context may also influence students' disruptive behavior. Kaplan and Maehr (1999) found a relationship between middle school students' perceptions of the classroom goal structure and reports of disruptive behavior. Mastery goal oriented classrooms that emphasize performing an activity with the purpose of developing skills, gaining competence, and promoting understanding, tend to have students who are less likely to disturb the lesson, get into trouble, or annoy the teacher. Relations between the classroom goal structure and disruptive behavior exist after controlling for students' gender, grades, self-efficacy, and personal achievement goals (Kaplan et al., 2002). Additionally, students who perceive themselves as disruptive are likely to feel inadequate in the classroom—a feeling that might result in or be the consequence of alienation (Kaplan & Maehr, 1999).

Research suggests classroom engagement also influences youths' capacities to plan for future careers (Wang, Willett, & Eccles, 2011). Highly engaged students are less likely to drop out of school (Finn & Rock, 1997). Behavioral engagement significantly differentiates successful school completers from school drop-outs (Klem & Connell, 2004). Disengaged students are more likely to fail and drop out of school, especially when they feel alienated or disconnected from their teachers and peers (Finn, 1989). Studies have reported a positive association between student engagement and academic achievement regardless of race, gender, and socio-economic status (Klem & Connell, 2004). Finn's renowned participation–identification model (Finn, 1989)

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emphasizes the importance of emotional engagement for positive school behavior and performance. If students identify with their school, they participate more actively in school activities. This participation reinforces academic achievement, which in turn stimulates identification. If students do not identify with school, they are more likely to engage in problem behavior or to psychologically or physically withdraw from school, leading to negative achievement outcomes, and to further psychological and physical withdrawal (Elffers et al., 2012).

### *Relevance and Gaps*

Extant research has demonstrated the importance of classroom contextual factors and peer relationships in the development of student engagement and in the promotion of involved behavior and reduction of disruptive behavior. However, it remains unclear the extent to which teacher-promoted social interaction and mutual respect among classmates impacts students' involved and disruptive behavior. Furthermore, even less is known regarding the impact of teacher self-efficacy on students' involved and disruptive behavior.

### Association among Key Variables

### *Teacher Self-efficacy and Classroom Social Environment*

With regards to the effect of teacher self-efficacy on teacher behavior, a substantial amount of the research has focused on teachers' instructional practices and goal orientation (Chong et al., 2010; Ghaith & Yaghi, 1997; Onafowora; 2005; Woolfolk, Rosoff, & Hoy, 1990). Research suggests that teachers with high levels of self-efficacy play an important role in creating a classroom environment that encourages students to become active, self-motivated and/or mastery-oriented learners (Deemer, 2004; Pajares, 1992). A seminal article that provided early support for this conclusion is the work by Gibson and Dembo (1984). These authors

conducted classroom observations in a sample of 8 teachers (4 high efficacy and 4 low efficacy) to determine whether high- and low-efficacy teachers exhibit differential patterns of teacher behaviors in the classroom related to academic focus, feedback, and persistence in failure situations. Observations indicated more efficacious teachers allocated no time to academic games and conducted more whole class instruction.  Additionally, teachers who were confident in their ability to teach communicated higher expectations by providing less criticism to students and persisting with students demonstrating academic difficulty. Results from this study provided preliminary data to suggest that teacher self-efficacy beliefs may have the potential to influence how teachers interact with their students and the type of classroom social environment they promote.

In more recent empirical research a construct that has been frequently been studied in relation to teacher self-efficacy and the classroom environment is goal orientation. Deemer (2004) contributes to this literature by investigating the influence personal teaching efficacy on teachers' instructional practices and students' perceptions of classroom goal orientations in high school science classrooms. Ninety-nine (99) high school science teachers and 1,680 students in Delaware participated in this study. Levels of personal teaching efficacy related positively to the use of mastery practices in the classroom, showing that teachers with confidence in their teaching capabilities created a classroom atmosphere focused on effort and student learning. Contrary to expectations, levels of efficacy were not inversely related to the use of performance practices in the high school classroom. The relationship found between personal teaching efficacy and mastery instructional practices highlights the importance of maintaining teachers' level of instructional confidence. Teachers with high levels of efficacy were more "likely to seek out resources and develop challenging lessons, persist with students who are struggling and teach

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in multitude ways that promote student understanding" (Deemer, 2004, p. 74). These results provide a rationale for this study to investigate how teacher self-efficacy influences the extent to which teachers provide students with academic support.

A similar study was conducted by Rubie-Davies, Flint, and McDonald (2011) who investigated the relations between teacher self-efficacy and teacher goal orientation. The participants were 68 male and female teachers from socio-economically diverse elementary and middle schools in New Zealand. Results indicate teachers with higher efficacy for promoting student engagement were likely to have a mastery goal orientation. Conversely, there was a negative relation between efficacy for class management and a mastery goal orientation, whereby teachers with higher efficacy for class management were less likely to have mastery goal orientation. A similar but smaller negative relationship was found between teacher efficacy for instructional strategies and performance goal orientation. This suggests that teachers who feel confident about their ability to instruct and engage students were more likely to provide instructional support and encouragement to students that facilitate a focus on skill mastery. However, those who have strong beliefs in their ability to manage students' disruptive behavior have a more planned, criterion-based approach to management. Results indicate specific domains of teacher self-efficacy may have varying effects on teacher practices in the classroom. Therefore, this study's aim to investigate how teachers' overall self-efficacy score (which combines all three domains) influences the classroom social environment may provide a unique contribution to this field of research.

More specific research has demonstrated support for the notion that teacher self-efficacy influences how teachers deal with their discipline problems in their classroom. For example, Woolfolk, Rosoff and Hoy (1990) found that middle school teachers with high levels of efficacy

about their instructional abilities demonstrated more humanistic attitudes about classroom control. Ashton and Web (1986) found similar results demonstrating that highly efficacious teachers were more relaxed and friendly, were more trusting of students and dealt with misbehavior in more positive ways. Chong et al. (2010) also noted the effects of teacher self-efficacy in their student discipline practices with 222 teachers from five middle schools in Singapore. Results of this study suggest teachers' perceived efficacy was related to their use of instructional strategies, their ability to manage the classroom and engage students in learning, as well as their administration of student discipline. These results indicate how teacher efficacy affects how teachers interact with their students. Thus, it is reasonable to expect that teacher self-efficacy will impact how teachers provide academic and emotional support to their students.

Most of the research to date on the effects of teacher self-efficacy on the classroom environment has focused on teacher behaviors as it relates to instructional and discipline practices as well as the degree to which these beliefs promote mastery or performance goal orientations in the classroom. Overall, results indicate teacher self-efficacy has an influence on the classroom social environment. Although some research indicates teachers with high self-efficacy are more likely to assist students with academic tasks, current literature does not provide sufficient evidence to determine whether highly efficacious teachers are also more likely to provide emotional support to their students. Additionally, current research minimally addresses how teacher self-efficacy impacts teachers' tendency to promote positive peer social interactions and facilitate an environment of mutual respect among classmates. Thus, the current study attempts to address some of these gaps by investigating the influence of teacher self-efficacy on teachers' provision of academic and emotional student support as well as their facilitation of positive social interactions and mutual respect among students in the classroom.

*Classroom Social Environment and Student Adjustment*

The Classroom Social Environment is multidimensional as it encompasses social and academic aspects of the classroom. The teacher plays a key role in shaping the classroom social environment by providing emotional and academic support to students and by facilitating and encouraging student interaction and mutual respect. Teacher characteristics such as a caring disposition, recognition of, interest in, respect, and concern for students, and fair treatment of students influence the psychological environment of the classroom and thus have the potential to create an environment which stimulates students' engagement and learning (Murdock, 1999). Teacher support has monumental effects on youth's social and motivational development and achievement (Sakiz, Pape, & Woolfolk Hoy, 2012). As students advance into adolescence, their peer interactions become increasingly salient in influencing their academic and social adjustment. Thus, whether teachers promote positive peer interactions within the classroom is a critical area in this type of research. Current research investigating relations between students' perception of their classroom social environment and their adjustment examine a variety of classroom and student variables. Most of the findings to date support the idea that the quality of the classroom social environment has powerful influences on student adjustment with particular emphasis on teacher emotional/social support.

Given the central role teachers play in shaping the classroom social environment, understanding the connections between the affective components of learning environments and early adolescents' adjustment should be an area of focus for school psychologists. One of the earlier studies that illustrates the central role of the classroom social environment was conducted by Ryan and Patrick (2001). This research investigated the extent to which students' perceptions of the social environment of their math classroom (i.e., teacher support, promoting interaction,

promoting mutual respect, promoting performance goals) are associated with changes in motivation and engagement (i.e., academic and social efficacy, self-regulated learning, and disruptive behavior) when students transition from seventh to eighth grade. Participants included 233 students from three ethnically diverse middle schools in the Midwest. Results indicated students' perceptions of specific dimensions of the classroom social environment were important in influencing the particular indicators of motivation and engagement. Teacher promotion of mutual respect among classmates was the most important dimension of the social environment in predicting changes in academic efficacy and self-regulated learning. Teacher promotion of peer interaction was correlated with all four indicators of motivation and engagement. A unique finding was that students' perceptions of the classroom social environment were largely unrelated to their social self-efficacy. This result suggests that peer interactions outside of the classroom may have greater implications for early adolescents' confidence in their social skills. Additionally, an independent association between teacher support and students' academic efficacy was not found. This may be explained by other factors having stronger effects on student academic self-efficacy such as a competitive/comparative environment and performance feedback in the form of grades as well as peer and teacher feedback, or perhaps by the existence of mediating factors between these variables.

To gain a deeper understanding of the possible mediating factors between the classroom social environment and student adjustment variables Patrick, Ryan, and Kaplan (2007) examined whether fifth grade students' perceptions of the classroom social environment were related to their classroom engagement and whether this relation was mediated by personal motivational beliefs. Aspects of the classroom social environment included teacher academic and emotional support, promotion of mutual respect, promotion of task-related interaction and student academic

and social support. Engagement was measured by self-regulation and task-related interaction while personal motivational beliefs included mastery goals as well as academic and social efficacy. Findings indicated when students felt emotional support from their teacher, academic support from their peers, and encouragement from their teacher to discuss their work with peers, they were more likely to use self-regulatory learning strategies. Furthermore, students' personal motivational beliefs fully or partially mediated relations between perceptions of the social environment and engagement. This study demonstrates that positive classroom social environments enhance students' focus on mastery and feelings of efficacy and in turn, facilitate engagement.  Thus, it is important to examine these student outcomes simultaneously in the current study.

Investigating the combination of teacher and peer interactions in the classroom is essential in gaining a holistic understanding of the classroom social environment and its impact on student adjustment.  Wang (2012) investigated whether seventh grade students' perceptions of the math classroom environment predicted changes in their self- and task-related beliefs in seventh and tenth grades. Structural equation modeling was utilized to determine whether student perceptions of classroom characteristics predicted changes in expectancies and subjective task values as well as educational and career interests in math. Data were collected from 3,048 youth who reported on their classroom experiences in seventh grade using The Classroom Environment Measure. Expectancies and task values were also collected in the sixth, seventh, and tenth grades. The sample consisted primarily of European American students from middle-class income families. Findings indicated students' math classroom environment experiences in seventh grade predicted math self-expectancies, subjective task values, and interests in seventh and tenth grades, controlling for prior math achievement, motivational beliefs, and family

demographics. More specifically, teacher emotional support predicted math expectancies and teacher-promoted cooperation predicted task value in math. This study underlines that when students are encouraged to cooperate, interact with, and help their classmates during lessons and when they perceive their teacher as understanding and supportive, they are more likely to expect academic success and see the value of learning or completing tasks. Studies like this suggest teacher and peer interactions are important factors for student academic self-efficacy and classroom engagement. Thus, investigating the extent to which teachers provide support to students and promote student interactions in the classroom may be important variables to include in the current study.

Other studies have highlighted the relation between one dimension of the social environment and several student outcome variables. One such example is a study conducted by Sakiz, Pape, and Woolfolk Hoy (2012). This study aimed to investigate student perceptions of their teachers and their impact on adjustment via structural equation modeling. The research study examined relations among middle school students' perceptions of teacher emotional support and student adjustment (i.e., sense of belonging, academic self-efficacy, enjoyment, hopelessness, and effort) in mathematics classrooms. Sakiz and colleagues conducted this study with 317 seventh- and eighth-grade students primarily from Caucasian backgrounds in the Midwest. Students with higher perceptions of teacher emotional support reported a greater sense of belonging, higher academic enjoyment, lower academic hopelessness, and greater academic self-efficacy. These variables, in turn, were associated with greater effort within the academic context. The results of this study highlight the importance of teachers' ability to create affective classroom environments and enhance the development of middle school students' sense of belonging, academic self-efficacy, and enjoyment and perhaps an indirect effect on academic

effort. Therefore, this study provides support for examining the relations among teacher emotional support and student academic self-efficacy in the current study.

Student engagement is another important facet of adjustment that is impacted by the classroom social environment and has been relatively understudied among middle school students. Dotterer and Lowe (2011) examined the links between classroom context and school engagement among elementary school children. Participants included 1,014 fifth grade students, primarily from Caucasian backgrounds. This study incorporated both observational and self-reported assessments of various dimensions of classroom context (i.e., instruction quality, social/emotional climate, and student-teacher relationship) and school engagement (i.e., psychological and behavioral engagement). Findings indicated multiple aspects of the classroom environment are important predictors of both psychological (i.e., feelings of belonging, trying hard in school) and behavioral (i.e., time on task, paying attention) engagement. Results indicated students without previous achievement difficulties who were in positive classroom social environments reported greater behavioral and psychological engagement. Students with previous achievement difficulties in similar environments were more likely to be behaviorally engaged in classroom activities but not psychologically engaged. These findings denote that to increase behavioral engagement of fifth grade students, it is important to enhance classroom environments with high quality instruction, positive social climate, and low levels of student-teacher conflict. Thus, further research examining the extent to which providing a positive classroom social environment is associated with higher levels of behavioral engagement for middle school students is warranted.

Although research studies have underscored the importance of teachers in creating positive social environments, few studies have examined the effect of teacher-promoted variables

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such as social interaction and mutual respect among students on academic and social self-efficacy as well as involved and disruptive behavior, especially during early adolescence. Further research is necessary in order to investigate whether teacher-related factors regarding the classroom environment are associated with students' efficacy to excel academically, relate well to peers, and engage in their school work particularly within the larger, more diverse learning environment of the middle school. Thus, the current study seeks to address existing gaps in the literature and examines the extent to which teacher-related classroom environmental factors (i.e., academic and emotional teacher support, teacher-promoted student social interaction and mutual respect) impacts students' self-efficacy (i.e., academic and social self-efficacy) and classroom engagement (i.e., behavioral classroom engagement and disruptive behavior), among an ethnically diverse, early adolescent student population.

*Teacher Self-efficacy and Student Adjustment*

With regards to the effect of teacher self-efficacy on student outcomes, a substantial amount of the research has focused on student achievement (Bandura, 1977, 1986; Gibson & Dembro, 1984; Pajares, 1996; Schunk, 1994, 1995). Research suggests teacher self-efficacy has significant influence on achievement in that students with highly efficacious teachers earn higher standardized test scores than students with less efficacious teachers. A recent study that provides support for this association is the work by Caprara et al. (2006). These authors sought to investigate whether teachers' self-efficacy beliefs significantly contributed to students' final academic achievement beyond the influence exerted from previous academic achievement. Participants were 2184 teachers from 75 junior high schools in Italy. Variables of interest include teachers' self-efficacy beliefs at time 1 and students' average final grades at time 1 and 2. Structural equation modeling analyses corroborated a conceptual model in which teachers' self-

efficacy beliefs influenced students' subsequent academic achievement, controlling for previous levels of achievement. Caprara and colleagues note additional factors that may influence student's academic achievement, including factors outside of the learning context such as student enthusiasm, engagement, and positive interpersonal skills. Additionally, efficacious teachers promote social classroom environments that may enhance these factors, resulting in higher academic achievement. Therefore, these authors provide reason for the current study to examine how teacher self-efficacy affects the type of classroom social environment teachers promote and how these factors impact students' academic and social self-efficacy and classroom engagement.

Few studies examine relations between teacher self-efficacy and student academic self-efficacy. Of the few studies that exist, teacher self-efficacy has been examined as a single construct. For example, Corkett et al. (2011) examined associations between teacher self-efficacy for teaching reading and writing and student self-efficacy as well as their reading and writing abilities. The sample consisted of 122 predominantly Caucasian, six grade students from central Ontario. Results indicated teachers' self-efficacy for teaching reading and writing did not correlate with students' total literacy score or their writing ability. However, there was a positive correlation between the teachers' self-efficacy for teaching reading and the students' reading ability for male students. These results may suggest that high teacher self-efficacy for teaching reading does not transfer to the teaching of writing due to the belief that reading skills have a positive impact on writing skills as well as the fact that writing skills are not given as much attention and/or assessed to the same degree as the mechanics of reading. Additionally, teachers' self-efficacy for teaching reading and writing was not significantly correlated with students' self-efficacy of their reading and writing abilities. These findings imply there may other factors intervening between teacher self-efficacy and student self-efficacy. Therefore, this study

provides a rationale for examining the mediating role of the classroom social environment in the current study.

Also examining teacher self-efficacy as a single construct, Midgley, Feldlaufer, and Eccles (1989) conducted a two year study investigating the relation between teachers' sense of efficacy and students' beliefs in mathematics before and after the transition to junior high school. Participants included 1,329 predominately Caucasian students and 95 pre-transition and 46 post-transition mathematics teachers. Results indicated positive relations between teachers' beliefs about their personal efficacy and students' expectancies and perceptions of mathematics performance. In the spring of both years, students with more efficacious teachers had higher expectancies and perceptions of math performance than did students with less efficacious teachers. Results also revealed that students with more efficacious teachers rated math as less difficult than did students with less efficacious teachers in the spring of their seventh grade year. This result suggests the existence of an unknown factor in the junior high school environment that makes teacher self-efficacy particularly influential regarding difficulty perception. Results also indicated changes in students' beliefs within the school year were related to teachers' sense of efficacy. Specifically, the beliefs of students who had low-efficacy teachers became more negative as the school year progressed, whereas the beliefs of students who had high-efficacy teachers became more positive or showed less negative change from the beginning to the end of the school year. Findings support the important role of teacher self-efficacy on student self-efficacy beliefs particularly within the context of the junior high classroom environment.

Other studies have examined self-efficacy as a multi-dimensional construct. For example, Bagaka (2010) examined the extent to which teacher self-efficacy enhanced secondary school students' mathematics self-efficacy. Data were collected from 13,173 students in 193 classrooms

from 141 schools in Kenya. Factor analyses revealed teacher self-efficacy items loaded onto two dimensions of teachers' mathematics self-efficacy: (a) interest and enjoyment of mathematics and (b) ability and competence in teaching mathematics. Similar statistical analyses revealed that students' mathematics self-efficacy items loaded onto five dimensions: (a) students' lack of interest in and fear of mathematics; (b) students' relative competence in mathematics; (c) students' self-confidence and competence in mathematics; (d) students' interest in, effort in, and perception of the importance of mathematics; and (e) mathematics anxiety. Findings indicate both dimensions of teacher self-efficacy were found to be positively related with students' interest in, effort in, and perception of the importance of mathematics. Each dimension of teacher self-efficacy had unique contributions to different dimensions of student self-efficacy. For example, teachers' interest and enjoyment of mathematics significantly enhanced students' self-confidence and competence in mathematics while teachers' perceived ability and competence in teaching narrowed the gender gap in students' self-confidence in mathematics. Findings suggest teacher self-efficacy improved students' mathematics self-efficacy. Additionally, the self-efficacy dimension of students' interest in, effort in, and perception of the importance of mathematics may have implications for student engagement. This research supports further investigation into the influences of teacher self-efficacy on student academic self-efficacy and classroom engagement. Differences in results across studies discussed could be attributed to the operationalization and measurement of self-efficacy, student population, and geographical location. Thus, further research is needed to verify relations among variables.

Studies addressing the association between teacher self-efficacy and student outcomes have been minimal. Extant studies have primarily examined associations between teacher self-efficacy and student academic achievement and have found that high teacher self-efficacy has

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positive influences on students' academic achievement. However, few studies have focused on the effects of teacher self-efficacy on student academic self-efficacy. Presently, there are conflicting findings regarding the associations between these two variables primarily due to variation in operationalization and measurement of teacher and student self-efficacy as well as the disparity in the sample populations examined. Minimal research also exists regarding the impact of teacher self-efficacy on students' confidence in their abilities to interact with their classmates. Current literature is similarly scarce when examining the impact of teacher self-efficacy on student classroom engagement and disruptive behavior. Given the potential impact of teacher self-efficacy and the importance of these student adjustment variables for academic and social development, the current study seeks to address the mentioned gaps in the literature by investigating the indirect influence of teacher self-efficacy on student adjustment (i.e., academic and social self-efficacy and classroom engagement) via the classroom social environment.

**Summary of Current Study's Aims and Hypotheses**

Current literature supports the influence of teachers and peers in fostering healthy adjustment for adolescents, especially youth transitioning to middle school. Thus, it is important to consider how teachers provide student support and facilitate positive peer interactions and mutual support among students when assessing students' academic and social adjustment. Research has also shown teacher's self-efficacy has implications for their instructional, classroom management and discipline practices as well as the support they provide to students. However, minimal research has examined how teacher self-efficacy impacts their ability to facilitate a positive classroom social environment for students, specifically fostering social interactions and mutual respect among students. Additionally, few studies exist that aim to

investigate how teacher self-efficacy and the classroom social environment impact students'

academic and social self-efficacy, classroom engagement, and disruptive behavior.

Therefore, the current study attempted to address gaps in literature and aimed to investigate:

(1).What is the impact of teacher self-efficacy on students' perception of the classroom social

environment? (2).What is the impact of the classroom social environment on students' academic

and social self- efficacy, involved behavior, and disruptive behavior? (3).To what extent does the

classroom social environment mediate the relation between teacher self-efficacy and student

adjustment (i.e., academic and social self-efficacy and classroom engagement)?  Based on trends

in the current literature, it was expected that teacher self-efficacy would be positively related to

students' perception of the classroom social environment and that these perceptions would have

positive effects on student adjustment. It was also hypothesized that the classroom social

environment would mediate the relation between teacher self-efficacy and student adjustment.

This investigation provides unique contributions to this field of research by examining these

variables in tandem and using a diverse population of young adolescence in middle school. The

results of this study provide a deeper understanding of the role of teachers and classroom factors

in shaping student adjustment in middle school and may assist school psychologists in guiding

school personnel in practices to enhance students' academic and social development.

**Chapter III: Method**

The purpose of this study was to examine the direct and indirect relationships between teacher self-efficacy, the classroom social environment and student adjustment. In order to answer the research questions, this study utilized a single data point 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). The current study utilized archival data from this larger study, specifically sixth-grade teacher and student self-reports from fall 2009. Quantitative methods were used to answer the research questions regarding the associations between teacher-reported self-efficacy, student perceptions of the classroom social environment, and student reported adjustment (i.e. self-efficacy and classroom engagement). The design of this study examined whether the classroom environment was a mediating factor between teacher self-efficacy and student adjustment. This section outlines the participants, measures, procedure, as well as the analyses conducted.

**Participants**

*School Demographics*

Participants in this study are sixth-grade students from three middle schools in a southeastern state; School A, School B and School C. The principal investigator for the larger

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study used the 2008-2009 No Child Left Behind Act Accountability Report for demographics (refer to Table 1). 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. Convenience sampling method was used as the sample was drawn from an accessible population of local schools.

Table 1.Student Population Demographics for Middle Schools (2008-2009)

| Variable | School A | School B | School C |
|---|---|---|---|
| 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% |

There was a wide range of variability regarding socio-economic status across the schools, with School A having 30%, School B with 52%, and School C 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 racial backgrounds. The Latino population was the ethnic group with the greatest variability among the middle schools. Schools A and School C were similar with 21% and 16%, respectively, while School B had 42% Latino students.

*Participant Selection*

Participants were recruited from three local middle schools where all 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 schools, 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.

*Student Demographics.* A total of 421 sixth-grade students across the three schools participated in the current study. There was an equal distribution of gender ($N = 211$ males, 50%) and several ethnicities were represented. Caucasian students composed the highest percentage with 52.2% of the total students. Latino students composed 24% of the sample, and the other/multiracial category was 12.3 % of the sample. African American (6%) and Asian (5.5%) students were the smallest groups. Student participation in the fall of 2009 was an average of 57% across the three middle schools. Please refer to Table 2 for the demographic disaggregation information for students across the three schools.

*Teacher Demographics.* Data were collected from a total of 31 sixth-grade teachers across the middle schools. Of the total sample of teachers, the largest percentage (48.4%) originated from School C, 35.5% from School B and 16.1% from School A. In terms of ethnic composition, 64.5% of sixth-grade teachers were Caucasian, 9.7% were Latino, 3.2% were either African or Asian, and the remaining 19.4% did not report their ethnicity in the survey.

Approximately 77 percent of the teachers were female. Teacher participation rate in this sample

was 23%. See Table 3 for sixth-grade teacher demographic data.

Table 2. Student Sample Demographic Data

| Variable | School A | School B | School C | Total |
|---|---|---|---|---|
| Sex (N) | | | | |
| Male | 41 | 78 | 92 | 211 |
| Female | 44 | 71 | 95 | 210 |
| Total | 85 | 149 | 187 | 421 |
| Ethnicity (%) | | | | |
| Caucasian | 61.2% | 30.9% | 65.2% | 52.2% |
| Latino | 18.8% | 43.6% | 10.7% | 24% |
| African American | 3.5% | 8.7% | 4.8% | 6% |
| Asian | 5.9% | 2.7% | 7.5% | 5.5% |
| Other | 10.6% | 14.1% | 11.8% | 12.3% |

*Note.* Percentages were rounded to the tenth place

**Measures**

Variables in the current study included teacher self-efficacy, classroom social

environment and student adjustment. Measurement tools for each of these variables are described

below.

### *Teacher Self-efficacy*

Teacher self-efficacy was measured using a 15 item teacher self-efficacy scale (Bandura, 1997). This measure consists of three subcomponents, including the instructional self-efficacy, disciplinary self-efficacy and positive school environment, self-efficacy. Each item on the scale uses a 7 point Likert Scale ranging from 1 *(nothing)* to 7 (*a great deal*). Teacher self-efficacy involves teachers' perceptions of their ability to deliver instruction, carry out discipline, and create a positive school environment. The instructional efficacy subscale measures 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 contains 7 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 measures 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 consists of three items, "How much can you do to get children to follow rules?", "How much can you do to control disruptive behavior in the classroom?", and "How much can you do to prevent problem behavior on the school grounds?" The positive environment subscale measures teachers' expectation of his/her ability to create a trusting atmosphere and make school enjoyable for students. The efficacy to create a positive school environment subscale contains five items. Examples include, "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 (Hines & Kritsonis, 2008; LoCasale-Crouch et al., 2012) and have been found to be reliable.

Table 3. Teacher Sample Demographic Data

| Variable | School A | School B | School C | Total |
|---|---|---|---|---|
| Sex (N) | | | | |
| Male | 1 | 2 | 1 | 4 |
| Female | 5 | 9 | 14 | 28 |
| Ethnicity (%) | | | | |
| Caucasian | 60% | 36.4% | 86.7% | 64.5% |
| Latino | 20% | 9.1% | 6.7% | 12.9% |
| African American | 0% | 0% | 6.7% | 1.6% |
| Asian | 0% | 9.1% | 0% | 1.6 % |
| Undisclosed | 20% | 36.4% | 0% | 19.4% |

*Note.* Percentages were rounded to the tenth place.


### *Classroom Social Environment*

The classroom social environment was measured using three scales from the Classroom Social Environment (CSE) scale developed by Ryan and Patrick (2001) and adapted from Johnson and Johnson (1983), including teacher support and teacher promotion of mutual respect and social interaction. Teacher support measures students' perceptions of academic and emotional support from teachers. Teacher support refers to the degree to which students perceive their classroom climate as having academic and emotional provisions of help, safety, and nurturing (Wentzel, Battle, Russell, & Looney, 2010). This student report scale consists of 8 items which are equally divided among 2 subscales: teacher academic support and teacher emotional support. Each item uses a Likert type Scale ranging from 1 (*not at all true*) to 5 (*very*

*true*). Teacher Academic and Emotional Support items include, "My teacher likes to see my work" and "My teacher respects my opinion." This scale has been utilized in previous research with early adolescents and has proven to be reliable (Ryan & Patrick 2001; Wentzel et. al, 2010). Ryan and Patrick (2001) reported a .82 Cronbach alpha for the Teacher Support scale, which included both academic and emotional support.

Mutual respect and social interaction subscales were measured using a 10 item scale, which uses a 5-point Likert Scale, 1 (*not true at all*) and 5 (v*ery true)*. Mutual respect measures the extent to which students perceive teachers as encouraging respect among classmates (Ryan & Patrick, 2001). Items on the Mutual Respect Scale include "My teacher wants students to respect each other's' opinion" and "My teachers want all students to feel respected." Social Interaction measures the extent to which students perceive teachers as encouraging students to interact with one another during academic activities. Examples of Social Interaction items include, "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." Scores for these two scales were computed by taking the mean of corresponding items for each scale. This scale has been administered to early adolescents previously and has been found to be valid and reliable with reported Cronbach alphas of .90 and .82 for the social interaction and mutual respect subscales respectively (Ryan & Patrick, 2001).

### *Student Adjustment*

*Academic Self-efficacy.* Academic self-efficacy refers to student' contextually specific judgments of their capabilities to perform academic task successfully (Bandura, 1986; Schunk, 1991). In the current study academic efficacy was measured using items developed from the Patterns of Adaptive Learning Survey (PALS; Midgley et al., 2000). This self-report measures the extent to which a student feels he or she is academically competent in his or her coursework

(Midgley et al., 2000). This scale consists of 5 items and each item ranges from 1 (*not at all true of me*) to 5 (*very true of me*). 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).

     ***Social Self-efficacy.*** Social self-efficacy beliefs can be defined as students' confidence that he/she can successfully make new friends, form positive peer relationships, are accepted by peers, and are able to behave appropriately in school (Patrick et al., 1997). Social self-efficacy was measured using the Social Efficacy with Peers Subscale from Motivational Beliefs Scale developed by Patrick, Hicks, and Ryan (1997). This subscale contains 5 items and each item ranges from 1 (not at all true of me) to 5 (very true of me). Examples included, "I can explain my point of view to other students in the class" and "I can get along with most of the students in my class." This scale has been used with young adolescents and has been found to be reliable (α =.73-.76; Patrick et al., 1997).

     ***Classroom Engagement.*** Classroom engagement refers to students' participation in academic and nonacademic activities at school and effort and perseverance in learning activities (Sook-Lee 2012). The classroom engagement scale consisted of two subscales including the Involved Engagement Subscale created by Skinner and Belmont (1993) and the Disruptive Engagement Subscale from the PALS (Midgley et al., 2000). Each subscale has a total of four items, with each item ranging from 1 (not at all true of me) to 5 (very true of me). Involved Engagement items include "I listen carefully in class" and "I try very hard in school." Items on the Disruptive Subscale include "I always follow the classroom rules" 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, Involved Engagement α= .80; (Midgley et al., 2000) and The

Disruptive Engagement scale α= .82-.89 (Kaplan & Maehr, 1999).

**Procedure**

*Student Data Collection*

The current study utilized archival data. This section describes how data were collected

among the sixth-grade students for the larger longitudinal study during fall 2009. Graduate

assistants and the Principal Investigator collected data in three middle schools. Prior to data

collection graduate students received training on survey administration, including how to answer

student questions. Additionally, all graduate students 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 students with less experience to ensure

consistency across 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. 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 remain in 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.

Survey administration took about 45 minutes. Surveys were administered in classrooms

or the media center, depending on availability and the preference of the school, 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. 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.

Several steps were taken during survey administration to reduce threats to measurement validity. Similar training was provided to all survey administrators to ensure familiarity with procedures and measures. Furthermore, students were given a folder to help increase privacy and the anonymity of their answers was emphasized in efforts to increase the internal validity of the measures completed. No adverse events transpired that should affect the survey results.

### Teacher Data Collection

Teachers who demonstrated interest in the study were provided a sealed packet which included a description of the study purpose, all teacher relevant questionnaires, and informed consent forms. All teachers who agreed to participate returned sealed packets with signed consent forms within a week.

### 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 other analysis on IBM SPSS Version 20 to ensure accuracy of data.

*Missing Data*

In the current study, only data from Fall of 2009, for sixth-grade students and their teachers was included. When scoring, if there was only one item missing per scale, an average was created for that scale and mean imputation was used depending on the amount of missing data (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). The researcher reported the amount of missing data in order to acknowledge the potential extent of any biases resulting based on the method selected to handle missing data.

**Analysis Plan**

*Descriptive Analyses*

All descriptive data analyses were conducted using Version 20 of IBM Statistical Package for the Social Sciences (SPSS). Descriptive analyses were conducted for the current study in order to determine means, standard deviations, normality (skewness and kurtosis), and correlations among the variables of interest (i.e., teacher self-efficacy, classroom social environment, student self-efficacy, and classroom engagement). The first step of this analysis

involved testing the measurement model of the scales and the correlations among all variables in the model. This involved a factor analysis procedure in which the assumptions regarding the factor structures of the various scales were tested. Cronbach's alphas were conducted in order to determine the reliability of these measures for the current sample.

### *Structural Equation Model*

This study utilized structural equation modeling via the SAS program, which is the method of choice for assessing hypothesized structural relations, particularly those that involve mediation (Patrick et al., 2007). Despite the use of nested data in this study, single level modeling was utilized due to the insufficient number of schools to create another level of analysis.

To test the hypothesis concerning the direct and indirect relationships between the variables, a model that posited the social environment variables between the teacher self-efficacy variables and the student adjustment variables was used. To determine how well the model fit the sample data, in other words, to determine the size of the discrepancy between the theoretical and the observed relations, the goodness-of-fit test statistic (including the number of degrees of freedom, and its $p$ value) as a measure of absolute fit, the comparative fit index (CFI) as a measure of incremental fit,  the 90% confidence interval for the root-mean-square error of approximation (RMSEA), and features of the residuals, in particular the standardized root mean squared residuals (RMR), were calculated and reported. To determine the percentage of variance on student self-efficacy and engagement accounted for by teacher self-efficacy and the classroom social environment, the size of squared multiple correlation coefficients (R2) was also calculated and reported.

When the model proved satisfactory based on conventional cutoff criteria for fit indexes suggested by Hu and Bentler (1999), the size of the model parameters or the strength of the relations among teacher self-efficacy, the classroom social environment, and student adjustment variables were examined. To conduct this, standardized estimates of the unknown parameters were reported. Similarly, estimates of the indirect effect were reported in order to determine the strength of the relation for the indirect effects of teacher self-efficacy on student adjustment. Additionally, to determine the reliability of the parameter estimates, estimates of the standard errors of the (primary) parameter estimates were calculated and reported.

**Chapter IV: Results**

This chapter presents the results of the analyses conducted to answer the study's research questions. First, procedures used to check data entry accuracy and screen the data gathered are presented. Preliminary analyses follow, including standard deviations, and normality (skewness and kurtosis) for the variables of interest (i.e., teacher self-efficacy, classroom social environment, student adjustment) and are presented in Table 4 below. Then the correlations among the variables are discussed, followed by factor analysis and reliability of the variables. Lastly, the results from the initial and final structural equation models examining the relationships among the variables are presented and discussed.

**Data Screening**

Data were screened through several techniques. First, data were reviewed through manual checks prior to scanning, and Remark. Next manual checks of every 10th survey entry within Remark database, and frequency checks in SPSS Version 19.0 were conducted to ensure data entry was accurate. For further information refer to data integrity on page 80. The researcher defined outliers as any student that was 3 standard deviations above or below the group mean on any variable. No subjects were identified as outliers based on this criterion.

**Descriptive Statistics**

For each of the three major variables (teacher self-efficacy, classroom social environment and student adjustment), means, standard deviations, and normality were calculated in SPSS. The results for each variable and its components are described below and can be seen in Table 4.

*Teacher Self- efficacy*

Teacher self-efficacy (9 point Likert Scale) was comprised of three components, including instructional self-efficacy, disciplinary self-efficacy, and efficacy to promote a positive classroom environment. The sample mean for the sum of the three components, ($M = 7.14$, SD = .96) entitled overall teacher self-efficacy, indicates teachers in the sample reported relatively high confidence in their ability to deliver effective instruction, execute effective classroom management practices and create a positive classroom environment. Teachers reported the highest levels for discipline self-efficacy, suggesting that teachers had confidence in their ability to engage in effective classroom management practices, enforce class rules and prevent disruptive behavior ($M = 7.98$, $SD = .96$). Teachers reported the second highest levels for their ability to create a trusting atmosphere and make school enjoyable for their students ($M = 7.30$, $SD = 1.08$). For instructional self-efficacy teachers reported moderate confidence in their ability to deliver effective instruction and engage students in the learning process ($M = 6.80$, $SD = 1.07$). All components, and the overall teacher-self efficacy scale, demonstrated normal distribution with skewness figures ranging between +1 and -1 and kurtosis figures ranging between +3 and -3.

*Classroom Social Environment*

Classroom Social Environment (5 point Likert Scale). included students' perception of teacher academic and emotional support, as well as teacher-promoted social interaction and

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mutual respect. Students reported the highest levels for overall teacher support, indicating students  perceived their teachers as providing them with emotional and academic support ($M$ = 4.07, $SD$ = .84).  Students perceived their teachers cared more about how much they learn and want to help them learn ($M$ = 4.31, $SD$ = .81) than like them as a person ($M$ = 3.84, $SD$ = 1.01). Students reported their teachers promoted mutual respect among classmates ($M$ = 4.33, $SD$ = .83) more than they encouraged, or allowed, students to interact with one another during academic activities ($M$ = 3.27, $SD$ = .92). Overall teacher support fell slightly outside the normality range (skewness = -1.14, kurtosis =1.23). Skewness and Kurtosis scores indicated teacher emotional support was normally distributed but that teacher academic support fell slightly outside the accepted range (skewness = -1.69, kurtosis = 3.22). Social interaction was normally distributed but mutual respect fell slightly outside the accepted range (skewness = -1.33, kurtosis = 1.03).

### Student Adjustment

Student adjustment (5 point Likert Scale) included student-reported academic and social self-efficacy as well as student-reported engagement and disruptive behavior. Students reported moderate confidence in their ability to successfully execute academic tasks at expected levels ($M$ = 3.99, $SD$ = .79) and to form positive peer relationships, feel accepted by peers, and behave appropriately in school ($M$ = 3.49, $SD$ =.51).  Students also reported that they are engaged in classroom activities ($M$ = 4.16, $SD$ = .85) and report that they rarely engage in disruptive behavior in the classroom ($M$ = 2.20, $SD$  =1.00). Skewness and Kurtosis scores indicated social self-efficacy was normally distributed but that academic self-efficacy fell slightly outside the accepted range (skewness = -.903, kurtosis = 1.14).  Disruptive behavior was normally

distributed but classroom engagement fell slightly outside the accepted range (skewness = -1.33, kurtosis = 1.03).

Table 4. Descriptive Statistics of Variables

| Variables | N | Mean | SD | Skewness | Kurtosis | Alpha |
|---|---|---|---|---|---|---|
| Teacher Self- Efficacy * | 29 | 7.15 | .96 | .08 | -.63 | .91 |
| Instructional Efficacy | 31 | 6.80 | 1.07 | .27 | -.67 | .75 |
| Discipline Efficacy | 31 | 7.98 | .96 | -.61 | -.69 | .75 |
| Positive Environment | 29 | 7.30 | 1.08 | -.50 | -.017 | .81 |
| Classroom Social Environment | | | | | | |
| Teacher Support | 395 | 4.10 | .850 | -1.14 | 1.23 | .90 |
| Teacher Academic Support | 396 | 4.31 | .81 | -1.69 | 3.22 | .84 |
| Teacher Emotional Support | 397 | 3.84 | 1.01 | -.72 | -.21 | .86 |
| Social Interaction | 403 | 3.27 | .92 | -.22 | -.361 | .74 |
| Mutual Respect | 405 | 4.34 | .83 | -1.33 | 1.03 | .81 |
| Student Adjustment | | | | | | |
| Academic Self-Efficacy | 420 | 3.99 | .79 | -.903 | 1.14 | .84 |
| Social Self-Efficacy | 421 | 3.49 | .51 | -.401 | -.262 | .51 |
| Classroom Engagement | 411 | 4.16 | .85 | -1.086 | .883 | .859 |
| Disruptive Behavior | 408 | 2.20 | 1.00 | .651 | -.341 | .729 |

* Teacher reported measures with 9 point Likert Scale. All other measures are student reported and are measured using a 5point Likert Scale

**Correlational Analyses**

The three main variables in this study comprised of multiple components and were classified as latent variables in order to run the structural equation analysis with all the components. Thus, correlations were analyzed between components within each major variable as well as across variables and their corresponding components. See Table 5 for pearson product-moment correlation results for all continuous variables.

*Teacher Self- efficacy*

Each of the three components of teacher self-efficacy demonstrated positive relationships, with medium to large correlations with the overall teacher self-efficacy variable. Instructional self-efficacy was highly correlated with the overall teacher self-efficacy variable ($r = .951$, $p < .001$). Efficacy to provide a positive environment also had a strong correlation with the overall teacher self-efficacy variable ($r =. 888$, $p < .001$). Additionally, discipline self-efficacy had a medium relationship with teachers' overall self-efficacy ($r = .666$, $p < .001$).

The three teacher self-efficacy components demonstrated significant, positive, medium correlations at the $p < .001$ level. Instructional self-efficacy was moderately correlated with discipline self-efficacy ($r = .594$) and highly correlated with efficacy to provide a positive environment ($r = .728$). Discipline self-efficacy had a medium correlation with efficacy to provide a positive classroom environment ($r = .442$). The overall teacher self-efficacy and the three components were not significantly correlated with any other variables in the study.

*Classroom Social Environment*

Classroom social environment components demonstrated positive, significant relations with each other, ranging from small to large correlations. Students' perception of overall teacher support was significantly, positively, strongly related to each of the sub-components, academic

support (.910, $p < .001$) and emotional support (.944, $p < .001$). Academic and emotional

teacher support were highly correlated with each other (.723, $p < .001$). Students' perception of

teacher- promoted social interaction was moderately correlated with their perception of teacher-

promoted mutual respect ($r = .309$, $p < .001$). Academic support was also moderately correlated

with teacher-promoted social interaction ($r = .411$, $p < .001$) and teacher-promoted mutual

respect ($r = .468$, $p < .001$). Emotional support had a medium relationship with teacher-

promoted social interaction ($r = .513$, $p < .001$) and a small relationship with teacher-promoted

mutual respect ($r = .372$, $p < .001$). Overall, teacher support had a medium relationship with

teacher-promoted social interaction ($r = .500$, $p < .001$) and teacher-promoted mutual respect ($r$

$= .447$, $p < .001$).

### *Student Adjustment*

Student adjustment components demonstrated both positive and negative relationships

with each other, ranging from small to medium correlations. Academic self-efficacy was

positively associated with social self-efficacy ($r = .223$, $p < .001$) and engagement (.404, $p <$

.001), and was negatively associated with disruptive behavior (-.302, $p < .001$). Social self-

efficacy was positively associated with engagement (.246, $p < .001$) and a negative, insignificant

relationship with (-.086, $p < .001$). Behavioral engagement had a negative relationship with

disruptive behavior (-.583, $p < .001$).

Table 5. Correlations Among Major Variables

| Construct | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TSE | | | | | | | | | | | | | |
| Instr. | .951** | - | | | | | | | | | | | |
| Disci. | .661** | .594** | - | | | | | | | | | | |
| Env. | .888** | .728** | .442** | - | | | | | | | | | |
| Supp. | .060 | .048 | .051 | .054 | - | | | | | | | | |
| Aca. | .023 | .021 | .035 | .011 | .910** | - | | | | | | | |
| Emo. | .074 | .050 | .053 | .077 | .944** | .723** | - | | | | | | |
| Inter. | .035 | -.026 | -.076 | .020 | .500** | .411** | .513** | - | | | | | |
| Resp | .014 | .007 | .002 | .018 | .447** | .468** | .372** | .309** | - | | | | |
| ASE | .029 | .004 | .023 | .059 | .271** | .227** | .269** | .163** | .167** | - | | | |
| SSE | .035 | .015 | .088 | .045 | .146** | .075 | .075 | .092 | -.002 | .223** | - | | |
| Engag | .026 | -.011 | .080 | .035 | .324** | .289** | .311** | .138** | .213** | .404** | .246** | - | |
| Disrp. | .012 | .058 | -.065 | .019 | -.227** | -.208** | -.212** | -.044 | -191** | -.302** | -.086 | -.583** | - |

*Note.* TSE= Teacher Self-efficacy; Instr.=Instructional efficacy; Disci= Classroom Management and Discipline efficacy; Env. = Promoting a positive classroom environment; Supp = Teacher Support; Inter = Social Interaction; Resp = Mutual Respect; ASE = Academic Self- efficacy; SSE = Social Self-efficacy; Engag = Classroom Engagement; Disrp = Disruptive Behavior.
**Correlation is significant at the 0.01 level (2-tailed).

### Classroom Social Environment and Student Adjustment

Classroom social environment and student adjustment variables had significant, small relationships with one another, except for social self-efficacy. No classroom social environment variables demonstrated significant relationships with social self-efficacy. Additionally, no significant relationship was found between disruptive behavior and teacher-promoted social interaction

### Factor Analysis

A factor analysis was conducted in order to test the assumptions regarding the factor structures of the various scales. This involved testing whether variables included all items intended to measure that variable and that the three major variables included all components outlined in the model. All the scales' items were entered into the same measurement model. Cronbach's alphas were conducted in order to determine the reliability of these measures for the current sample (see Table 4 for reliabilities). Results for each measure are below.

### Teacher Self- efficacy

Principal Axis Factor analysis with oblique rotation was conducted to test the hypothesized three-factor structure of the teacher self-efficacy construct. The analysis yielded three factors with eigenvalues greater than 1.0, which accounted for 69% of the variance. The three factors did not completely correspond to the three hypothesized teacher self-efficacy variables, as some factors cross-loaded onto one another. Factor loadings for discipline efficacy were above .57. Although all items hypothesized for this variable loaded on the discipline efficacy factor, other items also loaded on to this factor. There was considerable cross loading of items on to all three factors. Approximately 8 out of the 14 items had cross loadings above .40, which may suggest a limited distinction among these three factors for teachers in this sample.

Reliability analyses indicated that three factor variables as well as overall teacher self-efficacy demonstrated high internal consistency: instructional efficacy α= .759; discipline efficacy α=.759 and efficacy to promote a positive classroom environment α= .805. Reliability analyses indicated that the overall teacher self-efficacy scale had high internal consistency with a .911 Cronbach alpha.

### Classroom Social Environment

The hypothesized two-factor structure of the teacher support construct was tested using principal Axis Factor analysis with oblique rotation. The analysis yielded one factor with an eigenvalue greater than 1.0, which accounted for 59.6% of the variance. Analysis of teacher support indicated good reliability for both factors and the overall teacher support scale. Teacher academic support demonstrated a Cronbach alpha of .825 ($N$ =389) and teacher emotional support demonstrated an alpha of .850 ($N$ =391). Total teacher support had an internal consistency of .723 ($N$ =397). To increase the reliability for teacher-promoted social interaction of this scale one reverse item was deleted, "In our classes, we are supposed to be quiet all the time." The final Cronbach alpha was α = .741 ($N$ =394). The reliability for teacher-promoted mutual respect was .805 ($N$ =396).

### Student Adjustment

The hypothesized two-factor structure of the student self-efficacy construct was tested using principal Axis Factor analysis with oblique rotation. The analysis yielded three factors with eigenvalues greater than 1, which accounted for 60% of the variance. The reverse item on the social self-efficacy scale, "When other students are already doing something together I often find it hard to join in with them," created a third factor. This may imply that this item addresses more than social self-efficacy. Academic self-efficacy indicated adequate internal consistently

with a Cronbach alpha of .836 ($N = 417$). The social self-efficacy scale had moderately low

internal consistency. In order to increase reliability, one of the reverse items, "I often say things

to other students that later I wish I hadn't," was deleted to increase the alpha level of this scale.

The final Cronbach alpha was $\alpha = .514$. This scale demonstrated lower reliability than previously

reported by Patrick, Hicks, and Ryan (1997; 5 items, $\alpha = .73$). The diverse composition of the

sample in this study may explain the difference in Cronbach alpha level, as the sample utilized in

Patrick, Hicks, and Ryan (1997) was predominantly comprised of Caucasian students.

The hypothesized two-factor structure of the classroom engagement construct was tested

using principal Axis Factor analysis with oblique rotation. The analysis yielded two factors as

hypothesized (involved engagement and disruptive behavior) with eigenvalues greater than 1.0,

which accounted for 68% of the variance. Only one reverse score item on the disruptive behavior

scale, "I always follow class rules," demonstrated a strong cross loading on involved

engagement. Both involved behavior ($\alpha = .859$) and disruptive behavior ($\alpha = .792$) demonstrated

good reliability.

**Structural Equation Modeling**

Structural Equation Modeling was utilized to test the hypothesis concerning the direct

and indirect relationships between teacher self-efficacy, classroom social environment and

student adjustment. To answer all three research questions, a model that posited the social

environment variables, between the teacher self-efficacy variables and the student adjustment

variables was analyzed in SAS. For the analysis of the models, maximum likelihood (ML)

estimation procedure was implemented. During data collection, several groups of students were

unable to complete some of the measures because of time restraints. Due to the default listwise

deletion setting, several cases ($N = 63$) were omitted. Therefore, the final number of cases used in

the structural equation analysis for the models was $N = 358$. In the analysis of the structural

equation model, the measurement model was first examined to ensure that each predicting item

accurately reflected the primary variables in the study. Next, the structural model, which looked

at the relationships among the major variables in the study, was examined. The initial model

analyzed consisted of all variables constructed at the item level that estimated the three major

latent variables of interest: teacher self-efficacy, classroom social environment and student

adjustment. Teacher self-efficacy was indicated by three latent variables (instruction, discipline

and promote a positive classroom environment) that were broken down to the item measurement.

Classroom social environment was also indicated by three latent variables (teacher support,

mutual respect and social interaction). Teacher support was further divided into two latent

variables, academic support and emotional support. These two teacher support variables as well

as mutual respect and interaction were then broken down to the item level. Student adjustment

was indicated by two latent variables, self-efficacy and engagement. Self-efficacy was further

indicated by academic and social self-efficacy latent variables, which were then broken down at

the item level. Engagement was indicated by involved behavior and disruptive behavior latent

variables, which were then broken at the item level. Direct paths from overall teacher self-

efficacy to classroom social environment and from classroom social environment to student

adjustment were estimated. The mediated path of classroom social environment between teacher

self-efficacy and student adjustment was also estimated. This model is displayed in Figure 1.

Proc CALIS analysis indicated that this model did not meet convergence criteria. This may have

occurred due to the complexity of the overall model.

Therefore, to make the model more parsimonious, all items were deleted and the three

self-efficacy latent variables, the academic and social teacher support latent variables, the mutual

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respect and social interaction variables, the academic and social self-efficacy variables, as well as the involved behavior and disruptive behavior latent variables were collapsed into the observed variables. Therefore, the model size and complexity was reduced and met convergence criteria (see Figure 2). The fit of this model was adequate when assessing fit in comparison to the criteria outlined by Hu and Bentler (1999) and Steiger (2007). The goodness-of-fit test statistic (including the number of degrees of freedom, and its $p$ value) as a measure of absolute fit [$\chi 2$ ($N$ = 358, $df$ = 39) = 75.4521, $p$ = .0004) suggest that the model had statistically significant misfit. Because the Chi-square fit statistic is considerably influenced by sample size when a model is approximately correct, model fit was evaluated primarily based on the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Squared Residuals (SRMR). Model fit is considered acceptable or good when the CFI coefficient is .95 or higher and the RMSEA coefficient is .05 or below and SRMR less than .08 (Hu & Bentler, 1999; Steiger, 2007). For the final model, CFI was .97, RMSEA was .033 and the SRMR was .038. See Table 6 below.

Table 6.  Fit Indices for the Initial and Final Models

| Model | $\chi 2$ | df | SRMSR | RMSEA | CFI |
|---|---|---|---|---|---|
| Initial model | 3605.3 | 999 | .072 | .084 | .71 |
| Final model | 54.572 | 39 | .038 | .033 | 0.97 |

**Path Coefficients for Key Variables**

*Measurement Model*

The standardized path coefficients for three teacher self-efficacy factors as predictors of the teacher self-efficacy latent variable were significant. Instructional self-efficacy coefficient was 1.02, discipline self-efficacy was .63 and efficacy to create a positive classroom environment was .72. Although results suggest that the three dimensions of teacher-self efficacy are important in determining teachers' reports of self-efficacy, instructional self-efficacy was the most influential factor in determining overall teacher self-efficacy.

The predictor variables were also significant for the classroom social environment. Teacher academic (.83) and emotional (.86) support were significant predictors of overall teacher support. Overall teacher support path coefficient was extremely strong (.99). Students' perception of teacher-promoted social interaction (.55) and mutual respect (.50) were in the low to medium range.

For student adjustment, self-efficacy and classroom engagement were strong predictors. Student self-efficacy more strongly predicted student adjustment (.97) than classroom engagement (.73). Academic self-efficacy (.62) had a greater impact on overall self-efficacy than social self-efficacy (.35). Involved engagement (.96) and disruptive behavior (-.62) had significant path coefficients to classroom engagement, with involved engagement having higher predictability.

*Structural Model*

Results of the path coefficients indicate that teacher self-efficacy had minimal impact on classroom social environment (.06). Review of the $R^2$ values suggest that .37% of the variance in the classroom social environment is explained by teacher self-efficacy. The Classroom Social

Environment had a moderate impact on Student Adjustment (.51). Review of the $R^2$ values suggest that 26% of the variance in student adjustment is explained by the classroom social environment. The path coefficient for the indirect effect of teacher self-efficacy on student adjustment was minimal (.03).

**Testing Measurement Model**

To test the hypothesis concerning the direct relationship between teacher self-efficacy and classroom social environment, the direct relationship between classroom social environment and student adjustment as well as the mediating roles of classroom social environment variables, a model that posited the social environment variables, between the teacher self-efficacy variables and the student adjustment variables were analyzed in SAS. Confidence intervals at 95% for the relevant path coefficients were calculated by multiplying the critical value by the standard error. The upper and lower bounds of the confidence interval were determined by adding and subtracting the margin of error from the mean. The answer to each research question is discussed below.

*(1).What is the impact of teacher self-efficacy on students' perception of the classroom social environment?*

For the first question, the direct relationship between teacher self-efficacy and classroom social environment was examined. The direct standardized path coefficient between these two variables in the final model was insignificant (.06). Examining the impact at 95% confidence interval, it is likely that the impact of overall teacher self-efficacy would range from +.18 to -.06, indicating a very small impact on students' perception of the classroom social environment.
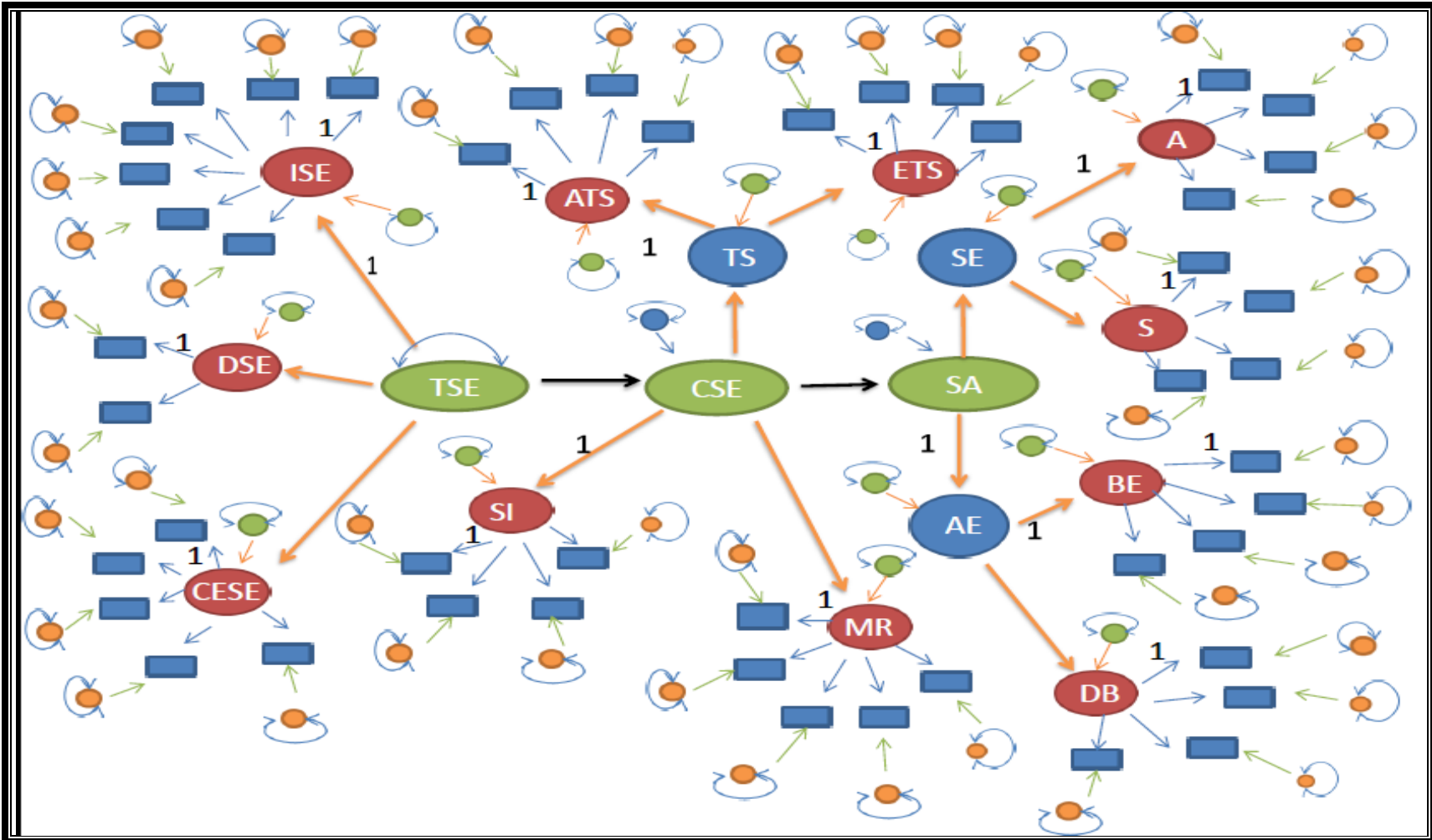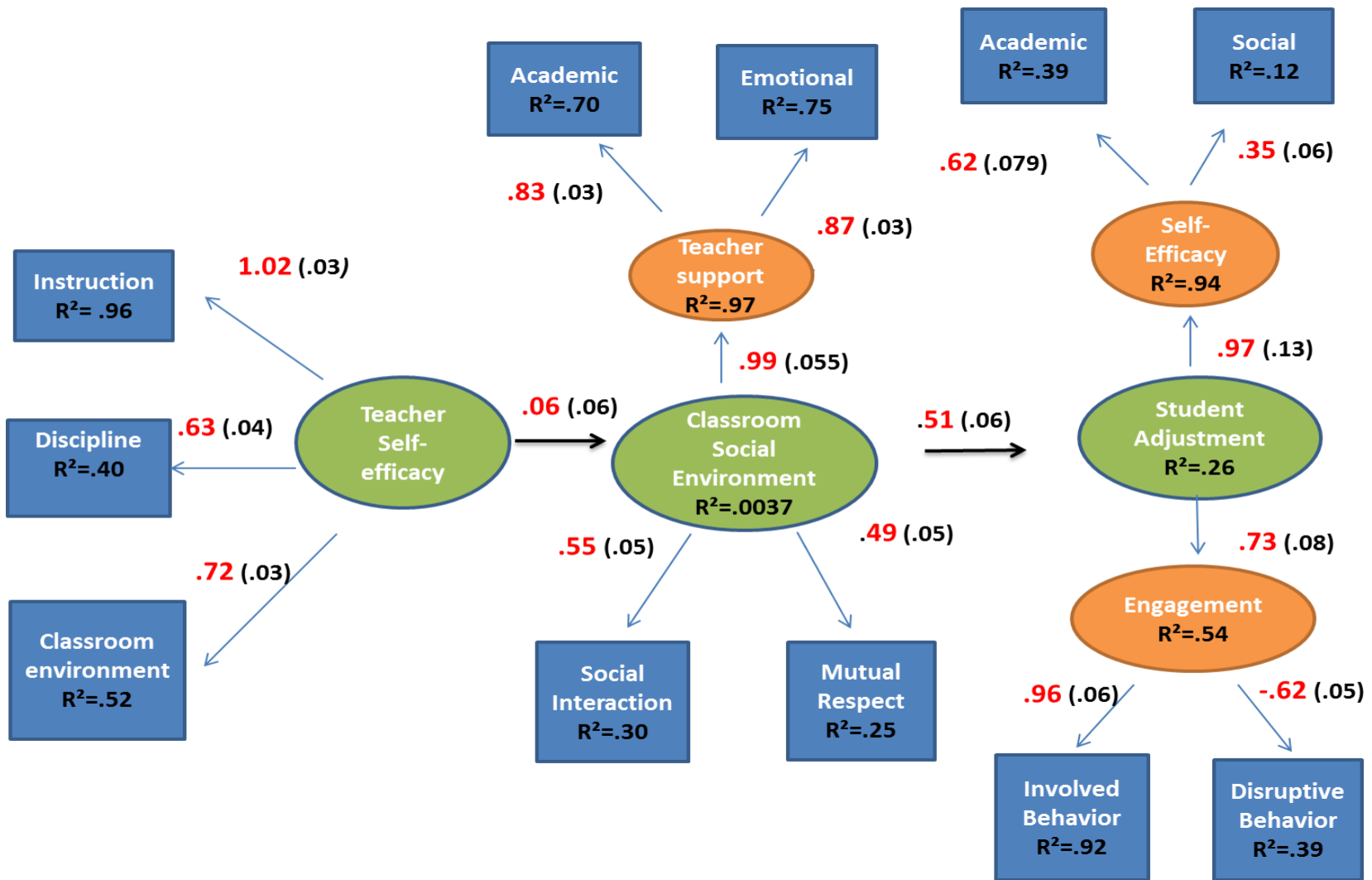
**Figure 1: Initial Structural Equation Model**

**Figure 2: Final Structural Equation Model**

*(2).What is the impact of the classroom social environment on student adjustment (academic and social self-efficacy as well as involved and disruptive behavior)?*

For the second research question, the standardized coefficient between classroom environment and student adjustment was examined. Results from the standardized path coefficient in the model indicate a moderate (.51) impact of the classroom social environment on student adjustment. This suggests that students' perception of their classroom environment may have some influence on their self-efficacy and engagement.

*(3).To what extent does the classroom social environment mediate the relation between teacher self-efficacy and student adjustment (i.e., self-efficacy and classroom engagement)?*

For the third question, the mediating role of the classroom social environment between teacher self-efficacy and student adjustment was examined. Examining the mediation at 95% confidence interval, the mediation of classroom social environment between teacher self-efficacy and student adjustment would likely range from +.067 to -.007, indicating a very small influence of the classroom social environment on the relationship between teacher self-efficacy and student adjustment. The path coefficient for the indirect effect of teacher self-efficacy on student adjustment was minimal (.03).

**Chapter V: Discussion**

The current study examined the relationships between teacher self-efficacy, the classroom social environment and student adjustment. The main purpose of the study was to determine whether the classroom social environment mediated the relation between teacher self-efficacy and student adjustment. The research questions also focused on the direct relationships between teacher self-efficacy and the classroom social environment and between the classroom social environment and student adjustment. Preliminary analyses and structural equation modeling analyses were conducted and revealed that findings from the current study provide some support for the self-determination and the stage-fit environment theories which postulate that adolescents' adjustment is enhanced when their environment is responsive to their basic, academic and social development needs (Eccles, Wigfield, & Schiefele, 1998; Roeser et al., 2000; Ryan & Deci, 2000). This chapter summarizes the key findings from these analyses, the implications of the findings for school psychologists, the limitations and unique contributions of the current study as well as recommendations for future research.

**Teacher Self- efficacy**

Results indicated that although three factors of teacher self-efficacy were identified, there was considerable cross loading among the three dimensions. The identification of three factors aligns with extant research that suggest teacher self- efficacy is a multi-faceted concept (Bandura, 1997; Slaavik & Slaavik, 2007; Tschannen-Moran & Woolfolk Hoy, 2001). However, in the current study, teachers saw considerable overlap between the ability to deliver effective

instruction, engage in effective classroom management practices, and create a positive classroom environment. Anderman, Andrzejewski and Allen (2011) found comparable overlaps when coding teachers' practices in student-reported, supportive classroom environments. These authors identified three distinct yet overlapping categories of teacher practices including, supporting understanding, classroom management practices, and building and maintaining rapport. Teacher practices that provided students with support, facilitated interaction and created enthusiasm fell into multiple categories (Anderman et al, 2011). These dimensions of teacher practices correspond to the dimensions of teacher self-efficacy addressed in the current study. Thus, teachers' practices and behaviors may fit into multiple domains similar to how teachers in the current study perceive their ability to engage in effective instruction, classroom management and promotion of a positive classroom environment.

### *Impact of Teacher Self-efficacy on other Variables*

Few studies have examined the impact of teacher reported self-efficacy on student perceptions of the classroom social environment, but previous research has found that students who had teachers with a stronger sense of self-efficacy gave more positive evaluations of their teachers (Woolfolk, Rosoff & Hoy, 1990). Teachers in this sample reported moderately high mean levels of self-efficacy and overall, students perceived that teachers created a positive classroom environment. However, this study provides minimal support for previous findings as correlational data indicated minimal association between teacher reported self-efficacy and student perceptions of their classroom environment. When examining the impact of teachers self-efficacy on student adjustment, prior research suggests teachers with higher self-efficacy have students with higher levels of achievement, motivation, and academic self-efficacy (Anderson et al., 1988; Gibson & Dembo, 1984; Ross, 1992). However, results from this study also indicate

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minimal impact of teacher reported self-efficacy on students' self-efficacy and behavioral engagement. There may be several possible explanations for these findings.

This study's definition of teacher self-efficacy, unlike research conducted by Woolfolk, Rosoff, and Hoy, (1990), included teachers' belief about their ability to create a positive classroom environment. Furthermore, this study provides a unique examination of the classroom social environment by focusing on students' perception of teachers' ability to support students as well as foster student interaction and respect, while previous research has focused on teacher instructional and discipline self-efficacy and students' perception of their teachers (Woolfolk, Rosoff, & Hoy, 1990). The small association between teachers' belief and students' perception may be due to the unique inclusion of classroom social environment indicators in the model. Although this study provides a unique contribution to the literature by simultaneously examining teacher and student perceptions, the lack of association between teacher reported self-efficacy and students' perception of the classroom social environment may be due to fact that teacher's beliefs about their ability to foster a positive classroom environment need to be translated into observable behaviors and practices in order to be recognized by students.

Self-efficacy is a significant determinant of performance and operates partially independent from an individual's underlying skills (Schunk, 1984). Although self-efficacy is a strong determinant of behavior, an individual's self-beliefs may also mediate the relationship between knowledge and action (Bandura, 1986). Failure to act in congruence with one's belief arises when the expectations and skills involved in a task are ambiguous. Beliefs are intrinsic thoughts and feelings that do not necessarily manifest in behaviors, and thus may be difficult for an outside observer to assess. Even though students in this study rated that their teachers promoted positive classroom environments, perhaps teachers' behavior mediate the relationship

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between teacher belief and students' perception. The model in the current study analyzed students' perception of teacher behavior but did not account for teacher perception of their own behavior or actual observed behaviors. Without assessment of teacher behaviors, the relationship between a teacher's belief and students' perception of teacher behavior is difficult to determine. Thus, future research needs to investigate whether teacher's behaviors mediate the relationship between teacher self-efficacy and student perceptions. Observing the relationships among teachers' skills, beliefs and behaviors as well as student perceptions of their teachers' behaviors, extends Bandura's (1986) model of self-efficacy which stipulates that an individual's self-beliefs mediate the relationship between knowledge and action. A greater understanding of these relationships will help determine which teacher practices are most salient to students' perceptions of their classroom environments and which perceptions most strongly impact student adjustment variables.

### *Implications for School Psychologists*

Although teacher reported self-efficacy had minimal impact on the outcomes observed in the current study, previous research has shown that teacher self-efficacy is associated with a myriad of teacher practices as well as student achievement (Anderson et al., 1988; Chong et al., 2010; Gibson & Dembo, 1984; Ross, 1992). Therefore, school psychologists should continue to build teacher self-efficacy but also promote effective teacher practices as a catalyst to enhancing student self-efficacy and engagement. School psychologists play a pivotal role in consulting with and assisting teachers in developing their self-efficacy by encouraging teacher collaboration and providing them with opportunities to make decisions about the practices and strategies they implement to improve student achievement and adjustment (Gilbertson, 2007). Research on transformational leadership suggests that  if school psychologists who assume leadership roles in

their school, show respect for and confidence in their teachers, they can increase the self-efficacy beliefs of their teachers (Kurt, Duyar & Calik, 2011; Nir & Krano, 2006; Pillai & Williams, 2004).

School psychologists often consult with teachers about a variety of practices related to instructional practices, classroom management practices and creating positive classroom environment practices. The overlap between instruction, discipline and positive environments not only reflects the complexities of teaching, but also highlights that school psychologists must understand that effective teaching practices can have positive implications for several classroom domains, including classroom instruction, classroom management and promoting a positive classroom environment. This knowledge may assist school psychologists gain teachers' buy-in during consultation and intervention processes. Teachers are often pressed for time and need effective yet time-efficient interventions. If interventions are proposed with the notion that a single intervention can result in improvements in several areas in their classroom and/or with students, teachers are more likely to implement interventions. Additionally, if school psychologists prompt, guide, and structure effective changes in practice as well as provide consultation regarding problems about practice, teachers are more are likely to implement interventions with fidelity (Donohoe, 1994; Gersten, Chard, & Baker, 2000).

Additionally, if teachers experience authentic success with an intervention in one of the three dimensions and receive positive feedback, their self-efficacy is likely increased, which may affect their performance, regardless of underlying skills (Bandura, 1997; Schunk, 1984). Given the interplay of the three categories (i.e. instruction, discipline and positive classroom environment), an increase in self-efficacy in one area may result in a subsequent increase in the other areas. Whether teachers feel efficacious and engage in future interventions depends on the

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factors they attribute to their successes and failures (Weiner, 1986). Thus, it is paramount that school psychologists convey positive feedback that teacher success is a result of internal, stable factors that are within their control, in order to maintain or increase teacher self-efficacy and directly and indirectly impact student adjustment.

**Classroom Social Environment**

Teacher support had the highest influence on students' perception of their classroom environment. Factor analysis revealed that students viewed academic and emotional support as highly interrelated. This aligns with previous findings that students often perceive teacher academic and emotional support as intertwined, with both types of support having a positive, significant influence on student adjustment (Patrick et al., 2007). Correlational data in this study highlighted that teacher support had small to moderately significant correlations with student adjustment. In prior research, perceived teacher care and respect was positively associated with middle school students' academic, social, and emotional functioning (Roeser et al., 2000). Findings from the current study align with prior research indicating teachers are influential in shaping the classroom environment as students take cues from the teacher about how to interact with others in the classroom, which in turn influences students' academic and social adjustment (Merritt et al., 2012; Ryan & Shim, 2007).

Findings indicate small but significant relations between teacher-promoted dimensions (social interaction and mutual respect) of the classroom environment and student academic self-efficacy and engagement. Results from this study add to the body of literature that demonstrates when students are in an environment that promotes social interaction and mutual respect, students are more engaged in the learning process and have greater confidence in their academic skills (Ryan & Patrick, 2001). Additionally, results indicate an insignificant relationship between

teacher promotion of social interaction and disruptive behavior. Findings indicate a small but significant relationship between teacher-promoted mutual respect and disruptive behavior. Results from this study did not align with previous research conducted with a homogenous, middle class sample (Ryan & Patrick, 2001). However, research conducted with a more urban, ethnically diverse sample provides some support for the importance of mutual respect in determining disruptive behavior. Kiefer et al. (2013) found that students who feel respected by peers are more likely to strive for peer acceptance, and are less likely to develop antisocial social goals during early adolescence. The relationships between teacher-promoted social interaction and mutual respect with disruptive behavior, may suggest that solely promoting social interaction is not sufficient to reduce disruptive behavior in the classroom and that promoting mutual respect may be a key factor in creating positive classroom social environments. Given the classroom social environment variables addressed in the current study did not impact all student adjustment variables examined, further research is needed to investigate whether additional factors of the classroom social environment may affect disruptive behavior for students from urban and diverse backgrounds, such as classroom goal structure or feelings of social alienation (Juvonen, 2007; Kaplan et al., 2002; Kaplan & Maehr, 1999).

The dimensions of classroom social environment were not associated with social self-efficacy. This aligns with prior research (Ryan & Patrick, 2001). These results suggest that although students are likely to perceive peer support when teachers promote social interaction on task-relevant classroom activities, this may not necessarily equate to students feeling as though they have the skills to engage in effective communication with their peers. These findings suggest teacher support and teacher promotion of interaction and respect within middle school classrooms may not provide the necessary social structures to help students feel more confident

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in their ability to engage with peers. In order to increase students' social self-efficacy, comprehensive school-wide supports to develop social skills may be necessary.

*Implications for School Psychologists*

Results from this study indicate overall self-efficacy and engagement are significant for enhancing student adjustment, especially academic self-efficacy and engagement. The overall impact of the classroom social environment on student adjustment in this study highlights the need for school psychologists to advocate for the development of middle school environments that meet early adolescents' developmental and basic needs. School psychologists can support this endeavor by providing teachers with professional development regarding best practices needed to foster a positive classroom social environment. Specifically, to maintain and improve students' academic self-efficacy and engagement, school psychologists can support middle school teachers in fostering classroom environments characterized by high levels of academic and emotional support. This may be achieved through providing teachers with interventions that focus on the specific academic needs of their student population, demonstrate care and concern for students and provide classroom routines/structures that promote mutual respect and allow student interaction (Ryan & Patrick, 2001).

Providing strategies to improve student-teacher relationships may also be paramount in building academic self-efficacy and engagement (McNeely & Falci, 2004; Ozer, Price, Wolf, & Kong, 2008). Specific strategies school psychologists can use to improve student-teacher relationships at the middle level include, helping teachers connect with students by providing opportunities for teachers to get to know students personally, modeling empathy and respect for teachers during interactions with students and educating teachers on strategies to provide students with constructive feedback and support (Wentzel, 1997). Furthermore, research has

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indicated that over one-third of middle school homeroom teachers are unaware of the potential positive impact student-teacher relationships have on motivation and achievement (Davis, 2006). Thus, school psychologists should also educate teachers about the importance of building and maintaining high quality student-teacher relationships for student motivation and achievement.

As it relates to enhancing student social self-efficacy, additional efforts need to be made to provide students with the skills to engage in positive communications with their classmates outside of the classroom context and opportunities for practice and feedback. These efforts may include school-wide social skills training or facilitating group-based extra-curricular activities.

**Limitations and Unique Contributions**

One limitation that often occurs in school-based research, due to the fact that students were derived from classes taught by teachers in the sample, is the existence of nested data. Additionally, there were a small number of teachers included in the model, which restricted the use of multi-level modeling, despite the nested nature of the data. Additional limitations include the sole use of teacher and student self-report surveys and the inclusion of data from one time point. Including multiple methods (interviews, observations) and examining relations over time may have provided a more comprehensive understanding of teacher self-efficacy, the classroom social environment, as well as student adjustment and how these develop over time. Further, the low reliability of the student social self-efficacy scale may have affected the extent to which the study was able to capture students' feelings about their ability to interact with peers. In addition, the first proposed model demonstrated insufficient match between the model construction and the data, which resulted in a lack of convergence and modifications to the model. Lastly, given that previous research has indicated that several classroom factors (e.g. peer relationships, class size) and teacher influences (e.g., student-teacher relationships; academic press) impact student

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outcomes such as student motivation, engagement, cognitive development, academic efficacy, self-regulated learning, and social goals (Blatchford, Bassett, & Brown, 2011; Bishop & Pflaum, 2005; Keating, 1990; Kiefer et al., 2013; Sook-Lee, 2012), this study could have included a broader range of variables in the model.

Despite these limitations, the current study makes several unique contributions to the literature related to factors that can impact student adjustment. First, the three main variables in this study (teacher self-efficacy, classroom social environment and student adjustment) were measured using several indicators. The multi-faceted nature of these variables provides a more comprehensive understanding of these concepts and reflects the complexity that exists in the real world. As it relates to teacher self-efficacy, previous research has examined the three dimensions addressed in this study (Tschannen-Moran & Woolfolk Hoy, 2001), while others such as Bandura (1997) address additional dimensions of teacher-self-efficacy including the extent to which teachers influence decision making, utilize school resources, as well as enlist parental and community involvement. However, this study provides insight into teacher efficacy in the classroom, as it focused on teacher self-efficacy practices directly tied to interacting with students in the classroom. As it relates specifically to student adjustment, both academic and social components were included in the conceptualization of this construct, which research demonstrates are important for student overall well-being (Eccles & Midgley, 1989; Erikson, 1950; Masten & Coatsworth, 1998; Roeser, et al., 2000).

The study simultaneously examined the impact of teacher self-perceptions and students' perception of their classroom environment on student adjustment. Furthermore, this study primarily focused on the interpersonal/social dimensions of the classroom environment and examined the impact of these dimensions on both student academic and social outcomes. Some

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researchers adopt a global approach to examining student and teachers' general perceptions across middle school classrooms (Johnson & Johnson, 1973; Pianta, LaParo, & Hamre, 2007), while other researchers examine classroom/content specific perceptions (Ryan and Patrick, 2001; Sakiz, Pape, & Woolfolk Hoy, 2012; Wang, 2012). The global approach taken in this study provides deeper insight into what general actions middle school teachers can perform in the classroom (e.g., promote mutual respect and social interaction) to ensure that students positively adjust in middle school. Although the results of this study did not support all the predicted hypotheses, both approaches have merit and provide information that can inform educator practices. Future research should aim to examine both approaches simultaneously in order to determine both global and specific strategies middle schools can employ to enhance student adjustment.

To analyze the multi-faceted variables in the current study, structural equation modeling was utilized, which aligns with current studies examining classroom factors (Brock et al., 2008; Kiruru et al., 2012; Patrick et al., 2007) Lastly, the study utilized a large, urban, ethnically diverse sample of middle school students, with whom few studies on classroom factors and student adjustment have conducted research.

**Future Directions**

Given that previous research and the current study support the influence of teachers and peers in fostering healthy adjustment for early adolescents, it is important to examine additional social classroom factors that can promote student adjustment. Furthermore, when examining the classroom environment's impact on student adjustment, research should examine both academic and social classroom factors. Ultimately, more research in these areas needs to be conducted with students from urban and diverse backgrounds.

Additionally, further research is needed to determine which domains of teacher self-efficacy are most crucial to student adjustment, as the few existing studies focused on these associations have reported conflicting findings. Given the current study's findings between these two variables, it may also be necessary to investigate whether teachers' behaviors/practices mediate the relationship between teacher self-efficacy and student perceptions. More research in this area may assist in identifying teacher practices that are salient to students' perceptions of their classroom environments and practices that may impact their adjustment.

Student perceptions of their classroom environment have strong influences for their adjustment (Ryan & Patrick, 2001; Sakiz, Pape, & Woolfolk Hoy, 2012; Wang, 2012). Furthermore, teachers are not always fully aware of how they impact students' perception of the classroom environment (Bulter, 2013). Therefore, simultaneously examining both teacher and students' perceptions may provide valuable information to school psychologists as they assist teachers in facilitating developmentally responsive classroom environments and enhancing student adjustment in middle school.

## References

Abu-Tineh , A.M., Khasawneh, S.A., & Khalaileh, H.A. (2011). Teacher self-efficacy and classroom management styles in Jordanian schools. *Management in Education, 25* (4), 175-181.

Anderman, L. H. (2003). Academic and social perceptions as predictors of change in middle school students' sense of school belonging. *The Journal of Experimental Education, 72*(1), 5–22.

Anderman, L. H., & Freeman, T. M. (2004). Students' sense of belonging in school: Motivating students, improving schools. *Advances in Motivation and Achievement,13*, 27–63.

Anderman, L. H., & Kaplan, A. (2008). The role of interpersonal relationships in student motivation: Introduction to the special issue. *The Journal of Experimental Education, 76*(2), 115–119.

Anderman, L. H.,Andrzejewski, C.E., & Allen, J. (2011). How do teachers support students' motivation and learning in their classrooms? *Teachers College Record*, *113*(5), 969 1003.

Archambault, I., Pagani, L. S., & Fitzpatrick, C. (2013). Transactional associations between classroom engagement and relations with teachers from first through fourth grade. *Learning and Instruction, 23*, 1-9.

Arslan, A. (2012). Predictive power of the sources of primary school students' self-efficacy

beliefs on their self-efficacy beliefs for learning and performance. *Educational Sciences:*

*Theory & Practice, 12*(3), 1915-1920.

Ashton, P. T., & Webb, R. B. (1986*). Making a difference: Teachers' sense of efficacy and*

*student achievement.* New York: Longman

Archambault, I., Pagani, L. S., & Fitzpatrick, C. (2013). Transactional associations between

classroom engagement and relations with teachers from first through fourth grade.

*Learning and Instruction, 23*, 1-9.

Arslan, A. (2012). Predictive power of the sources of primary school students' self-efficacy

beliefs on their self-efficacy beliefs for learning and performance. *Educational Sciences:*

*Theory & Practice, 12*(3), 1915-1920.

Ashton, P. T., & Webb, R. B. (1986*). Making a difference: Teachers' sense of efficacy and*

*student achievement.* New York: Longman.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychological*

*Review, 84*, 191–215.

Bandura, A. (1986). *Social foundations of thought and action*: A social cognitive theory.

Englewood Cliffs, NJ: Prentice Hall.

Bandura, A.  (1997). *Self-efficacy: The exercise of control.* New York: W. H. Freeman.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. Annual Review of

Psychology, 5(2), 1-26.

Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.),

Self-efficacy beliefs of adolescents (307–337). Greenwich, CT: Information Age.

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

Bagaka, J.G. (2010). The role of teacher characteristics and practices on upper secondary school students' mathematics self-efficacy in Nyanza province of Kenya: A multilevel; analysis. *International Journal of Science and Mathematics Education, 9*, 817-842.

Blatchford, P., Bassett,P., Brown, P.(2011). Examining the effect of class size on classroom engagement and teacher- pupil interaction: Differences in relation to pupil prior attainment and primary vs. secondary schools. *Learning and Instruction, 21*, 715-730.

Bishop, P.A., & Pflaum, S.W. (2005). Middle school students perceptions of social dimensions as influencers of academic engagement. *Research in Middle Level Education, 29*(2), 1 14.

Bodrova, E., & Leong, D. J. (2007). *Tools of the mind: The Vygotskian approach to early childhood education.* Upper Saddle River, NJ: Pearson Education.

Boekaerts, M., Otten, R., Voeten, R. (2003). Examination performance: Are student's causal attributions school-subject specific? *Anxiety, Stress, and Coping, 16*(3), 331-342.

Bolshakova, V. L.,  Johnson, C. C., Czerniak, C.M. (2011). It depends on what science teacher you got: Urban science self-efficacy from teacher and student voices. *Cultural Studies of Science Education, 6*, 961–997.

Brophy, J. (1998). *Motivating students to learn*. Boston: McGraw Hill.

Brookover, W. B.; Beady, C.; Flood, P.; Schweitzer, J.; & Wisenbaker, J.(1979).  *School social systems and student achievement: schools can make a difference*. New York: Praeger.

Brouwers, A., & Tomic, W. (1999). Teacher burnout, perceived self-efficacy in classroom

    management and student disruptive behaviors in secondary education. *Curriculum and*

    *Teaching, 14*(2), 7-26.

Burney, V.H. (2007). Applications of social Cognitive theory to gifted education. Gifted

    education and social cognitive theory. *Roeper Review, 30*, 130–139.

Caprara, G. V., Barbaranelli, C., Steca, P., & Malone, P. S. (2006). Teachers' self-efficacy

    beliefs as determinants of job satisfaction and students' academic achievement: A study

    at the school level. *Journal of School Psychology, 44*, 473–490.

Chambers, B., &. Abrami, P.C. (1999). The Relationship between student team learning

    outcomes and achievement, causal attributions, and affect. *Journal of Educational*

    *Psychology, 83*(1), 140-146.

Chong, W.H., Huan, V. S., Wong, I., Klassen, R.M., & Kates, A.D. (2010). The relationship

    among school types, teacher efficacy beliefs and academic climate: perspective from

    Asian middle schools. *Journal of Educational Research, 103*, 183-190.

Cillessen, A. H. N., & Rose, A. J. (2005). Understanding popularity in the peer system. *Current*

    *Directions in Psychological Science, 14*, 102–105.

Coleman, P.K., (2003). Perceptions of parent–child attachment, social self-Efficacy, and peer

    relationships in middle childhood. *Infant and Child Development, 12*, 351–368.

Collie, R. J, Shapka, J.D., & Perry, N.E. (2012). School climate and social–emotional learning:

    Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational*

    *Psychology, 104*(4), 1189–1204.

Corkett, J., Hatt, B., Benevides, T. (2011). Student and teacher self-efficacy and the connection

    to reading and writing. *Canadian Journal of Education, 34*(1), 65–98.

Cornelius-White, J. (2007). Learner-centered teacher-student relationships are effective: A meta-analysis. *Review of Educational Research, 77*(1), 113-143.

Curby, T. W., LoCasale-Crouch, J., Konold, T. R., Pianta, R. C., Howes, C., Burchinal, M., et al. (2009). The relations of observed pre-k classroom quality profiles to children's achievement and social competence. *Early Education & Development, 20*, 346-372.

Davis, H. A. (2003). Conceptualizing the role and Influence of student-teacher relationships on children's social and cognitive development. *Educational Psychologist, 38*(4), 207 -234.

Davis, H. (2006). Exploring the contexts of relationship quality between middle school students and teachers. *The Elementary School Journal, 106*(3), 193-223.

Deci, E. L. (1975). *Intrinsic motivation.* New York: Plenum.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Deci, E. L., & Ryan, R. M. (1991). *A motivational approach to self: Integration in personality*. In R. Dienstbier (Ed.), Nebraska Symposium on Motivation: Vol. 38. Perspectives on motivation (pp. 237-288). Lincoln: University of Nebraska Press.

Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist, 26*(3-4), 325-346.

Deemer, S., (2004). Classroom goal orientation in high school classrooms: revealing links between teacher beliefs and classroom environments, *Educational Research, 46*(1), 73-90.

Dellinger, A., Bobbett, J., Dianne, F. O., & Chad, O. (2008). Measuring teachers' self-efficacy beiliefs: development and use of the TEBS-Self. *Teaching and Teacher Education, 24,* 751-766.

111

Dembo, M.H., & Gibson,S. (1985). Teachers' sense of efficacy: An important factor in school improvement. *The Elementary School Journal, 86*(2), 173-184.

Devos, C., Dupriez, V., & Paquay, L. (2012). Does the social working environment predict beginning teachers' self-efficacy and feelings of depression? *Teaching and Teacher Education, 28,* 206-217.

Dotterer, A.M., & Lowe, K. (2011). Classroom context, school engagement, and academic achievement in early adolescence. *Journal of Youth Adolescence, 40*,1649–1660.

Downer, J. T., Rimm-Kaufman, S. E., & Pianta, R. B. (2007). How do classroom conditions and children's risk for school problems contribute to children's behavioral engagement in learning? *School Psychology Review*, 36, 413- 432.

Durik, A. M., Vida, M., & Eccles, J. S. (2006). Task values and ability beliefs as predictors of high school literacy choices: A developmental analysis. *Journal of Educational Psychology, 98*(2), 382.

Eccles, J. S. (2004). Schools, academic motivation, and stage– environment fit. In R. M. Lerner & L. Steinberg (Eds.), Handbook of adolescent psychology (2nd ed., pp. 125–153). New York, NY: Wiley.

Eccles, J. S., & Midgley, C. (1989). Stage/environment fit: Developmentally appropriate classrooms for early adolescents. In R. E. Ames & C. Ames (Eds.), Research on motivation in education (Vol. 3, pp. 139-186). New York: Academic Press.

Eccles, J.S., Lord, S., & Midgley, C. (1991). What are we doing to early adolescents? The impact of educational contexts on early adolescent. *American Journal of Education: Development and Education across Adolescence 99*(4), 521-542.

Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., & Mac Iver, D. (1993). Development during adolescence: The impact of stage– environment fit on young adolescents' experience in schools and families. *American Psychologist, 48*, 90–101.

Ellerbrock, C. R. & Kiefer, S. M. (2010). Creating a ninth grade community of care. *Journal of Educational Research, 103*(6), p393-406.

Elffers, L., Oort, F.J., & Karsten, S. (2012). Making the connection: The role of social and academic school experiences in students' emotional engagement with school in post-secondary vocational education. *Learning and Individual Differences, 22*, 242–250.

Eren, A. (2009). Examining the Teacher Efficacy and Achievement Goals as Predictors of Turkish Student Teachers' Conceptions about Teaching and Learning. *Australian Journal of Teacher Education, 34(1), 1-15*.

Erickson, E.H. (1950). *Childhood and society*. Norton, New York, NY.

Ferla, J., Valcke, M., Schuyten, G. (2010). Judgments of self-perceived academic competence and their differential impact on students' achievement motivation, learning approach and academic performance. *European Journal of Psychological Education, 25,* 519-536.

Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research, 59*, 117–142.

Finn, J. D. (1993). *School engagement and students at risk.* Washington, DC: National Center for Education Statistics.

Finn, J. D., & Rock, D. A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology, 82,* 221–234.

Filak, V.F., & Sheldon, K.M., (2008). Teacher support, student motivation, student need

satisfaction, and college teacher course evaluations: testing a sequential path model,

Educational Psychology. *An International Journal of Experimental Educational*

*Psychology, 28*(6), 711-724.

Fortier, M. S., Vallerand, R. J., & Guay, F. (1995). Academic motivation and school

performance: Toward a structural model. *Contemporary Educational Psychology, 20*(3),

257-274.

Fredricks, J.A., Blumenfeld , P.C., & Paris, A.H., (2004). School engagement: Potential of the

concept, state of the evidence. *Review of educational research, 74(*1), 59–109.

Galanaki, E. P., & Besevegis, E. (1996). Coping with everyday problems in childhood: The case

of loneliness. *Psichologia, 3*(2), 72-84

Galanki, E.P., & Kalanztzi- Azizi, A. (1999). Loneliness and social dissatisfaction: Its relation

with children's self-efficacy for peer interaction. *Child Study Journal, 22*(1),1-22.

Ghaith, G., & Yaghi, H. (1997). Relationships among experience, teacher efficacy, and attitudes

toward the implementation of instructional innovation. *Teaching and Teacher Education,*

*13*(4), 451-458.

Gibson, S., & Dembo. M. (1984). Teacher efficacy: A construct validation. *Journal of*

*Educational Psychology,* 76, 569-582.

Greene, B.A., Miller, R.B., Crowson, M.H., Duke, B. L.,  & Akey, K.L. (2004). Predicting high

school students' cognitive engagement and achievement: Contributions of classroom

perceptions and motivation. *Contemporary Educational Psychology, 29*, 462–482.

Gonida, E.N., Voulala ,K., & Kiosseoglou, G. (2009). Students' achievement goal orientations and their behavioral and emotional engagement: Co-examining the role of perceived school goal structures and parent goals during adolescence. *Learning and Individual Differences,19,* 53–60.

Gonida,E.N., & Leondari, A. (2011). Patterns of motivation among adolescents with biased and accurate self-efficacy beliefs. *International Journal of Educational Research, 50,*209 220.

Gotshall, C.., & Stefanou, C. (2011). The effects of on-going consultation for accommodating students with disabilities on teacher self-efficacy and learned helplessness. *Education, 132*(2), 321-331.

Guo, Y., Piasta, S.B., Justice, L.M., & Kaderavek, J.N. (2010). Relations among preschool teachers' self-efficacy, classroom quality, and children's language and literacy gains. *Teaching and Teacher Education, 26*, 1094-1103.

Guo, Y., Justice, L.M., Sawyer, B., Tompkins, V.( 2011). Exploring factors related to preschool teachers' self-efficacy. *Teaching and Teacher Education, 27*, 961-968.

Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education,* 4, 63-69.

Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal, 31*(3), 627-643.

Hall, B.. Burley, W., Villeme. M., & Brockmeicr, L. (1992). An attempt to explicate teacher self-efficacy among first year teachers. Paper presented at the annual meeting of the American Educational Research Association, San Franciso.

Hardré, P.L., & Sullivan, D.W. (2009). Motivating adolescents: high school teachers'

    perceptions and classroom practices, Teacher Development. *An International Journal of*

    *Teachers' Professional Development, 13*(1), 1-16.

Henson, R.K. (2002). From adolescent angst to adulthood: Substantive implications and

    measurement dilemmas in the development of teacher efficacy research. *Educational*

    *Psychologist, 3*7(3), 137–150.

Hughes, J. N., & Kwok, O. (2006). Classroom engagement mediates the effect of teacher student

    support on elementary students' peer acceptance: A prospective analysis. *Journal of*

    *School Psychology, 43,* 465– 480.

Hughes, J. N., Luo, W., Kwok, O., & Loyd, L. (2008). Teacher–student support, effortful

    engagement, and achievement: A 3-year longitudinal study. *Journal of Educational*

    *Psychology, 100,* 1–14.

Joet, G., Usher, E.L., & Bressoux, P. (2011). Sources of self-efficacy: An investigation of

    elementary school students in France. *Journal of Educational Psychology, 103*(3), 649-

    663.

Johnson , D. W.,& Johnson, R. T. (1983). Social interdependence and perceived academic and

    personal support in the classroom. *The Journal of Social Psychology, 120*, 77-82.

Juvonen, J. (2007). Reforming middle schools: Focus on continuity, social connectedness, and

    engagement. *Educational Psychologists, 42*(4), 197–208.

Kaplan, A., Gheen, M., & Midgley, C. (2002). Classroom goal structure and student disruptive

    behavior. *British Journal of Educational Psychology, 72*, 191–211.

Kaplan, A., & Maehr, M. L. (1999). Achievement goals and student well-being. *Contemporary*

    *Educational Psychology, 24*, 330–358.

Kiefer, S.M., Matthews, Y.T., Montesino, M., Arango, L., & Preece, K.K. (2012). The Effects of

    Contextual and Personal Factors on Young Adolescents' Social Goals. *The Journal of*

    *Experimental Education, 81*(1), 44-67.

Kim, Y., & Baylor, A.L. (2006).  A social-cognitive framework for pedagogical agents as

    learning companions. *Educational Technology Research and Development, 54*(6), 569-

    596.

Kinderman, T. A., McCollam, T. L., & Gibson, E. (1996). Peer networks and students'

    classroom engagement during childhood and adolescence. In J. Juvonen & K. R. Wentzel

    (Eds.), Social motivation: Understanding children's school adjustment (pp. 279–312).

    New York: Cambridge University Press.

Klassen, R. M. (2002). Writing in early adolescence: A review of the role of self-efficacy beliefs.

    *Educational Psychology Review, 14*, 173–203.

Klassen, R.M., & Chiu, M.M., (2010). Effects on teachers' self-Efficacy and job satisfaction:

    Teacher gender, years of experience, and job stress. *Journal of Educational Psychology,*

    *102*(3), 741–756.

Klassen, R.M., Tze, V. M.C., Betts, S.M., & Gordon, K.A. (2011). Teacher efficacy research

    1998–2009: Signs of progress or unfulfilled promise? *Educational Psychology Review,*

    *23*, 21–43.

Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student

    engagement and achievement. *Journal of School Health, 74*, 262–273.

Koutsoupidou, T. (2010). Self-assessment in generalist preservice kindergarten teachers'

    education: Insights on training, ability, environments, and policies. *Arts Education Policy*

    *Review, 111*, 105-111.

Ladd, G.W., & Price, J.M. (1986). Promoting children's cognitive and social competence: The relation between parents' perceptions of task difficulty and children's perceived and actual competence. *Child Development, 57*, 446-460.

Linnenbrink, E. A. & Pintrich, P. R. (2002). Motivation as an Enabler for Academic Success. *School Psychology Review, 31*(3), 313-327.

Linnenbrink, E. A. & Pintrich, P. R. (2003). The role of self-efficacy beliefs in student efficacy engagement and learning in the classroom. *Reading & Writing Quarterly, 19*(2), 119 137.

LoCasale-Crouch, J., Davis, E., Wiens, P., & Pianta, R. (2012). The role of the mentor in supporting new teachers: Associations with self-efficacy, reflection, and quality, mentoring & tutoring. *Partnership in Learning, 20*(3), 303-323.

Lorsbach, A. W., & Jinks, J. L. (1999). Self-efficacy theory and learning environment research. *Learning Environments Research, 2*, 157–167.

Martin, K., Yin, Z. & Baldwin, B. (1998). Construct validation of the attitudes and beliefs classroom control inventory. *Journal of Classroom Interaction, 33(*2), 6–15.

Masten, A.S., & Coatsworth, J.D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist, 53*, 205-220.

McNeely, C., & Falci, C. (2009). School Connectedness and the transition into and out of health risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of School Health, 74*(7), 284-292.

McTigue, E., & Liew, J. (2011). Principles and Practices for Building Academic Self-Efficacy in Middle Grades Language Arts Classrooms. *The Clearing House, 84*, 114–118.

Mercer, S.H., Nellis, L.M., Martínez, R.S., & Kirk, M. (2011). Supporting the students most in

    need: Academic self-efficacy and perceived teacher support in relation to within-year

    academic growth. *Journal of School Psychology, 49*, 323–338.

Merritt, E.G., Wanless, S.B., Rimm-Kaufman, S.E., Cameron, C., James L., & Peugh, J. L.

    (2012). The contribution of teachers' emotional support to children's social behaviors and

    self-regulatory skills in first grade. *School Psychology Review, 41*(2), 141–159.

Midgley, C, Feldlaufer, H., & Eccles, J. S. (1988). The transition to junior high school: Beliefs of

    pre- and post-transition teachers. *Journal of Youth and Adolescence, 17*, 543-56.

Midgley, C., Feldlaufer, H., & Eccles., J.S. (1989). Change in teacher efficacy and student self

    and task-related beliefs in mathematics during the transition to junior high school.

    *Journal of Educational Psychology, 81*(2), 247-258.

Morris-Rothschild, B.K., & Brassard, M.R. (2006). Teachers' conflict management styles: The

    role of attachment styles and classroom management efficacy. *Journal of School*

    *Psychology 44*,105–121.

National Institute of Child Health and Human Development Early Child Care Research Network.

    (2002). The relation of global first-grade classroom environment to structural classroom

    features and teacher and student behaviors. *The Elementary School Journal, 102,* 367

    387.

National Center for Education Statistics.(2010). U.S. Department of Education Institute of

    Education Sciences. http://nces.ed.gov/

Nelson, M.R., & Debacker, T.K. (2008). Achievement motivation in adolescents: The role of

    peer climate and best friends. *The Journal of Experimental Education, 76*(2), 170–189.

Nasiriyan, A., Azar, H.K., Noruzy, A.,& Dalvand, M.R. (2011). A model of self-efficacy, task

    value, achievement goals, effort and mathematics achievement. *International Journal of*

    *Academic Research, 3*(2), 612-618.

Onafowora, L.L. (2005). Teacher Efficacy Issues in the Practice of Novice Teachers.

    *Educational Research Quarterly, 28* (4), 34-43.

Orthner, D.K., Akos, P., Rose,R., Jones-Sanpei, H., Mercado, M., & Woolley, M.E. (2010).

    Career Start: A middle school student engagement and academic achievement program.

    *Children & Schools, 32*(4), 222-234.

Ozder, H. (2011). Self-efficacy beliefs of novice teachers and their performance in the

    classroom. *Australian Journal of Teacher Education, 36*(5), 1-15.

Ozgen, K., & Bindak, R. (2011). Determination of self-efficacy beliefs of high school students

    towards math literacy. *Educational Sciences: Theory & Practice, 11*(2), 1085-1089.

Patrick, H., Ryan, A. M., Anderman, L. H., Middleton, M., Linnenbrink, L., Hruda, L. Z., &

    Midgley, C. (1997). *OPAL. Observing patterns of adaptive learning: A protocol for*

    *classroom observations.* Ann Arbor: University of Michigan.

Patrick, H., Kaplan, A., & Ryan, A. M. (2011). Positive classroom motivational environments:

    Convergence between mastery goal structure and the classroom social climate. *Journal of*

    *Educational Psychology, 103,* 367–382.

Patrick, H., Ryan, A.M..& Kaplan, A. (2007). Early adolescents' perceptions of the classroom

    social environment, motivational beliefs, and engagement. *Journal of Educational*

    *Psychology, 99*(1), 83–98.

Pianta, R. C. (1999). *Enhancing relationships between children and teachers.* Washington DC:

    American Psychological Association.

Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom Assessment Scoring System (CLASS).* Baltimore, MD: Paul H. Brookes Publishing Co.

Pajares, F. (1996). Self-efficacy beliefs in achievement settings. *Review of Educational Research, 66,* 543–578.

Pajares, F. (2002). Gender and perceived self-efficacy in self-regulated learning. Theory into practice, 41(2), 116-125.

Puckett, M.B., Aikins, J.W., & Cillesse, A.H.N. ( 2008). Moderators of the association between relational aggression and perceived popularity. *Aggressive Behavior, 34,* 563–576.

Putman, M.S. (2012). Investigating teacher efficacy: Comparing preservice and Inservice teachers with different levels of experience. *Action in Teacher Education, 34*, 16-40.

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

Reyes, M.R., Brackett, M.A., Rivers, S.E., White, M., & Salovey, P. (2012).  Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology, 104*(3), 700–712.

Rich, Y., Lev, S., & Fisher, S. (1996). Extending the concept and assessment of teacher efficacy. *Educational and Psychological Measurement, 58*(6), 1012-1025.

Rimm-Kaufman, S., La Paro, K., Downer, J., & Pianta, R. (2005). The contribution of classroom setting and quality of instruction to children's behavior in kindergarten classrooms. *The Elementary School Journal, 105,* 377–394.

Roeser, R.W., Eccles, J.S., & Sameroff, A.J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings.  *Journal of Research on Adolescence, 100*(5), 443-471.

Roeser, R. W., Urdan, T. C., & Stephens, J. M. (2009). *Schools as a context of student motivation and achievemen*t. In K. R. Wentzel, & A. Wigfield (Eds.), Handbook of motivation at school. New York/Oxon: Routledge.

Rosenfeld, L. B., Richman, J. M., & Bowen, G. L. (2000). Social support networks and school outcomes: The centrality of the teacher. *Child and Adolescent Social Work Journal, 17*, 205–226.

Ross, J. A. (1998). The antecedents and consequences of teacher efficacy. *Advances in Research on Teaching, 7,* 49-74.

Rounds, T. S.,  & Osaki, S. Y. (1982). *The social organization of classrooms: An analysis of sixth-and seventh-grade activity structure*s. San Francisco: Far West Laboratory for Educational Research and Development.

Rubie- Davies, C. M., Flint, A., & McDonald, L. G. (2012). Teacher beliefs, teacher characteristics, and school contextual factors: What are the relationships?. *British Journal of Educational Psychology*, 82(2), 270–288.

Ryan, A. M. (2000). Peer groups as a context for the socialization of adolescents' motivation, engagement, and achievement in school. *Educational Psychologist, 35*(2), 101–111.

Ryan, R. M., Deci, E. L., & Grolnick, W. S. (1995). *Autonomy, relatedness, and the self: Their relation to development and psychopathology*. In D. Cicchetti & D, J. Cohen (Eds.), Developmental psychopathology: Theory and methods (pp. 618-655). New York: Wiley.

Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychology, 55*(1), 68-78.

Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in

adolescents' motivation and engagement during middle school. *American Educational*

*Research Journal, 38*, 437–460.

Ryan, A. M., & Shim, S. S. (2012). Changes in help seeking from peers during early

adolescence: associations with changes in achievement and perceptions of teachers.

*Journal of Educational Psychology.* Advance online publication. doi: 10.1037/a0027696.

Sage, N. A., & Kinderman, T. A. (1999). Peer network, behavior contingencies, and children's

engagement in the classroom. *Merrill-Palmer Quarterly, 45*, 143–171.

Sakiz, G., Pape S.J., & Woolfolk Hoy, A. (2012). Does perceived teacher affective support

matter  for middle school students in mathematics classrooms? *Journal of School*

*Psychology, 50*, 235–255.

Saricoban, A. (2010). Views of efl teachers and students on teachers' self-efficacy. *Ekev*

*Academic Review, 14*(42), 321-330.

Savin-Williams, R. C., & Berndt, T. J. (1990). *Friendship and peer relations*. Harvard University

Press Cambridge.

Schunk, D. H. (1984). Sequential attributional feedback and children's achievement behaviors.

*Journal of Educational Psychology, 76*(6), 1159.

Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist, 26*,

207-231.

Sharma, U., Loreman, T., & Forlin, C. (2012).Measuring teacher efficacy to implement inclusive

practices. *Journal of Research in Special Educational Needs, 12*(1), 12–21.

Simmons, R. G., & Blyth, D. A. (1987). *Moving into adolescence: The impact of pubertalchange*

*and school context.* Aldine de Gruyter. Hawthrone New York.

Skinner, E.A., & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology, 85*(4), 571-581.

Skinner, E. A., Furrer, C., Marchand, G., & Kindermann, T. (2008). Engagement and disaffection in the classroom: part of a larger motivational dynamic? *Journal of Educational Psychology, 100*(4), 765–781.

Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology, 99*, 611–625.

Skaalvik, E. M., & Skaalvik, S. (2009). Does school context matter? Relations with teacher burnout and job satisfaction. *Teaching and Teacher Education, 25*, 518–524.

Soodak, L., & Podell, D. (1993). Teacher efficacy and student problem as factors in special education referral. *Journal of Special Education, 27*, 66–81.

Sook Lee, J. (2012). The effects of the teacher–student relationship and academic press on student engagement and academic performance. *International Journal of Educational Research, 53,* 330–340.

Tinto, V. (1993). *Leaving college. Rethinking the causes and cures of student attrition.* University of Chicago Press, Chicago.

Thoonen, E. J., Sleegers, P.J.C., Peetsma, T.T.D., & Oort, F.J. (2011). Can teachers motivate students to learn? Educational Studies, 37(3), 345-360.

Tschannen-Moran, M., Woolfolk-Hoy, A. & Hoy, K. (1998). Teacher efficacy: its meaning and measure. *Review of Educational Research, 68,* 202–48.

Tschannen-Moran, M., & Hoy, A. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education, 17, 783–805.*

Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education, 23*, 944 956.

Urdan, T., & Schoenfelder, E. (2006). Classroom effects on student motivation: Goal structures, social relationships, and competence beliefs. *Journal of School Psychology, 44*, 331–349.

Usher, E. L. (2009). Sources of middle school students' self-efficacy in mathematics: A qualitative investigation of student, teacher, and parent perspectives. *American Educational Research Journal, 46*, 275–314.

Usher, E. L., & Pajares, F. (2006b). Sources of academic and self-regulatory efficacy beliefs of entering middle school students. *Contemporary Educational Psychology, 31*, 125–141.

Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research, 78*(4), 751–796.

Usher, E. L., & Pajares, F. (2009). Sources of self-efficacy in mathematics: A validation study. *Contemporary Educational Psychology, 34*, 89–101.

Wang, M., (2012). Educational and career interests in math: A longitudinal examination of the links between classroom environment, motivational beliefs, and interests. *Developmental Psychology , 48*(6), 1643–1657.

Wang, M. T., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *American Educational Research Journal, 47*(3), 633-662.

Wang, M. T., Willett, J. B., & Eccles, J. S. (2011). The assessment of school engagement: Examining dimensionality and measurement invariance by gender and race/ethnicity. *Journal of School Psychology, 49*(4), 465-480.

Wentzel, K. R. (1993). Does being good make the grade? Social behavior and academic competence in middle school. *Journal of Educational Psychology, 85*(2), 357.

Wentzel, K.R. (1997). Student motivation in middle school: The role of perceived pedagogical caring. *Journal of Educational Psychology, 89*(3), 411-419.

Wentzel, K.R. (2002). Are Effective Teachers Like Good Parents? Teaching Styles and Student Adjustment in Early Adolescence. *Child Development, 73*(1), 287–301.

Wentzel, K. R., Battle, A., Russell, S. L., & Looney, L. B. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology, 35*(3), 193-202.

Wheeler, V.A., & Ladd, G.W. (1982). Assessment of children's self-efficacy for social interactions with peers. *Developmental Psychology, 18*(6), 795-805.

Wigfield, A., Eccles, J. S., & Pintrich, P. R. (1996). *Development between the ages of 11 and 25.* In D. C. Berliner & R. C. Calfee (Eds.), Handbook of educational psychology (pp. 148-185). New York: Simon & Schuster Macmillan.

Wigfield, A., Eccles, J.S., & Rodriguez, D. (1998). The development of children's motivation in school contexts. *Review of Research in Education, 23*, 73-118.

Wigfield, A., Eccles, J., S., Schiefele ,U., Roeser, W., &. Davis- Kean,P. (2006). Development of achievement motivation. In Handbook of child psychology: Vol. 3; Social, emotional and personality development, 6th ed., (Ed.) W. Damon, R. M. Lerner, and N. Eisenberg, pp.933–1002. New York: Wiley.

Wigfield, A., Lutz, S., & Wagner, A. L. (2005). Early adolescents' development across the middle school years: Implications for school counselors. *Professional School Counseling, 9*, 112–19.

Wigfield, A., & Wagner. A. L. (2005). Competence and motivation during adolescence. In Handbook of competence and motivation, (Ed.) A. Elliott and C. Dweck, 222–39. New York: Guilford Press.

.Wolters, C. A., & Daugherty, S.G. (2007). Goal Structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic Level. *Journal of Educational Psychology, 99*(1), 181–193.

Woolfolk, A. E., Rosoff, B., Wayne, K.H. (1990). Teachers' sense of efficacy and their beliefs about managing students. *Teaching & Teacher Education, 6*(2), 137-148.

Xiao-bin, Z., Li-miao, Z., & Liang-Liang, W., (2011). A study on the relationship between achievement goal orientation, academic social comparison and academic self-efficacy in middle school students. *Chinese Journal of Clinical Psychology, 19*(2). 255-258.

**Appendices**

**Appendix A: Demographics Form**

**The Adolescent Motivation and Development Study**



**XXX Elementary School**
**Fall, 2009**


**Print Name:** _____


Survey ID: _____

**Student Demographics**

**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:  Teacher Self efficacy**

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

**Instructional Self- Efficacy** (Bandura; NIHCD)

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**

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**

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 C: Teacher Support and Classroom Context**

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

*Teacher Academic Support* (Johnson & Johnson, 1983)

**In this class, my teacher…**

likes to see my work

cares about how much I learn

wants me to do my best in school

likes to help me learn

*Teacher Emotional Support*

respects my opinion

really understands how I feel about things

tries to help me when I am sad or upset

I can count on my teacher for help when I need it

**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 D:  Academic and Social Self-efficacy**

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.


**Social efficacy with peers** (Patrick, Hicks & Ryan, 1997)

I find it easy to start a conversation with most students in my class.

I can explain my point of view to other students in my class.

I often say things to other students that later I wish I hadn't (R)

I can get along with most of the students in my class.

When other students are already doing something together I often

find it hard to join in with them (R)

**Appendix E: 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)

**Involved Engagement (IRRE)** (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 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.

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- ✓ 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 agny 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: Administrator Handbook**

**Student Verbal Assent Script**

<u>**Introduction**</u>

Hello my name is_____. I am a <u>student/teacher</u> 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.)*

<u>**Informed Consent**</u>

I will ask you to fill out a survey. Filling out this survey is <u>voluntary</u>. If at any point you want to stop or skip a question that is ok. For survey questions, there are <u>no right or wrong</u> 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 <u>confidential</u>. 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.

- <u>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</u>. 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. <u>You can stop at any time</u>. 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?

<mark>**Would you like to be in the study and fill out the survey?**</mark>

---

**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 <u>PRINT</u> your first and last name on the front cover.  After you have <u>printed your name</u>, 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 <u>no right or wrong</u> answers; we just want your opinions.

2. If you have any <u>questions</u> raise your hand.

3. I will read the questions out loud.  With these types of questions we are interested in your <u>first reaction</u> to the questions. Don't spend <u>too much time on any one question</u>.

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.

<u>**Example of survey question**</u> (have this on board at the beginning of the session).

> **I like <u>pepperoni pizza</u>**
>
> **1        2      3      4      5**
>
> **not        somewhat        very**
>
> **true            true            true**

**Ask class:**

1. How many of you would pick 1 – why?  Right because <u>you don't like it</u>, that is not true for you. So you would circle 1 on your survey.

2. How many of you would pick 3 – why? Right <u>you think it is ok</u>, 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 <u>you love it</u>, 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 <u>all</u> 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 <u>in their own GRADE.</u>*

- *Students may not want to nominate a peer that they <u>admire</u>. 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 - <u>check that students' names are on front page!</u>

- One person can pass out <u>highlighter/pens.</u>

- Be sure to pick up <u>teacher survey,</u> <u>ask teacher if there are any absent students today</u>.

**Appendix H: IRB Certificate and Approval Letter**

**Certificate of Completion**

**Keri Stewart**

**Has Successfully Completed the Course in**

**CITI Social / Behavioral Investigators and Key Personnel**

**USF**

UNIVERSITY OF
SOUTH FLORIDA

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,

*John A Schinka, Ph.D.*

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