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# Relationship Quality And Student Engagement

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**RELATIONSHIP QUALITY AND STUDENT ENGAGEMENT**

by

**JENNIFER CULVER**

**DISSERTATION**

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

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MAJOR: EDUCATIONAL PSYCHOLOGY

Approved by:

\_\_\_\_\_  
Advisor

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Date

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## DEDICATION

*This work is dedicated to my husband, Ben, and parents, Ken and Becky, who provided me with unconditional love, support, and encouragement throughout this process.*

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## CHAPTER 1

### Relationship Quality and Student Engagement

Student engagement has been a topic of interest in the field of education for quite some time, as it is associated with various academic, behavioral, and social outcomes. While there remains some debate among the definition of student engagement, according to Fredricks, Blumenfeld, and Paris (2004), engagement can be conceptualized as a meta-construct that brings together various construct of study (e.g., motivation, school belonging, school climate, student conduct and attitudes, as well as learning). Researchers continue to debate whether engagement is a separate construct from motivation. Although motivation is correlated with psychological processes such as autonomy (Grolnick & Ryan, 1987; Skinner, Welborn, & Connell, 1990), belonging (Goodenow, 1993a, 1993b; Goodenow & Grady, 1993), and competence (Schunk, 1991), engagement is thought of as motivation in action, or the “connection between person and activity” (Russell, Ainley, & Frydenberg, 2005, p.1).

#### Student Engagement

Despite difficulty achieving consensus on the definition and conceptualization of student engagement, research supports the view of engagement as a multi-dimensional construct. Early models of engagement focused primarily on behavioral and emotional characteristics, such as participation in class and school and school identification, respectively (Finn, 1989). More recent research has indicated that there are several subtypes of engagement, including behavioral, cognitive, and emotional (Fredricks et al., 2004; Jimerson, Campos, & Greif, 2003). Other researchers have further proposed that engagement is comprised of four subtypes: academic, behavioral, cognitive, and psychological (Appleton, Christenson, Kim, & Reschly, 2006; Christenson & Anderson, 2002; Reschly & Christenson, 2006a). This view conceptualizes

academic and behavioral engagement as overt behavior, and cognitive and psychological engagement as covert behavior internal to the student (Sinclair, Christenson, Lehr, & Anderson, 2003). These subtypes are likely comprised of multiple characteristics, or indicators, of student engagement, as opposed to a single characteristic.

**Academic engagement.** Characteristics of academic engagement include observable student behaviors, such as time on-task, completion of credits for graduation, and completion of homework and assigned tasks (Reschly & Christenson, 2006a, 2006b; Sinclair et al., 2003). The inclusion of academic engagement in recent theoretical models of student engagement attempts to further specify what has often been vaguely identified as “student engagement” and “behavioral engagement.” Furthermore, Appleton and colleagues (2008) note that distinguishing academic engagement as a separate construct highlights the importance of the relationship between learning time, time spent on-task, work completion, and student achievement.

**Behavioral Engagement.** Behavioral engagement commonly refers to student attendance trends, office discipline referrals, classroom participation, and participation in after school activities (Appleton et al., 2006; Finn, 1993; Fredricks et al., 2004). Other definitions of behavioral engagement include positive conduct, such as compliance, as well as the absence of troublesome behaviors, such as misbehaving and skipping school (Finn, 1993). Researchers have also considered students’ effort, persistence, ability to focus, attentiveness, questioning, and participation in class as other characteristics of behavioral engagement (Birch & Ladd, 1997; Skinner & Belmont, 1993). Some indicators of behavioral engagement (i.e., attentiveness, participation in class) are similar to characteristics of academic engagement (i.e., time on-task, completion of work).

**Cognitive Engagement.** Cognitive engagement involves more internal indicators, such as

self-regulation, value of education, goal orientation, and autonomy (Appleton et al., 2006). Research on this area of student engagement incorporates aspects of school engagement (i.e., student involvement in learning) and learning and instruction (e.g., self-regulation). For example, Connell and Wellborn (1991) view cognitive engagement as an individual's ability to problem-solve, preference for challenging work, and demonstration of positive coping skills. Many of the qualities of cognitive engagement are similar to variables identified in studies regarding student motivation, such as desire to learn, educational goals, and intrinsic motivation (Fredricks et al., 2004). Although there are differences in the way researchers have defined cognitive engagement, most have included use of metacognitive strategies, such as planning and monitoring, and self-regulation skills.

**Psychological Engagement.** Psychological engagement, also called emotional engagement, broadly refers to feelings of identification and school belonging, as well as perceptions of teacher and peer support (Appleton et al., 2006). Additionally, psychological engagement encompasses students' emotions within the classroom, such as level of interest and feelings of anxiety (Connell & Wellborn, 1991; Skinner & Belmont, 1993). Finn (1993) described psychological engagement as feelings of identification, belonging, and value in school. Like the construct of cognitive engagement, characteristics of psychological engagement (e.g., students' feelings of interest and value of school) also overlap with those in the motivational literature (Fredricks et al., 2004). In their review of the literature on the topic of student engagement, Fredricks and colleagues (2004) report that the terms *motivation* and *engagement* have occasionally been used interchangeably.

Although much of the research has focused on academic and behavioral engagement, fewer studies have investigated the role of cognitive and psychological engagement in the school

engagement literature. However, existing research suggests that cognitive and psychological indicators are related to positive academic outcomes (Fredricks et al., 2004; National Research Council & Institute of Medicine, 2004), motivation (Reeve, Jang, Carrell, Jeon, & Barch, 2004; Russell et al., 2005), and can be influenced by particular instructional techniques (Marks, 2000; Reeve et al., 2004). These findings indicate that it is important to examine more closely the indicators of cognitive and psychological engagement in order to better identify and understand the needs of students (Appleton et al., 2006).

In summary, student engagement is associated with various educational outcomes, which has gained a great deal of recent attention in educational and developmental psychology. It connects several distinct areas of research (i.e., motivation, belonging, self-regulation, etc.) into a single theoretical model. By bringing together these lines of interest, researchers are able to examine multiple variables influencing student outcomes at once, as opposed to viewing them in isolation. Student engagement also serves as a framework for organizing and linking various developmental contexts to student outcomes (Fredricks et al., 2004; Pianta & Walsh, 1996; Reschly & Christenson, 2006b). Additionally, student engagement has been identified as a valid model from which to develop intervention to encourage school success.

### **Theoretical Framework for Student Engagement**

The study uses Pianta and Walsh's (1996) Contextual Systems Model to better understand the ways that student engagement is promoted and facilitated. The Contextual Systems Model proposes that concentric, interconnected systems, or contexts, influence human development across the lifespan. In this model, Pianta and Walsh emphasize the necessity of understanding children's social behavior, particularly regarding their school experience, by

learning how children relate to their contexts; in other words, by examining the goodness of fit between the child and their environment.

Similarly, theories of student engagement posit that differences in levels of student engagement, as well as outcomes, are due to interactions within the learning environment that affect how well the context meets the basic needs of the student (Connell & Wellborn, 1991). Research has supported this theory, suggesting that student engagement is influenced by the goodness-of-fit between the student, the context, and the variables influencing both (Appleton et al., 2006; Christenson & Anderson, 2002; Reschly & Christenson, 2006a). Marks (2000) argues that contexts that are supportive and connect learning *across settings and systems* yield higher levels of engagement.

A major focus of the Contextual Systems Model is relationships, especially those within family and classroom systems, which have been identified as two main contexts in children's lives. The relationships children experience with adults are pivotal to their development (Pianta & Stuhlman, 2004). Pianta and Walsh (1996) suggest that supportive relationships between adults and children can be a protective factor to prevent negative school outcomes. Using the Contextual Systems Model, student engagement can be conceptualized as an outcome variable of quality relationships and contexts interacting. As such, it is important to examine the quality of both parent-child and teacher-child relationships and their contributions to student engagement.

### **Parent-Child Relationships and Student Engagement**

It has been suggested that secure attachment relationships foster children's trust in their caregiver's sensitivity and responsiveness, which provides children security to explore their environments and expand their learning (McCartney, Owen, Booth, Clark-Stewart, & Vandell, 2004). Additionally, attachment relationships have a significant impact on relationship quality

(Pianta, 1999). The parent-child relationship plays a vital role in shaping academic outcomes during the first years of schooling (Barth & Parke, 1993; Pianta, 1997, 1999). Children's relationships with their parents can serve as a protective factor when presented with risks (Sroufe, Duggal, Weinfield, & Carlson, 2000). The most salient characteristics of parent-child relationships determined to be protective assets when faced with risk are parent warmth, emotional support, and secure parent-child attachment (Sroufe et al., 2000). These characteristics are features of high quality parent-child relationships, which have also been shown to protect against risk factors related to low academic achievement, such as low socio-economic status (Birch & Ladd, 1997; Pianta & Walsh, 1996).

Parent-child relationships that are reciprocally receptive, sensitive, and characterized by positive affect influence children's cognitive and psychological engagement. For example, high quality parent-child relationships promote children's preparedness to learn, as well as children's motivation to please, internalize, and integrate parent values (Dix, 1991; Laible & Thompson, 2000; Maccoby, 1984). Children who have high quality relationships with their parents also tend to have reduced levels of anxiety, suggesting an absence of psychological obstacles to learning (Wood, 2007). Motivation to learn, self-regulation, and social-emotional development are also outcomes of high quality parent-child relationships (National Institute of Child Health and Human Development [NICHD] Early Child Care Research Network, 2003; Pianta, Smith, & Reeve, 1991; Pianta & Harbers, 1996; Pianta, 1997). Conflict within the parent-child relationship also influences children's development, possibly even aspects of cognitive engagement (Dunn & Slomkowski, 1992). Positive conflict, characterized by discussion, explanation, and resolve, may afford parents the opportunity to model adaptive problem-solving strategies for their children.

## **Teacher-Student Relationships and Student Engagement**

Children's attachment relationships with their caregivers predict their relationships with teachers, and the teacher-student relationship influences student adjustment (Howes & Matheson, 1992; Howes, Matheson, & Hamilton, 1994; Lynch & Cicchetti, 1992). Teacher-student relationships significantly impact educational and emotional outcomes for children (Murray-Harvey, 2010). One way in which the teacher-student relationship impacts educational outcomes, such as achievement, is likely through its influence on student engagement.

Skinner and Belmont (1993) found that teacher-student interactions influence student engagement directly through the feedback that teachers provide to students during the interactions, and indirectly via students' perceptions of the interactions. Students who perceive they have a high quality relationship with their teacher endorse feelings of cognitive and psychological engagement within the classroom, such as greater effort, persistence, and feelings of interest. Students who report positive relationships with their teachers also tend to report higher levels of motivation. Similarly, students who describe their relationship with their teachers as close tend to display greater levels of emotional engagement, such as positive feelings and attitudes toward school and within the classroom. High quality teacher-student relationships are associated with increases in student feelings of motivation and responsibility toward academic work, development of self-regulation skills, and psychological wellbeing (Pianta, 1997; Roeser, Midgley, & Urdan, 1996; Ryan, Stiller, & Lynch, 1994; Wentzel, 1994).

For children at-risk for negative school outcomes, supportive relationships with teachers have been identified as a significant protective factor (Pianta & Walsh, 1996; Willms, 2003). It has been suggested that teachers tend to give additional assistance to students with whom they have a close relationship (Resnick et al., 1997). Furthermore, Hamre and Pianta (2001)



hypothesize that positive teacher-student relationships may influence teachers to utilize supplementary aid that could facilitate positive academic outcomes.

While positive teacher-student relationships have been consistently identified as a protective factor for all students, and particularly for those at-risk for negative academic outcomes, it is unfortunate that many students perceive having poor relationships with their teachers. Stressful or conflictual teacher-student relationships may negatively impact cognitive and psychological engagement, as they can promote feelings of anxiety for the student that could hinder development of academic skills and motivation. Difficult teacher-student relationships negatively impact academic and emotional outcomes, and have even been linked to psychosomatic complaints in students (Sava, 2002). Data from longitudinal studies indicate that decreases in school achievement often follow decreases in supportive teacher-student relationships (Hamre & Pianta, 2001; Midgley, Feldlaufer, & Eccles, 1989).

### **Relationship Quality, Student Engagement, and School Outcomes**

The quality of parent-child and teacher-student relationships has been shown to affect school functioning, including cognitive and psychological engagement. For example, Ryan and colleagues (1994) report that students who feel comfortable with and use these adults as a resource show positive attitudes and motivation in the classroom.

Students' feelings of relatedness to parents and teachers also influence the development of their cognitive and psychological engagement in the classroom (Avery & Ryan, 1988; Skinner, Kindermann, & Furrer, 2009). Relatedness to parents has been found to affect children's motivational and emotional behavior (Avery & Ryan, 1988). Students who report feeling a sense of relatedness to and cared for by their teachers claim autonomous reasons for participating in positive school behaviors, suggesting high levels of psychological engagement (Ryan et al.,

1994). Feelings of relatedness to others also have a significant impact on indicators of cognitive engagement, such as internalization of school values and practices. Furthermore, students who rate their teachers as warm and supportive of their autonomy tend to have increased cognitive and psychological engagement, as they have higher levels of motivation, competence, and self-esteem than students who hold negative perceptions of their teachers (Ryan & Grolnick, 1986).

Student engagement is influenced by relationships, develops early in a child's schooling, and has implications for school success. In a longitudinal study by Hughes and colleagues (2008), it was found that teacher-student relationship quality in first grade influenced student engagement patterns, which was associated with increased achievement and better relationships with teachers. Students in elementary school who have high quality relationships with teachers demonstrate higher levels of cognitive engagement and achievement compared to their peers with low quality relationships (Birch & Ladd, 1997; Hamre & Pianta, 2001). Improvement in the quality of teacher-student relationships in kindergarten has even been correlated with increased academic skills in first grade (Pianta & Nimetz, 1991).

The association between relationship quality and student engagement seems to be reciprocal. Students who exhibit high levels of engagement tend to perceive high levels of teacher support, which leads to additional increases in engagement and teacher support (Finn, 1993; Osterman, 2000). This appears to be a profitable cycle, particularly for students with initially high levels of student engagement, as teacher behaviors have been found to intensify the degree of initial student engagement (Skinner & Belmont, 1993). While this finding is beneficial for students who already demonstrate high levels of engagement, students who initially present with lower levels of motivation and engagement may experience further decreases in these areas.

The positive impact of supportive relationships on student engagement, and ultimately on

achievement outcomes, indicates that the teacher-student relationship may be a possible avenue for intervention for students with low levels of engagement (Skinner & Belmont, 1993; O'Connor & McCartney, 2007). Providing teachers with knowledge of the impact of teacher-student relationships on classroom behavior may make teachers more likely to focus on students with whom they have low-quality relationships, which, consequently, may prevent those students from engaging in maladaptive behaviors in the classroom and school (O'Connor & McCartney, 2007).

### **The Purpose of Study**

The purpose of this study is to examine the quality of parent-child and teacher-student relationship quality and its impact on cognitive, psychological, and behavioral engagement. This study also seeks to better understand the cognitive and psychological dimensions of student engagement, as the term “student engagement” has been used broadly and vaguely throughout much of the literature, without distinguishing between its subtypes. For the purposes of this study, student engagement was conceptualized as involving three separate subtypes: psychological, cognitive, and behavioral.

While the effects of teacher and parent support on student engagement has been examined in the literature, there appears to be little information regarding how the quality of these relationships explains student engagement, particularly psychological and cognitive engagement. It was hypothesized that parent-child and teacher-student relationship quality would predict psychological, cognitive, and behavioral engagement. Specifically, it was expected that students who experience high quality relationships endorse perceptions of support from, and feelings of relatedness to, parents and teachers while simultaneously reporting low levels of negative interactions with parents and teachers. Students who endorse these indicators of high quality

relationships were also expected to report high levels of psychological, cognitive, and behavioral engagement in the classroom. In addition, it was hypothesized that cognitive and psychological engagement precedes behavioral engagement. Differences in relationship quality and school engagement by gender and ethnicity are also expected.

### **Research Questions**

The following research questions and hypotheses were explored:

1. Are there significant gender, grade, or ethnicity differences in relationship quality?

H<sub>1a</sub>: Female and male students will report similar perceptions of relationship quality with their mothers and fathers; however, female students will report higher quality relationships with teachers in comparison to male students.

H<sub>1b</sub>: Third, fourth, and fifth grade students will differ in their perceptions of teacher support, relatedness, and negative interaction.

H<sub>1c</sub>: Student perceptions of support, relatedness, and negative interaction will differ by ethnicity.

2. Are there significant gender, grade, or ethnicity differences in student engagement?

H<sub>2a</sub>: Female students will report higher levels of cognitive, psychological, and behavioral engagement than male students.

H<sub>2b</sub>: Third, fourth, and fifth grade students will differ in their reports of engagement.

H<sub>2c</sub>: Student ratings of cognitive, psychological, and behavioral engagement will differ by ethnicity.

3. Do teacher-student and parent-child relationship quality predict cognitive, psychological, and behavioral engagement?

H<sub>3a</sub>: Teacher support, relatedness, and negative interaction will predict student engagement.

H<sub>3b</sub>: Parent support, relatedness and negative interaction will predict student engagement.

4. Do cognitive engagement and psychological engagement precede behavioral engagement?

H<sub>4</sub>: Cognitive and psychological engagement precedes behavioral engagement.

## CHAPTER 2

### Literature Review

There are many issues of importance to educators today surrounding the topic of student achievement. One of the concerns educators commonly face involves how to help students learn more. This issue is especially relevant in today's culture, as teachers are increasingly pressured to demonstrate their effectiveness by documenting student achievement within the classroom and on high-stakes tests. However, the task of increasing student learning within the classroom is particularly challenging when faced with the possibility that the current system of education does not meet the needs of our young learners. As students advance in grade level, they begin to become bored with school, do as little as possible to "get by" and experience declines in student engagement, resulting in withdrawal from school entirely in the most severe cases (Eccles, Midgley, & Adler, 1984; Finn, 1989; Fredricks & Eccles, 2002; Twenge, 2009; Willms, 2003).

Given a continued concern regarding rates of school dropout coupled with pressure to proactively respond to school withdrawal by providing early intervention, researchers have sought to identify characteristics within the learning environment, rather than within the student, that are responsive to intervention efforts (Appleton et al., 2006; Finn, 1989; Fredricks et al., 2004). One such area amenable to educators' intercession is student engagement, which has been considered one of the most important factors related to academic achievement and school completion. Klem and Connell (2004) demonstrated a correlation between student engagement and academic achievement irrespective of gender, socio-economic status (SES), and race. Similarly, evidence suggests that students who are engaged are more likely to graduate from high school (Finn, 1989). Academic failure and school withdrawal do not happen in isolation, but are consequences of the overall process of disengagement from school (Randolph, Fraser, &

Orthner, 2004). By monitoring student engagement early on in an individual's school career, educators can intervene at the first signs of disengagement and prevent student disconnect from school and its associated negative outcomes (e.g., problem behavior, low academic achievement, delinquency, etc.).

### **Student Engagement**

Students' engagement to school has consistently been identified as a critical factor in promoting school success. Many early studies of student engagement examined the efforts of teachers and schools to promote student interest in learning, with the goal of increasing academic achievement (Finn, 1989; Fredricks et al., 2004; Skinner et al., 2009). Results suggested that student perceptions of school significantly contributed to student motivation and effort, and ultimately to academic achievement. The study of student engagement represented a notable movement in the study of school outcomes, and in the field of education in general, as emphasis was shifted away from attempting to locate student characteristics responsible for particular outcomes and instead focused on identifying variables within the school environment that influence outcomes.

Many models of student engagement acknowledge that engagement encompasses both behavioral and affective features. One of the most frequently cited models of student engagement is Finn's (1989) Participation-Identification model, which makes a clear distinction between behavioral and affective engagement and describes engagement on an ongoing continuum. The behavioral dimension of Finn's model outlines varying degrees of participation throughout the school years, beginning in elementary school as students show their engagement by attending to instruction and responding to teacher questions or directions. In this model, participation is necessary for academic success, which promotes identification with school.

Identification is the affective component of Finn's model, and refers to students' feelings of belongingness and their value of school (Finn, 1989). Students who identify with school typically see themselves as part of the school environment, tend to believe their school experience is important, and generally want to succeed at school-related tasks. According to the Participation-Identification model, if students feel a strong sense of identification with school they are more likely to remain engaged in, and therefore participate in, school. In this manner, behavioral engagement (participation) and emotional engagement (identification) reciprocally promote student achievement. Finn's (1989) specific emphasis on participation and identification called attention to the multifaceted nature of student engagement.

**Student engagement: A multidimensional construct.** Following the development of the Participation-Identification model, student engagement has readily been accepted as a multidimensional construct that has evolved to comprise three subtypes: behavioral, cognitive, and emotional (Fredricks et al., 2004). Student engagement is considered a meta-construct because it encompasses many separate fields of research (i.e., school belonging, participation, motivation, etc.) into a single theoretical model, calling researchers to simultaneously study multiple variables relevant to student outcomes and yielding more comprehensive insight into the complex nature of students' experiences at school (Appleton et al., 2006). Moreover, student engagement provides researchers with a valid framework for examining features of students' developmental contexts as they relate to academic outcomes (Fredricks et al., 2004; Pianta & Walsh, 1996; Reschly & Christenson, 2006b). However, given the multidimensional nature of student engagement, it is not surprising that there has been some ambiguity in defining student engagement and its subtypes.

**Defining student engagement.** Although there is no universally accepted definition of



engagement, researchers generally agree that student engagement encompasses behavioral, cognitive, and emotional components. Similarly, the definitions of these subtypes also differ and occasionally overlap in the literature (Fredricks et al., 2004).

***Behavioral engagement.*** Behavioral engagement has often been viewed as having three components: positive behavior (i.e., compliance with school rules and classroom norms, etc.; Finn, 1993), participation in learning and school tasks (i.e., answering questions, paying attention, etc.; Birch & Ladd, 1997; Skinner & Belmont, 1993), and involvement in school activities (i.e., participation in extra-curricular activities; Finn, 1989, 1993). Researchers rarely make distinctions between these behaviors, so each component can be considered a form of behavioral engagement, despite the wide amount of variance (Fredricks et al., 2004). Complying with school rules is markedly different than participating in class discussion, which is also different from participating in school governance. Each of these behaviors involves varying degrees of effort and highlights the diversity that exists within the concept of behavioral engagement.

***Emotional engagement.*** Emotional, or psychological, engagement refers to students' affect within the classroom and sense of belonging at school (Connell & Wellborn, 1991; Finn, 1989; Fredricks et al., 2004; Skinner & Belmont, 1993; Willms, 2003). Students' feelings toward learning, school activities, and individuals within the school are represented within this domain of engagement and may include feelings of interest, boredom, anxiety, happiness, and others, which may or may not be dependent on specific tasks or situations. Emotional engagement has also been considered synonymous with identification with school. Finn (1989) noted that identification includes a sense of belongingness to school, as well as value for school. Many definitions of emotional engagement overlap with research on attitudes, motivation, and

values (Fredricks et al., 2004). Most literature examining emotional engagement offers general definitions, and often does not specify a particular source of the affective reaction.

***Cognitive engagement.*** Similar to emotional engagement, many definitions of cognitive engagement overlap with research in other fields of study (Fredricks et al., 2004). Some features of cognitive engagement that parallel literature on motivation and learning include problem solving, exhibiting a preference for challenging work, having an investment in learning, using metacognitive strategies, and persisting during difficult tasks. Attempting to define and measure some of the features of cognitive engagement are undoubtedly challenging because cognitive processes are internal to the student, and therefore not easily observable. Nonetheless, Fredricks and colleagues (2004) suggest that researchers synthesize information regarding learning (i.e., cognitive activity/processing) and motivation (i.e., investment in learning) in order to most effectively conceptualize cognitive engagement.

In sum, engagement has been used to describe a broad range of student behavior, from interest in learning within the classroom to students' general interest in school. While definitions of behavioral, emotional, and cognitive engagement remain conceptually vague, this provides further evidence for the multidimensionality of the construct of student engagement as a whole. By evaluating student engagement, researchers are able to effectively assess aspects of motivation, learning, behavior, value and attitudes to represent the dynamic nature of students' experiences at school (Fredricks et al., 2004). Unfortunately, most studies do not measure all aspects of student engagement, and in doing so fail to fully utilize the multidimensionality of the construct. For example, literature regarding student learning and achievement has tended to examine behavioral and cognitive features of engagement, while the study of students' overall interest in school has assessed behavioral and emotional features of engagement. Each subtype

of student engagement is associated with student outcomes; however, most studies of student engagement rarely examine all three components, suggesting a need for further research.

**Gender, ethnicity, and student engagement.** Existing studies examining patterns of student engagement across grade levels reveal that differences in students' level of engagement may be impacted by their gender and ethnicity. In general, girls tend to report higher levels of student engagement than boys, regardless of grade level (Marks, 2000; Skinner et al., 2009). In a study of behavioral and emotional engagement in third through sixth grade students, girls endorsed higher levels of engagement and lower levels of disengagement than boys (Skinner et al., 2009). Similarly, in a study comprised primarily of Hispanic students in eighth grade, Nichols (2008) found that girls tended to report higher levels of emotional engagement than boys. Teacher reports of behavioral and emotional engagement are also higher for girls than boys in middle school (Goodenow, 1993). An assessment of student engagement across elementary, middle, and high school students revealed that girls consistently reported significantly higher levels of student engagement than boys (Marks, 2000). In contrast, a review of research by Willms (2003) found similar levels of emotional engagement in boys and girls, but higher levels of behavioral engagement for girls.

While gender has been consistently associated with variance in levels of student engagement, less consistent evidence has been found for the effect of ethnicity. Early studies suggest that African American students experience lower levels of student engagement and higher levels of disengagement than White students; however, recent research indicates that this may not be the case (Marks, 2000; Randolph et al., 2004). In Marks' (2000) study of engagement across grade levels, no difference was found in level of student engagement based on students' ethnic background. Marks (2000) suggests that the extent to which ethnicity

influences student engagement may more of a reflection of students' SES or age, as opposed to difference in cultural background. Randolph and colleagues (2004) produced similar findings in their study investigating the association of behavioral engagement (i.e., school participation), grade retention in first grade, and high school completion.

It is also possible that lower levels of engagement in ethnic minority students due to the inconsistencies in defining and measuring the construct. Using data from the Maryland Adolescent Development in Context Study (MADICS), Wang, Willett, and Eccles (2010) examined students' levels of cognitive, psychological, and behavioral engagement, gender, and ethnicity. In seeking to determine whether discrepancies in students' ratings of engagement were related to error or inconsistency in measurement or due to students' gender and ethnicity, the researchers found evidence that such differences may be explained by gender and cultural background. Among the students sampled, girls reported higher levels of behavioral and psychological engagement than boys, while African American students endorsed less behavioral engagement but greater emotional engagement than White students. These findings indicate that gender and ethnicity may influence the *type* of engagement experienced by students, rather than merely its presence or absence among particular populations.

### **Theoretical Framework for Student Engagement**

Finn's (1989) emphasis on the participation and identification components of student engagement not only called attention to the multifaceted nature of engagement, but also encouraged researchers to identify and assess variables that can be influenced by intervention. Similarly, Christenson and Anderson (2002) acknowledge the need to examine contextual variables to better understand and promote student success. Even indicators of student engagement that are internal to the student, such as value of education or goal orientation, are

dependent on the context in which students live and learn. These contexts are social systems in which student characteristics reciprocally interact with environmental variables to produce academic outcomes.

In order to better understand student contexts and factors influencing student engagement, this study draws on the theoretical framework of ecological-contextual models of development. Bronfenbrenner's (1979) ecological contextual model of development emphasized the direct impact the immediate environment (i.e., parent-child relationship) has on children's outcomes, as well as the effect of more distal settings on children's outcomes via its impact on the immediate environment in which a child interacts. This ecological contextual model formed the basis for Sameroff's (1983) Developmental Systems Theory, in which human development is impacted by systematic changes across the lifespan (Bornstein & Lamb, 2005). Developmental Systems Theory further stresses that behavior cannot be studied separate from the environment in which it occurs. Pianta and Walsh (1996) further expanded these theories with their Contextual-Systems Model, which emphasizes the importance of understanding children's social behavior by examining how they relate to their contexts, particularly regarding the quality of relationships within the family and classroom systems. The theoretical foundation for this study is formed using the Contextual Systems Model to better understand how student engagement develops and is promoted.

**Contextual Systems Model.** Like the ecological-contextual and developmental systems models of development, the Contextual-Systems Model (CSM) consists of sequences of concentric systems, or contexts, that influence human development as it relates to children's school outcomes (Pianta & Walsh, 1996). More specifically, the CSM describes two systems (the child/family system and the school system), each with their own subsystems that work

together to produce various developmental outcomes for students.

At the heart of CSM are relationships, which Pianta and Walsh (1996) describe as broad, superordinate systems that are more complex than individual subsystems or the cumulative interactions of the subsystems. Each subsystem is comprised of isolated characteristics, and these characteristics are incorporated into the interactive relationship of systems. Patterns of behavior and expectations form as a result of the interaction of subsystems, and the relationship of systems, over time. Therefore, CSM asserts that the relationship between the child/family system and the school system occurs over time, is interactive, reciprocal, multidirectional, and influences the functioning of its subsystems.

Pianta and Walsh (1996) encourage the conceptualization of the model as a social system. The outermost layer of the social system is broadly comprised of the culture and community within which students live. Cultures and communities may appear to be distal variables but have significant influence in the lives of children by creating codes and expectations, which have implications for education. For example, cultures hold particular beliefs for development that are often related to children's age rather than their individual level of development, such as school entry or curriculum grade-level expectations. Moving inward within the model are small social groups and family systems (Pianta & Walsh, 1996). Children's peer group, schools, and classrooms are included within this level. These small groups also have codes, or expectations, for behavior, which may or may not be consistent with one another, or with those of the broader culture or community. For example, family codes may not align with the codes of a child's peer group or school. These cultural, community, and small group codes influence parent and teacher behavior, which have a direct impact on the child.

More proximal to the child are dyadic systems, including the relationships between

children and their parents or caregivers, peers, and teacher (Pianta & Walsh, 1996; Pianta, 1999). These dyadic relationships affect a child's development in key ways, such as how they learn to behave in social situations. Through repeated exposure and involvement in the relationship over time, children learn what to expect from these interactions and how to behave in response. Within dyadic relationships, the quality of interactions are not determined by *what* is being done, but by *how* it is being done. As a result, characteristics such as reciprocity, warmth, and responsiveness are essential aspects of interaction (Pianta & Walsh, 1996; Sameroff, 1989). These features of relationship quality influence child behavior through verbal and nonverbal interactions with others in their social contexts.

Finally, at the center of both the child/family system and the school system is the child and his or her various areas of development, including cognitive, social, emotional, and motor. The child's developmental domains and biological system are interconnected and integrated, although they are commonly examined in isolation. While educational research has historically tended to place its focus on the cognitive domain of development, as opposed to concurrently considering the social and emotional domains of development, Pianta and Walsh (1996) argue that schools commonly fail to meet the needs of the child as a system. One way to address students' social and emotional domains of development is to examine and promote dyadic relationships across systems, such as parent-child and teacher-student relationships.

### **Relationships as Contexts for Student Engagement**

The nature of development is active, complex, and multidimensional. CSM views development as the continuous adaptation of systems resulting from the interaction between child and context over time (Pianta & Walsh, 1996). Within this model of development, the goodness of fit between a child and their context is essential. For most children, the home and

school environments are the main contexts in which development occurs, and while children's relationships are part of these contexts, those relationships can also be conceptualized as contexts themselves.

Within the home and school contexts, the relationships children experience with adults (i.e., such as parents and teachers) are pivotal to their development, as high quality relationships between adults and children can be a protective factor against risk and promote positive school outcomes (Pianta & Walsh, 1996; Pianta & Stuhlman, 2004). For example, research has consistently indicated that parent-child relationships that promote secure attachment styles yield desirable developmental outcomes for children (Bornstein & Lamb, 2005). This finding may also be applicable to academic outcomes, as the relationship between teachers and students is viewed as key to children's effective navigation of the school as a system and is associated with student engagement and achievement (Davis, 2006; Pianta & Stuhlman, 2004).

Student engagement has been identified as a mediating variable between children's contexts and school outcomes (Appleton et al., 2006; Fredricks et al., 2004). As such, it is influenced by the interaction between students and their contexts over time and is seen as a possible pathway to promote student success (Sinclair et al., 2005; Reschly & Christenson, 2006a, 2006b). Additionally, much of the literature in the field of education calls for a focus on alterable variables to increase student engagement, particularly when seeking to provide intervention to students at-risk for school failure (Appleton et al., 2006). One such variable that is proximal to children and relevant to student engagement is the relationships they have with their parents and teachers. As a result, it is necessary to examine parent-child and teacher-student relationships, their qualities, and their impact on student engagement.

**Parent-child relationships.** Through repeated early interactions within the parent-child



relationship children form perceptions and expectations for future relationships, which influence later academic and social-emotional development (Bowlby, 1988; Skinner & Belmont, 1993). Parent-child relationships affect a wide range of developmental outcomes, most notably beginning with the formation of the attachment relationship, which contributes significantly to the quality of the parent-child relationship (Pianta, 1999). Secure attachment promotes high quality parent-child relationships and has been associated with many positive educational outcomes, such as the development of emotional regulation, communication and social behavior, student engagement, high academic achievement, and overall school adjustment (NICHD Early Child Care Research Network, 2003; Pianta, Smith, & Reeve, 1991; Pianta & Harbers, 1996; Pianta, 1997). This is likely because children with secure, high quality relationships with their parents trust that their caregivers will be sensitive and responsive to their needs, which affords children the security to explore their environment and fosters their learning (McCartney et al., 2004). High quality parent-child relationships can be a powerful protective factor against risk (Birch & Ladd, 1997; Pianta & Walsh, 1996; Sroufe et al., 2000). Conversely, insecure attachment relationships have been associated with low quality parent-child relationships and predictive of school difficulties, such as poor engagement, disruptive behavior, peer rejection, and low achievement (Pianta, 1997).

**Teacher-student relationships.** The parent-child attachment relationship is often predictive of the attachment relationship children form with teachers (Howes & Matheson, 1992; Howes, Matheson, & Hamilton, 1994; Lynch & Cicchetti, 1992; Pianta, 1997). Likewise, the attachment relationship that develops between students and teachers can foster high or low quality relationships, which also has significant implications for school outcomes (Birch & Ladd, 1996, 1997; Lynch & Cicchetti, 1992; Pianta, 1994). Teacher-student relationship quality is

related to student adjustment, grade retention, and referrals for special education services (Pianta, Steinberg, & Rollins, 1995).

One way in which the teacher-student relationship impacts these educational outcomes is likely through its influence on student engagement. Positive teacher-student relationships foster student engagement throughout a child's development. Students in elementary school who have high quality relationships with teachers demonstrate elevated levels of engagement and achievement compared to their peers with low quality relationships (Birch & Ladd, 1997; Hamre & Pianta, 2001). Furthermore, students in high school who report having high quality relationships with teachers tend to report higher levels of behavioral engagement, such as increased participation and attendance (Finn, 1993).

Interestingly, not only do children form expectations for future relationships based on prior experiences with parents, but they also form these expectations based on previous relationships with teachers (Davis, 2006). Students who experience high quality teacher-student relationships tend to have positive expectations for future teacher-student relationships. These students also report higher cognitive engagement and are rated as having greater academic competence by their teacher. Additionally, Davis (2006) found that students' and teachers' engagement influenced their relationship quality, suggesting that positive relationships promote higher levels of engagement, which in turn foster good relationships with current and even future teachers.

**Gender, ethnicity, and relationship quality.** There is evidence that girls and boys report similar perceptions of parent-child relationship quality (Demaray & Malecki, 2002; Rueger, Malecki, & Demaray, 2008). However, some gender differences have been found in students' relationship quality with teachers. Teacher and student reports have widely documented the finding that female students tend to have more positive relationships with their teachers than

males (Hamre & Pianta, 2001; Hughes & Kwok, 2007; Ryan et al., 1994).

Girls tend to report experiencing more overall support from multiple social partners, including higher levels of support from teachers (Demaray & Malecki, 2002; Hughes & Kwok, 2007; Murray-Harvey, 2010). In a study examining relationship quality among kindergarten students and their teachers, Birch and Ladd (1997) found that teachers endorsed having closer relationships and less conflict with girls than boys. A longitudinal study by Jerome, Hamre, and Pianta (2009) measured teacher-reported relationship quality in students from kindergarten through sixth grade and reported similar findings; however, in addition to boys having higher levels of conflict and less closeness than girls in teacher-student relationships, their findings also suggest that their teacher-student relationship quality decreases over the years. Gender differences have also been found in students' sense of relatedness to their social partners. Boys tend to report less sense of relatedness to teachers than girls (Ryan et al., 1994). Furrer and Skinner (2003) found that boys and girls report similar feelings of relatedness to parents and peers, but report that girls tend to experience greater relatedness to teachers than do boys.

Relationship quality, particularly within the teacher-student relationship, may also be influenced by ethnicity. Past research has revealed that the ethnic backgrounds of students and teachers influence teacher-student relationship quality (Hughes & Kwok, 2007; Jerome et al., 2009; Murray, Murray, & Waas, 2008; Pianta & Stuhlman, 2004; Saft & Pianta, 2001). When teachers and students have similar ethnic backgrounds, teachers report less conflict within the teacher-student relationship (Saft & Pianta, 2001). Teacher perceptions of teacher-student conflict in kindergarten are greater for African American students than White students and continue throughout elementary school, suggesting that African American students may be more at risk for negative teacher-student relationships throughout schooling (Jerome et al., 2009). Wu

and colleagues (2010) examined the trajectory of teacher-student relationship quality and its associated outcomes in a sample of 706 second and third grade students and identified several teacher-student relationship types. Among the four relationship types identified, African American students were more likely to fall into one of two groups: those with teacher ratings and student ratings indicating poor relationship quality, and those with teacher ratings indicating poor relationship quality but student ratings of positive relationship quality.

In a sample of primarily White teachers, Jerome and colleagues (2009) found that teacher ratings endorsing greater conflict in their relationships with African American students remained significant even when controlling for other possible predicting variables, such as gender, academic performance, behavior ratings, and parent characteristics. While teachers may report more positive relationships with White students than African American students, evidence also suggests that teachers may also report differences in relationship quality among ethnic minority students (Murray et al., 2008). For example, teachers have reported more positive relationships with White and Hispanic students than with African American students (Hughes, Gleason, & Zhang, 2005; Murray et al., 2008).

There is overwhelming evidence suggesting that the quality of relationships between children and important adults in their lives influences many developmental outcomes, such as social-emotional wellbeing and academic achievement. High quality relationships with adults are beneficial for all children and have consistently been identified as a significant protective factor against risk during development (Anderson, Christenson, Sinclair, & Lehr, 2004; Demaray & Malecki, 2002; Masten, Best, & Garmezy, 1990, Pianta & Walsh, 1996). Ryan, Stiller, and Lynch (1994) found that students who have positive relationships with parents and teachers have better overall school adjustment than students who do not experience positive relationships with

parents and teachers. The impact of high quality relationships with parents and teachers is especially important as students experience transitions in their educational setting, such as from elementary to junior high or middle school, where they tend to have multiple teachers with whom they have increasingly impersonal contact (Lynch & Cicchetti, 1997).

**Dimensions of relationship quality.** The relationships children have with their parents and teachers are complicated contexts that include not only the characteristics and experiences of each individual, but also the cumulative effect of their interactions (Pianta, 1997). These interactions involve patterns of action (i.e., *what* is happening) and quality (i.e., *how* it is happening) within the relationship, which influence child development. The qualities that characterize these relationships and their interactions contribute to the goodness of fit between the child and context.

While research has consistently documented the positive effects of high quality adult-child relationships on children's school outcomes, there seems to be little consistency as to what characteristics define *high quality* relationships (Murray, 2009). Definitions of high quality relationships have included behavioral and emotional characteristics, such as consistency, involvement, responsiveness, closeness, and warmth. In general, high quality relationships typically refer to the presence of positive and supportive interactions, and the absence of negative interactions.

Building upon the work of Weiss, Furman and Buhrmester (1985) surveyed 199 children ages 11 to 13 years old and found that children seek particular types of social support from various individuals within their social network. Using the Network of Relationships Inventory, they identified several dimensions of social support, as well as negative interaction, common in interpersonal relationships. For the purposes of this study, *high quality relationships* were

conceptualized to have features of support, relatedness, and negative interactions within parent-child and teacher-student relationships. More specifically, consistent with the work of Furman and Buhrmester (1985), *support* encompasses characteristics of companionship, aid, communication, nurturance, affection, admiration, and alliance that children perceive receiving in their relationships with parents and teachers. *Relatedness* is used to refer to students' sense of identification with, or connectedness to, their parents and teachers. Conversely, *negative interaction* was defined as student perceptions of conflict and antagonism.

**Support.** The support children perceive in their relationships with others directly impact their social-emotional wellbeing, and have been associated with various academic outcomes (Murray-Harvey, 2010). While perceptions of social support tend to change over the course of development, with younger children reporting greater support from parents and teachers and older students reporting higher levels of support from peers, supportive relationships have consistently been linked to positive outcomes for all students (Demaray & Malecki, 2002). Student perceptions of the support they receive from parents and teachers has been linked to numerous indicators of student engagement.

In a study examining perceived social support among sixth grade school students, Wentzel (1998) found that parent support is associated with features of cognitive engagement, such as students' mastery goal orientation and interest in school. Similarly, perceived support from teachers was related to students' cognitive and behavioral engagement, like interest in academic activities, motivation, and desire to follow classroom rules. In a longitudinal study of 1,018 students in third through sixth grades, Skinner and colleagues (2009) found that students who perceived receiving high levels of support from parents and teachers also reported greater engagement, sense of relatedness, and greater confidence and positive affect. Klem and Connell

(2004) also report that elementary students who perceive high levels of teacher support are 89% more likely to feel engaged than students with low teacher support. Moreover, those students who perceived low levels of teacher support were 73% more likely to report decreased engagement.

Murray (2009) examined the impact of parent and teacher support on student engagement and school adjustment by assessing student perceptions of closeness and trust in a sample of 129 students in sixth, seventh, and eighth grades. Results reveal that parent support is associated with student engagement, academic competence, and reading performance, while student feelings of closeness and trust with their teachers were significantly related to student engagement, grades in reading and math, and math performance. Additionally, Murray (2009) also found evidence indicating that the effects of these relationships are compensatory, suggesting that the experience of a supportive relationship with one adult can outweigh the effects of a lower quality relationship with other adults. Other literature suggests that students who receive support from multiple sources are likely to report higher levels of engagement than students who experience support from one source, or no support (Rosenfeld, Richman, & Bowen, 2000). The positive effects of supportive relationships further highlight the significance of parent and teacher support as it impacts students' school outcomes.

***Relatedness.*** Like children's perceptions of supportive relationships with significant adults in their lives, their sense of relatedness to these individuals is also an important aspect to consider when assessing the quality of the relationship. Relatedness is an aspect of relationship quality, and has been broadly referred to as classroom climate, social support, connectedness, and belonging (Furrer & Skinner, 2003). The literature on relatedness draws from theories of attachment and proposes that children develop expectations about their sense of self in

relationships through repeated interactions with individuals in their social network. Through these continued positive interactions, individuals develop feelings of relatedness, or likeness, to their social partners. When children feel a strong sense of relatedness to individuals within their social network, they are more likely to internalize the values or practices of those individuals, which has implications for promoting student engagement (Avery & Ryan, 1988; Connell & Wellborn, 1991; Ryan et al., 1994).

Students who report feelings of relatedness to teachers and parents evidence higher levels of cognitive and psychological engagement, and school adjustment (Ryan et al., 1994; Skinner et al., 2009). Children's perception of relatedness to their social partners has also been associated with changes in their level of engagement. Furrer and Skinner (2003) examined perceptions of relatedness to parents, teachers, and peers and its effects on engagement in students in third through sixth grades. Their results suggest that relatedness has a significant impact on student engagement and can even predict fluctuations in student engagement. Students who endorsed a high sense of relatedness had high levels of psychological and behavioral engagement. Moreover, students who reported high levels of relatedness and engagement at the beginning of the school year showed increases in their engagement over the course of the school year, while students with low initial relatedness showed decreases in engagement. This provides additional support that relationship quality and student engagement interact reciprocally to influence student outcomes, suggesting that intervention efforts focusing on building positive relationships may be worthwhile, particularly for students with low levels of engagement (Finn, 1993; Furrer & Skinner, 2003; O'Connor & McCartney, 2007; Skinner & Belmont, 1993).

Lynch and Cicchetti (1997) studied patterns of relationship quality by examining students' sense of relatedness to parents, teachers, and peers in a sample of 1,226 elementary and middle



school students. Similar to literature on children's perceptions of relationship support, their findings reveal that student feelings of relatedness change as students grow older, with elementary school students reporting higher levels of relatedness to parents and teachers, and middle school students reporting higher levels of relatedness to peers. Adolescents who endorse greater sense of relatedness to peers than adults have also reported lower levels of student engagement and school adjustment (Ryan et al., 1994), suggesting that fostering positive feelings of relatedness to parents and teachers may be especially beneficial as students get older.

***Negative interaction.*** While positive aspects of relationships influence development, the same is also true for relationships marked by conflict and negative interaction. Conflict can be positive and serve as a means for parents to model healthy problem solving; however, conflict that is maladaptive is associated with dysfunction and negative outcomes for children (Laible & Thompson, 2002). Parent-child interactions in early childhood provide children with opportunities to learn to regulate their emotion, which is in turn associated with developmental outcomes such as the formation of social skills and successful relationships with peers (Barth & Park, 1993; Pianta & Harbers, 1996). Barth and Park (1993) report that young children who experience negative interactions with their parents tend to have poor school adjustment upon entering school, whereas positive parent-child interactions were associated with better social skills and positive affect toward school. Similarly, among a small sample of preschool students, Wood (2007) found that negative parent-child relationships were associated with lower levels of engagement and academic performance one year later. Low quality parent-child relationships are also related to anxiety, poor relationships with peers, poor problem solving, and behavior problems (Pianta & Walsh, 1996; Pianta, 1997; Wood, 2007).

Given the parallel between parent-child and teacher-student relationships, it is not

surprising that low quality teacher-student relationships also have negative impacts on students' school outcomes. Conflict within the teacher-student relationship is associated with grade retention, peer rejection, and disruptive behavior (Ladd, Birch, & Buhs, 1999; Pianta et al., 1995). Children who experience difficult relationships with teachers also tend to display lower levels of engagement (Birch & Ladd, 1997; Connell & Wellborn, 1991; Hughes, Cavell, & Jackson, 1999). Midgley, Feldlaufer, and Eccles (1989) found that students who move from classrooms where they perceived high levels of teacher support to classrooms with lower teacher support show decreases in characteristics of cognitive and psychological engagement, such as interest and positive attitudes toward learning. Similarly, in a study of students in fifth through ninth grades, Murray-Harvey (2010) found that students who perceived discord in their relationships with teachers also endorsed lower levels of cognitive and psychological engagement, indicating that negative relationships can have a direct and detrimental effect on students' academic outcomes and social-emotional wellbeing.

Relationship quality between teachers and students has been found to decrease as students advance through the grade levels, suggesting that there may be less importance placed on forming relationships as instructional demands increase (Jerome et al., 2009; O'Connor & McCartney, 2007). Furthermore, poor teacher-student relationships in previous school years appear to impact future teacher-student relationships, as teacher-student relationships marked by conflict in earlier grades are associated with continued conflict during later grades (Jerome et al., 2009). This trajectory of low quality teacher-student relationships is also related to decreases in student engagement, and ultimately student achievement. O'Connor and McCartney (2007) report that children who experienced decreases in teacher-student relationship quality from kindergarten through third grade attained the lowest scores on a standardized assessment of

academic achievement. These results suggest that for students with low quality teacher-student relationships, the reciprocal effects of relationship quality and engagement have potential to be detrimental over the course of a student's academic career.

In conclusion, while the effects of teacher and parent relationship quality on student engagement have been examined in the literature, there appears to be little information regarding how the *quality* of these relationships affects student engagement, particularly psychological and cognitive engagement, in elementary school students. Examining students' perceptions of the support they receive from parents and teachers, as well as their own feelings of relatedness to these important social partners, may be useful in better understanding the factors contributing to students' cognitive, psychological, and behavioral engagement.

## CHAPTER 3

### Method

#### Participants

Participants in this study were 334 students from a suburban school district in southeastern Michigan. The school district reports an enrollment of approximately 3,124 students (Center for Educational Performance and Information, 2012). Of those students, 55% are eligible to receive free and reduced lunch. Community data from the United States Census Bureau (2010) indicated a median income of \$16,418 with 32.7% of persons earning an income below the poverty level. Within the community, 81.7% of residents reported that they hold a high school diploma.

Students who participated in this study were from two elementary schools and one middle school. A total of 370 students were recruited to participate in this study; 334 chose to complete the survey and 36 declined to participate. For convenience of analysis, cases missing more than 20% of responses on the requisite variables were excluded from the study. Approximately 7% ( $n = 23$ ) of participants did not provide complete responses to the survey questions; therefore, these students were removed from the study sample. As a result, the final study sample included 311 third ( $n = 78$ ), fourth ( $n = 69$ ), and fifth ( $n = 164$ ) grade students. Of those students, 47% were girls and 53% were boys. The majority of participants ( $n = 270$ ) reported attending school within the same school district the previous year.

Most participants reported speaking English as their primary language, while approximately 7% of participants indicated they speak a language other than English with their families. This is slightly lower than within the community, where 10% of residents reported speaking a language other than English (U.S. Census Bureau, 2010). Approximately half ( $n =$

157) of the students in this study identified themselves as Caucasian and almost a quarter ( $n = 64$ ) reported being multiracial. To facilitate data analysis, the ethnicity categories for this sample were collapsed, with the ethnicities of Asian/Pacific Islander and American Indian/Alaskan Native condensed as “Other” Non-White. Final categories were African American, Caucasian, Hispanic, Multiracial, and “Other” Non-White. Demographic information is presented in Table 1.

Table 1

*Frequency Distributions - Demographic Characteristics of the Student Participants*

Demographic Characteristics (n = 337)	Number	Percent
<b>Age in Years</b>		
8	15	5
9	70	23
10	82	26
11	124	40
12	20	6
<b>Gender</b>		
Female	145	47
Male	165	53
Missing	1	0.3
<b>Grade</b>		
3 <sup>rd</sup>	78	25
4 <sup>th</sup>	69	22
5 <sup>th</sup>	164	53
<b>Ethnicity</b>		
African American	25	8
Caucasian	157	51
Hispanic	54	17
Multiracial	64	21
“Other” Non-White	11	3
<b>Primary Language</b>		
English	288	93
Spanish	20	6
Other	3	1

## Measures

The following instruments were used in this study as part of an online survey: a demographic data form, the Network of Relationships Inventory Social Provision Version (NRI-SPV; Furman & Buhrmester, 1985), the Relatedness Assessment (Furrer & Skinner, 2003), and the Student Engagement Measure (SEM; Fredricks, Blumenfeld, Friedel, & Paris, 2005).

**Demographic form.** A demographic form was used for this study. Students provided information on their age, grade, ethnicity, gender, primary language, and previous schools attended. Their responses were prompted using a multiple-choice format.

**Relationship quality.** Parent-child and teacher-student relationships were assessed using the following indicators of relationship quality: support, relatedness, and negative interaction. These features of high quality relationships were measured using the Network of Relationships Inventory and the Relatedness Assessment.

*Perceived social support.* The Network of Relationships Inventory Social Provision Version (NRI-SPV; Furman & Buhrmester, 1985) was used to measure student perceptions of the social support provided from their relationships with their parents and teachers. The NRI-SPV is a rating scale in which children rate the extent to which their relationships with individuals within their social network are characterized by support or conflict. On the NRI-SPV, support, negative interactions, and perceived power are typically assessed using 10 scales, each scale containing three questions. For the purposes of this study, the NRI-SPV short form was used. The short form contains 7 questions to assess support by asking one question from each of the following scales: companionship, instrumental aid, intimate disclosure, nurturance, affection, admiration, and reliable alliance. Meanwhile, negative interaction is assessed using 6

questions from the conflict and antagonism scales. A factor score is then calculated to determine overall ratings of relationship support and negative interaction.

Each question is rated using a five-point Likert-type scale (1 = *Little or None*, 2 = *Somewhat*, 3 = *Very Much*, 4 = *Extremely Much*, and 5 = *The Most*). Participants were asked to answer each question in relation to each of three relationships: mother/stepmother, father/stepfather, and teacher. Item examples for each relationship type include: “How much does this help you figure out or fix things?” (*Instrumental Aid*); “How often do you and this person go places and do things together?” (*Companionship*); “How often do you and this person get mad at or get in fights with each other?” (*Conflict*); “How much does this person really care about you?” (*Affection*); “How much does this person treat you like you’re admired and respected?” (*Reassurance of Worth*).

Furman and Buhrmester (1985) reported internal consistency alpha values of .80 for scale scores on the NRI-SPV. In addition, Hughes, Cavell, and Grossman (1997) assessed children’s ratings of their social support from mothers, fathers, teachers, and friends. They reported support scale alpha values of .87 for mothers, .82 for fathers, .91 for teachers, and .94 for overall support. Meanwhile, overall conflict yielded an alpha coefficient of .82. In this study, alpha coefficients were  $\alpha = .77$  for mother support,  $\alpha = .85$  for father support, and  $\alpha = .85$  for teacher support. Alpha values for negative interaction were  $\alpha = .87$  for mothers, fathers, and teachers.

*Relatedness.* The Relatedness Assessment was also used as a measure of parent-child and teacher-student relationship quality. Whereas the NRI-SPV provided information about perceived social support, the Relatedness Assessment measured children’s feelings of connectedness to their parents and teachers (Furrer & Skinner, 2003). The Relatedness Assessment is a 20 item self-report questionnaire in which children rate their sense of relatedness

to individuals in their social network, including parents, teachers, classmates, and friends. For the purposes of this study, students were administered 12 items and asked to report their sense of relatedness their mother, father, and teacher. Each scale began with a similar prompt (“*When I’m with my mother/father/teacher...*”) and four identical items: “I feel accepted,” “I feel unimportant,” “I feel like someone special,” and “I feel ignored.” Children rated each item using a 4 point scale (*1 = Not at all true, 2 = Not very true, 3 = Sort of true, 4 = Very true*). Prompts regarding negative aspects of relationships (e.g., I feel unimportant) were reverse-coded.

Furrer and Skinner (2003) administered the Relatedness Assessment to a sample of 641 students in grades three through six. They averaged children’s responses on the mother and father scales to create a *relatedness to parents* scale. Furrer and Skinner (2003) reported alpha values of .76 and .79 for parents and teachers, respectively. Alpha values for the scores in this study were  $\alpha = .70$  for mothers,  $\alpha = .77$  for fathers, and  $\alpha = .77$  for teachers.

**Student engagement.** The Student Engagement Measure (SEM) was designed by Fredricks and colleagues (2005) as part of a study through the MacArthur Network for Successful Pathways through Middle Childhood and was utilized to assess student engagement (Fredricks, McColskey, Meli, Mordica, Montrosse, & Mooney, 2011). The SEM is a self-report questionnaire that measures students’ behavioral, cognitive, and psychological engagement using a five-point Likert scale where *1 = Never, 2 = On occasion, 3 = Some of the time, 4 = Most of the time, and 5 = All of the time*.

Behavioral engagement refers to a broad range of student behavior, such as student attendance, participation and attentiveness within the classroom and at school, office discipline referrals, and positive conduct (Appleton et al., 2006; Finn, 1993; Fredericks et al., 2004). Conversely, cognitive engagement involves covert characteristics, such as self-regulation, value



of school, goal orientation, flexible problem solving, and student motivation (Appleton et al., 2006; Connell & Wellborn, 1991; Fredricks et al., 2004). Psychological engagement refers to student emotions and feelings, including identification and school belonging, perceptions of teacher support, and level of interest (Appleton et al., 2006; Skinner & Belmont, 1993). The behavioral engagement scale contains five items, the psychological engagement is made up of six items, and the cognitive engagement scale is comprised of eight items. Examples of items include “I pay attention in class” (*behavioral engagement*), “I feel happy at school” (*psychological engagement*), and “When I read a book, I ask myself questions to make sure I understand what it is about” (*cognitive engagement*). For the purposes of this study, students were asked to complete all 19 items of the SEM. Two items within the behavioral engagement scale and one item within the psychological engagement scale are reverse-coded. Item responses are averaged to produce individual scale scores for each of the three types of student engagement.

Fredricks and colleagues (2005) report alpha coefficients of .72-.77 for behavioral engagement, .83-.86 for psychological engagement, and .55-.82 for cognitive engagement. Due to obtaining low levels of reliability on the cognitive engagement scale, items on this scale were revised (Fredricks et al., 2011). To address construct validity, the authors evaluated whether features of the classroom environment (e.g., teacher and peer support, task difficulty and norms, etc.) were correlated with the SEM subscales assessing cognitive, psychological, and behavioral engagement. Their results indicate that the subscales are moderately correlated with students’ views of their academic and social environment, attachment to school, and value of school (Fredricks et al., 2005; Fredricks et al., 2011). Student responses on the SEM were also positively correlated with data obtained from student interviews regarding engagement.

When using the five items recommended by Fredricks and colleagues (2005) to assess behavioral engagement, alpha values for this study were .61. Upon further review of students' responses to items on the behavioral engagement scale, alpha values increased to  $\alpha = .73$  when one of the reverse-coded items was removed (i.e., *When I am in class, I just act as if I am working*). During completion of this survey, many students sought clarification when answering this item and did not appear to understand the question. As a result, this question was excluded from the subscale analyses. In the present study, alpha values for psychological engagement and cognitive engagement were .89 and .88, respectively.

**Academic efficacy.** Items from the Patterns of Adaptive Learning Scale (PALS; Midgley, Maehr, Hruda, Anderman, Anderman, Freeman, et al., 2000) were used to measure students' perceptions of academic efficacy. Midgley and colleagues developed the PALS based on goal orientation theory in order to assess the relationships between the classroom environment and children's motivation, feelings, and behavior. Teacher and student versions are available; however, for the purposes of this study, only the student version was utilized. The PALS student version contains five scales designed to assess student's personal achievement goal orientations, perceptions of teacher's goals, perceptions of the goal structures in the classroom, perceptions of parents and home, and achievement-related beliefs, attitudes, and strategies. Participants in this study were asked to answer five questions comprising the *Academic Efficacy* subscale from the Achievement-Related Beliefs, Attitudes, and Strategies scale. Examples of questions within the subscale include, "*I'm certain I can master the skills taught in class this year*" and "*Even if the work is hard, I can learn it.*" Student responses are rated on a five-point Likert scale ranging from 1 = *Not At All True* to 5 = *Very True*.

Over the past decade, Midgley and colleagues (2000) have administered the PALS assessment to students in elementary, middle, and high school. Alpha values for subscales on the PALS range from .71 to .89 (*Academic Efficacy* subscale,  $\alpha = .78$ ). The alpha coefficient for this study was .83 for this study.

A summary of the internal consistencies for all study scales is reported in Table 2.

Table 2

*Cronbach Alpha Coefficients – Scaled Variables*

Scale and Subscales	Cronbach's $\alpha$
Network of Relationship Inventory	
Mother Support	.77
Father Support	.85
Teacher Support	.85
Mother Negative Interaction	.87
Father Negative Interaction	.87
Teacher Negative Interaction	.87
Relatedness Assessment	
Relatedness to Mother	.70
Relatedness to Father	.77
Relatedness to Teacher	.77
Student Engagement Measure	
Behavioral Engagement	.73
Psychological Engagement	.89
Cognitive Engagement	.88
Patterns of Adaptive Learning Scale	
Academic Efficacy	.83

**Data Collection Procedure**

The Human Investigations Committee at Wayne State University approved all procedures prior to data collection (Appendix A). Prior to the study, letters of support were also secured from administration at the school district where the research would be conducted (Appendix B).

Teachers and school staff were informed about the procedures of the study through email and their input was solicited during the planning phase to allow for minimal interruption to students' instructional time. Approximately two weeks before data collection began, parents were mailed an information sheet that detailed the study purpose, procedure, risks, benefits, confidentiality, and instructions on how to contact the principal investigator with questions (Appendix C). It also included a tear-off sheet which parents could use to decline consent for their child's participation in the study.

In order to decrease interruptions to core instruction, students were administered the assessment questions as an online survey as part of their typical computer class using SurveyMonkey and their school computers. The principal investigator visited each computer class at the designated date and time, and dismissed the teacher before speaking to the students about the research. The principal investigator then used a script to inform the students about the study (Appendix D). All students were given a choice of two free-time activities: silent reading or a typing activity they usually complete as part of computer class. Non-participating students were identified and allowed to begin these activities immediately. It was again noted to the remaining students that their participation in the study was voluntary, that their participation had no effect on their grades, and that they would not be treated any differently by teachers, school staff, or the principal investigator should they choose not to participate. Students were also informed that their responses would be anonymous and confidential.

Students who chose to participate in the study provided assent to the principal investigator by selecting "yes" to the first survey question, which asked, "*Do you want to fill out this survey?*" Participating students were automatically directed to the demographic questions, followed by the remaining survey questions, which were randomized (Appendix E). Students

were given a separate sheet containing age appropriate definitions to help them better understand the survey questions (Appendix F) and they were encouraged to raise their hand at any time to ask for assistance. Total administration time was approximately 30-40 minutes, and was completed in a single session. Student responses were stored in an encrypted database on the SurveyMonkey website. Access to the data was password protected and only accessible to the principal investigator.

### **Data Analysis Procedures**

Student data was collected and entered into an IBM SPSS v. 22 data file. Preliminary analyses (descriptive statistics and correlational analyses) were conducted for the study variables. Linear regression and Analysis of Variance procedures were used to evaluate data in response to the research questions. See Table 3 for a list of the research questions and corresponding statistical methods.

Table 3

*Research Questions, Hypotheses, and Statistical Analyses*

Research Questions and Hypotheses	Variables	Statistical Analysis
1. Are there significant gender, grade, or ethnicity differences in relationship quality?		
<p>H<sub>1a</sub>. Female and male students will report similar perceptions of relationship quality with their mothers and fathers; however, female students will report higher quality relationships with teachers in comparison to male students.</p> <p>H<sub>1b</sub>. Third, fourth, and fifth grade students will differ in their perceptions of teacher support, relatedness, and negative interaction.</p> <p>H<sub>1c</sub>: Student perceptions of support, relatedness, and negative interaction with parents and teachers will differ by ethnicity.</p>	<p><u>Criterion Variables:</u>  Mother Support  Mother Relatedness  Mother Negative Interaction  Father Support  Father Relatedness  Father Negative Interaction  Teacher Support  Teacher Relatedness  Teacher Negative Interaction</p> <p><u>Predictor Variables</u>  Grade  Gender  Ethnicity</p>	Multivariate Analysis of Variance
2. Are there significant gender, grade, or ethnicity differences in student engagement?		
<p>H<sub>2a</sub>. Female students will report higher levels of cognitive, psychological, and behavioral engagement than male students.</p> <p>H<sub>2b</sub>: Third, fourth, and fifth grade students will differ in their reports of engagement.</p> <p>H<sub>2c</sub>: Student ratings of cognitive, psychological, and behavioral engagement will differ by ethnicity.</p>	<p><u>Criterion Variables</u>  Cognitive Engagement  Psychological Engagement  Behavioral Engagement</p> <p><u>Predictor Variable</u>  Grade  Gender  Ethnicity</p>	Multivariate Analysis of Variance
3. Do teacher-student and parent-child relationship quality predict cognitive, psychological, and behavioral engagement?		
<p>H<sub>3a</sub>. Teacher support, relatedness, and negative interaction will predict student engagement.</p> <p>H<sub>3b</sub>: Parent support, relatedness, and negative interaction will predict student</p>	<p><u>Criterion Variables</u>  Cognitive Engagement  Psychological Engagement  Behavioral Engagement</p> <p><u>Predictor Variables</u></p>	Hierarchical Linear Regression

engagement.	Mother Support Mother Relatedness Mother Negative Interaction Father Support Father Relatedness Father Negative Interaction Teacher Support Teacher Relatedness Teacher Negative Interaction  <u>Mediating Variables</u> Grade Gender Ethnicity	
4. Do cognitive and psychological engagement precede behavioral engagement?		
H <sub>4</sub> . Cognitive and psychological engagement precedes behavioral engagement.	<u>Criterion Variable</u> Behavioral Engagement  <u>Predictor Variables</u> Cognitive Engagement Psychological Engagement	Path Analysis

## CHAPTER 4

### Results

The study of student engagement provides researchers with a valid framework for studying students' developmental contexts as they relate to academic outcomes (Fredricks et al., 2004; Pianta & Walsh, 1996; Reschly & Christenson, 2006a, 2006b). Student engagement is influenced by relationships, develops early in a child's schooling, and has implications for school success. The quality of relationships between teachers and students, and parents and students, has been shown to effect school functioning, including engagement. For example, students who feel comfortable with and use these adults as resources show positive attitudes and motivation in the classroom (Ryan et al., 1994). High quality parent-child relationships have also been found to affect children's motivational and emotional behavior (Avery & Ryan, 1988). This chapter presents the results of statistical analyses that were used to address the four research questions pertaining to this study. The goal of this study was to examine the association between parent-child and teacher-student relationship qualities of support, relatedness, and conflict and their association with students' cognitive, psychological, and behavioral engagement.

#### Preliminary Analyses

All variables were examined to determine if the variables were normally distributed. The distribution data obtained from 11 of 13 subscales were skewed: the Cognitive Engagement (minimal positive skew) and Behavioral Engagement (substantial negative skew) subscales of the Student Engagement Measure; the Mother Support (substantial negative skew), Father Support (substantial negative skew), Mother Negative Interaction (substantial positive skew), Father Negative Interaction (substantial positive skew), and Teacher Negative Interaction (substantial positive skew) subscales of the Network of Relationships Inventory; the Mother



Relatedness (substantial negative skew), Father Relatedness (substantial negative skew), and Teacher Relatedness (substantial negative skew) subscales of the Relatedness Assessment; and the Academic Efficacy (substantial negative skew) subscale of the Patterns of Adaptive Learning Scale. Overall, the skew of distribution was expected, as it was anticipated that most students would report positive engagement, perceptions of support, feelings of relatedness, and academic efficacy.

Participants who were missing at least 20% of data from the requisite variables were dropped from analyses, accounting for approximately 7% of the sample. Missing value analysis was performed to determine whether the remaining data were missing completely at random (MCAR) and did not meet the MCAR assumption (Little, 1988). However, participants with complete data did not differ from those with incomplete data on demographic variables or study variables, suggesting that the data were missing at random. To address the missingness, the expectation-maximization (EM) method was used to estimate all other missing data, as it has been shown to yield unbiased results when data are ordinal, skewed, and missing at random (Enders, 2003). Inferential statistical analyses were completed to test the research questions, using a criterion alpha level of .05 to determine statistical significance. Table 4 provides descriptive information for study variables. Pearson correlations for the study variables are given in Table 5.

Table 4

*Descriptive Statistics (N=311)*

	Mean	SD	Range	
			Minimum	Maximum
<b>Parent-Child Relationship Quality</b>				
Mother Support	3.97	.79	1	5
Father Support	3.63	.97	1	5
Mother Relatedness	3.47	.62	1	4
Father Relatedness	3.33	.76	1	4
Mother Negative Interaction	2.05	.93	1	5
Father Negative Interaction	1.99	.93	1	5
<b>Teacher-Student Relationship Quality</b>				
Teacher Support	2.71	.98	1	5
Teacher Relatedness	3.18	.80	1	4
Teacher Negative Interaction	1.73	.91	1	5
<b>Student Engagement</b>				
Cognitive Engagement	2.85	1	1	5
Psychological Engagement	3.21	1.08	1	5
Behavioral Engagement	3.92	.75	1	5
Academic Efficacy	3.88	.81	1	5

Given that most of study variables do not approximate a normal distribution, Spearman's correlations were also calculated. While the findings were generally similar to those found for Pearson correlations, several differences were noted. Teacher Support was significantly positively correlated with Mother Relatedness ( $r = .12, \rho < .01$ ). Mother Negative Interaction was significantly negatively correlated with Cognitive Engagement ( $r = -.13, \rho < .05$ ). Father Negative Interaction was significantly negatively correlated with Psychological Engagement ( $r = -.14, \rho < .05$ ), while Teacher Negative Interaction was significantly negatively correlated with Academic Efficacy ( $r = -.13, \rho < .05$ ). Father Relatedness was not significantly correlated with Cognitive Engagement ( $r = .11$ ), but it was significantly positively correlated with Psychological Engagement ( $r = .11, \rho < .05$ ).

Table 5  
Intercorrelation Matrix for Study Variables

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Mother Support													
2. Father Support	.48**												
3. Teacher Support	.25**	.28**											
4. Mother Negative Interaction	-.12*	-.15**	.05										
5. Father Negative Interaction	.06	-.19**	.08	.54**									
6. Teacher Negative Interaction	.08	.03	-.22**	.30**	.24**								
7. Mother Relatedness	.42**	.20**	.09	-.41**	-.15**	-.23**							
8. Father Relatedness	.14*	.53**	.04	-.26**	-.44**	-.23**	.45**						
9. Teacher Relatedness	.08	.10	.51**	-.15**	-.09	-.56**	.35**	.32**					
10. Cognitive Engagement	.17**	.27**	.40**	-.10	-.12*	-.10	.08	.11*	.18**				
11. Psychological Engagement	.14**	.18**	.50**	-.13*	-.11	-.34**	.17**	.11	.44**	.66**			
12. Behavioral Engagement	.17**	.26**	.27**	-.20**	-.09	-.38**	.20**	.24**	.31**	.46**	.47**		
13. Academic Efficacy	.21**	.30**	.26**	-.17**	-.04	-.15**	.24**	.18**	.20**	.49**	.41**	.45**	

Note. \*p < .05; \*\*p < .01

## Research Questions

**Research question 1:** Are there significant gender, grade, or ethnicity differences in relationship quality?

**H1a:** Female and male students will report similar perceptions of relationship quality with their mothers and fathers; however, female students will report higher quality relationships with teachers in comparison to male students.

**H1b:** Third, fourth, and fifth grade students will differ in their perceptions of teacher support, relatedness, and negative interaction.

**H1c:** Student perceptions of support, relatedness, and negative interaction with parents and teachers will differ by ethnicity.

A multivariate analysis of variance was completed to test the hypothesis that student engagement differs by gender, grade, and ethnicity. Box's M was used to test the assumption that within-group covariance matrices were equal. Results were significant, indicating that this assumption was not met,  $Box's M = 962.75, F(450, 12938.93) = .157, \rho = < .001$ . Although Box's M is known to be robust despite this violation, results should be interpreted with this in mind. Results of this analysis are presented in Table 6.

Differences in relationship quality according to gender, grade, and ethnicity were examined with a 2 x 3 x 5 MANOVA. No significant effects were found for the main effects of gender or ethnicity; however, the interaction effect (gender x ethnicity) was statistically significant,  $F(36, 1108) = 1.5, \rho = .030, \eta^2 = .05$ . Conversely, the main effect for grade level was statistically significant,  $F(18, 550) = 2.13, \rho = .004, \eta^2 = .07$ , while the grade and ethnicity interaction effect was not significant.

Table 6

*Multivariate Analysis of Variance: Relationship Quality by Gender, Grade, and Ethnicity*

	Pillai's Trace	F Ratio	DF	$\eta^2$
Gender	.05	1.68	9, 274	.05
Grade	.13	2.13**	18, 550	.07
Ethnicity	.16	1.28	36, 1108	.04
Gender x Grade	.06	.96	18, 550	.03
Gender x Ethnicity	.19	1.50*	36, 1108	.05
Grade x Ethnicity	.31	1.27	72, 2248	.04
Gender x Grade x Ethnicity	.21	1.34	54, 1674	.04

Note. \* $p < .05$ ; \*\* $p < .01$

To explore the grade level group differences in relationship quality more specifically, between subjects testing procedures were performed. These results are included in Table 7. Results of between subject analyses for the interaction effect of gender and ethnicity are listed in Table 8. The assumption of homogeneity of variances was tested using Levene's  $F$  test. Results supported this assumption for all measures of relationship quality except for mother relatedness,  $F(27, 282) = 1.98$ ,  $p = .003$ , father negative interaction,  $F(27, 282) = 1.80$ ,  $p = .010$ , and teacher negative interaction,  $F(27, 282) = 2.57$ ,  $p < .001$ .

Table 7

*Between Subjects Analysis - Relationship Quality by Grade*

	$M$	$SD$	Sum of Squares	Mean Square	$F$ -Ratio	$\eta^2$
Mother Support			2.11	1.05	1.82	.01
Third	3.67	.13				
Fourth	4.21	.15				
Fifth	3.12	.08				
Mother Relatedness			.97	.48	.28	.01
Third	3.14	.10				
Fourth	3.47	.12				
Fifth	3.47	.07				
Mother Negative Interaction			3.86	1.93	2.29	.02
Third	2.27	.16				
Fourth	2.05	.18				
Fifth	1.98	.10				

Father Support			6.42	3.21	3.54*	.02
Third	3.54	.16				
Fourth	3.98	.18				
Fifth	3.45	.10				
Father Relatedness			2.51	1.26	2.14	.02
Third	3.13	.13				
Fourth	3.48	.15				
Fifth	3.34	.08				
Father Negative Interaction			3.13	1.57	1.88	.01
Third	2.11	.16				
Fourth	1.97	.17				
Fifth	1.91	.10				
Teacher Support			16.02	8.01	9.17**	.06
Third	3.00	.16				
Fourth	2.94	.18				
Fifth	2.43	.10				
Teacher Relatedness			1.03	.52	.79	.01
Third	3.27	.14				
Fourth	3.30	.15				
Fifth	3.13	.09				
Teacher Negative Interaction			2.08	1.04	1.28	.01
Third	1.49	.15				
Fourth	1.92	.17				
Fifth	1.77	.10				

Note. Grade  $DF = 2, 282$ ; \* $p < .05$ ; \*\* $p < .001$

Table 8

*Between Subjects Analysis – Interaction Effects of Gender and Ethnicity*

	Sum of Squares	Mean Square	F-Ratio	$\eta^2$
Gender x Ethnicity				
Mother Support	9.34	2.33	4.04*	.05
Mother Relatedness	1.90	.47	1.25	.01
Mother Negative Interaction	8.19	2.05	2.43	.03
Father Support	6.56	1.64	1.81	.03
Father Relatedness	3.45	.86	1.47	.02
Father Negative Interaction	4.74	1.19	1.42	.02
Teacher Support	2.76	.69	.79	.01
Teacher Relatedness	1.51	.38	.58	< .01
Teacher Negative Interaction	3.00	.75	.92	.01

Note. Gender x Ethnicity  $DF = 4, 282$ ; \* $p < .01$

Between-subjects tests showed that grade level was related to students' perceptions of support from fathers,  $F(2, 282) = 3.54, \rho < .05$ , and teachers,  $F(2, 282) = 9.17, \rho < .001$ . However, post-hoc testing for measures of relationship quality using Tukey's HSD provided no evidence of differences between the three grade levels on perceptions of father support. A statistically significant difference was found for teacher support between the groups. Third grade students reported greater perceptions of teacher support than students in fourth (mean difference = .40,  $\rho < .05$ ) and fifth grade (mean difference = .70,  $\rho < .001$ ). Difference in perceptions of teacher support between fourth and fifth grade students was not statistically significant. Meanwhile, the results of the between subjects analyses (Table 8) indicate a statistically significant interaction effect for gender and ethnicity on ratings of mother support ( $\rho < .01$ ). Males ( $N = 10$ ) in the "Other/Non-White" group (Asian/Pacific Islander and American Indian/Alaskan Native) reported receiving much more support from their mothers compared to females ( $N = 1$ ), although they both perceived similar levels of conflict. Given the small size of this group, this significant finding is difficult to interpret.

**Research question 2:** Are there significant gender, grade, or ethnicity differences in student engagement?

**H2a:** Female students will report higher levels of cognitive, psychological, and behavioral engagement than male students.

**H2b:** Third, fourth, and fifth grade students will differ in their reports of engagement.

**H2c:** Student ratings of cognitive, psychological, and behavioral engagement will differ by ethnicity.

Differences in student engagement according to gender, grade, and ethnicity were examined with a 2 x 3 x 5 MANOVA. Box's M was used to test the assumption that within-

group covariance matrices were equal. Results were not significant, indicating that this assumption was met ( $Box's M = 142.29$ ,  $F(114, 6799.12) = 1.06$ ,  $\rho = .324$ ). Levene's homogeneity of variance tests were performed and confirmed assumptions of homogeneity for all scales. Results of the MANOVA are presented in Table 9.

Table 9

*Multivariate Analysis of Variance: Student Engagement by Gender, Grade, and Ethnicity*

	Pillai's Trace	F Ratio	DF	$\eta^2$
Gender	< .01	.18	3, 280	< .01
Grade	.16	8.35**	6, 564	.08
Ethnicity	.10	2.30*	12, 846	.03
Gender x Grade	.03	1.19	6, 562	.01
Gender x Ethnicity	.05	1.14	12, 846	.02
Grade x Ethnicity	.06	.76	24, 846	.02
Gender x Grade x Ethnicity	.08	1.30	18, 846	.03

Note. \* $\rho < .01$ ; \*\* $\rho < .001$

As shown in Table 9, the results indicate that the main effects of grade,  $F(6, 562) = 8.35$ ,  $\rho < .001$ ,  $\eta^2 = .08$ , and ethnicity,  $F(12, 846) = 2.30$ ,  $\rho = .007$ ,  $\eta^2 = .03$ , significantly impact student engagement (grade,  $\rho < .001$ ; ethnicity,  $\rho < .01$ ). The main effect of gender was not statistically significant, nor was the interaction effect of gender, grade, and ethnicity. Between subjects analyses were interpreted in order to more specifically examine the group differences found in student engagement according to grade and ethnicity. Results are presented in Tables 10 and 11.

Table 10

*Between Subjects Analyses – Student Engagement by Grade*

	M	SD	Sum of Squares	Mean Square	F-Ratio	$\eta^2$
Cognitive Engagement			17.25	8.63	9.81*	.07
Third Grade	3.27	.16				
Fourth Grade	3.30	.18				
Fifth Grade	2.60	.10				



Psychological Engagement			19.00	9.50	9.56*	.06
Third Grade	3.79	.17				
Fourth Grade	3.10	.19				
Fifth Grade	2.92	.11				
Behavioral Engagement			2.62	1.31	2.56	.02
Third Grade	3.93	.12				
Fourth Grade	4.10	.14				
Fifth Grade	3.75	.08				

Note. Grade  $DF = 2, 282$ ; \* $p < .001$

Results of between subjects tests revealed statistically significant differences in cognitive and psychological engagement by grade level (significant at  $p < .001$  for both scales), but no significant differences in behavioral engagement. Post hoc testing using Tukey's HSD further showed that third and fourth grade students reported greater cognitive engagement than fifth grade students ( $p < .001$ ). No statistically significant differences in cognitive engagement were found between third and fourth grade students. Results of post hoc testing also indicated that third grade students reported higher psychological engagement than fourth (mean difference = .74,  $p < .001$ ) or fifth grade students (mean difference = .96,  $p < .001$ ). The difference between the fourth and fifth grade students was not statistically significant.

Table 11

*Between Subjects Analyses – Student Engagement by Ethnicity*

	<i>M</i>	<i>SD</i>	Sum of Squares	Mean Square	<i>F</i> -Ratio	$\eta^2$
Cognitive Engagement			10.84	2.71	3.08*	.04
Black/African American	3.71	.23				
Hispanic	2.96	.14				
White	3.00	.09				
Other/Non-White	2.71	.37				
Multiracial	2.82	.15				
Psychological Engagement			9.70	2.43	2.44	.03
Black/African American	3.69	.25				
Hispanic	3.41	.15				
White	3.27	.09				
Other/Non-White	2.47	.39				
Multiracial	3.31	.16				

Behavioral Engagement			3.18	.80	1.55	.02
Black/African American	4.04	.18				
Hispanic	3.99	.11				
White	4.07	.07				
Other/Non-White	3.64	.28				
Multiracial	3.79	.11				

Note. Grade  $DF = 4, 282$ ; \* $p < .05$

Between subjects tests showed that ethnicity is also related to differences in students' cognitive engagement ( $p < .05$ ), but no statistically significant differences were found in psychological or behavioral engagement. Post hoc testing using Tukey's HSD was utilized to further examine group differences in cognitive engagement. Results showed that African American students reported the greatest degree of cognitive engagement ( $M = 3.71, SD = .23$ ), which was significantly more than Caucasian ( $M = 3.00, SD = .09$  difference = .68,  $p < .01$ ) or Multiracial students ( $M = 2.82, SD = .15, p < .01$ ). No other statistically significant differences in cognitive engagement were found between groups.

**Research question 3:** Do teacher-student and parent-child relationship quality predict cognitive, psychological, and behavioral engagement?

**H3a:** Teacher support, relatedness, and negative interaction will predict student engagement.

**H3b:** Parent support, relatedness, and negative interaction will predict student engagement.

To test the hypothesis that relationship quality predicts student engagement, a hierarchical regression analysis was conducted. In order to control for the effects of grade and ethnicity, these variables were entered first as predictors. The variables of mother and father support, relatedness, and negative interaction were entered into the second step, while the variables assessing teacher-student relationship quality were entered into the third step. Separate

analyses were completed for each dependent variable (cognitive engagement, psychological engagement, behavioral engagement).

Results of the analysis reveal that in step 1, the variables of grade and ethnicity were significant and explained 12% of the variance in cognitive engagement,  $R^2_{adj} = .12$ ,  $F(2, 308) = 12.84$ ,  $\rho < .001$ . In step 2, six variables of parent-child relationship quality explained an additional 5% of variance,  $R^2_{adj} = .17$ ,  $F(8, 302) = 9.07$ ,  $\rho < .001$ . The three teacher-student relationship quality variables explained an additional 6% of the variance in cognitive engagement,  $R^2_{adj} = .23$ ,  $F(11, 299) = 9.50$ ,  $\rho < .001$ . Overall, these predictors all together explain 23% of the variance in cognitive engagement. In this model, teacher support was a significant predictor of cognitive engagement,  $\beta = .31$ ,  $t = 4.62$ ,  $\rho < .001$ . The other variables were not found to be statistically significant. See Table 12 for results.

Table 12

*Hierarchical Regression Analysis: Parent-Child and Teacher-Student Relationship Quality on Cognitive Engagement*

Predictor	$\beta$	Adjusted $R^2$	$R^2 \Delta$	$F$
Step 1.		.12	.12*	21.84*
Grade	-.23*			
Ethnicity	-.08			
Step 2.		.17	.07*	9.07*
Mother Support	.04			
Mother Relatedness	.03			
Mother Negative Interaction	-.02			
Father Support	.13			
Father Relatedness	-.01			
Father Negative Interaction	-.10			
Step 3.		.23	.07*	9.50*
Teacher Support	.31*			
Teacher Relatedness	-.07			
Teacher Negative Interaction	-.03			

Note.  $df = 11, 299$ , \* $\rho < .001$

Next, hierarchical regression analysis was used to examine the impact of parent and teacher relationship quality on psychological engagement. In step 1, grade and ethnicity were significant, explaining 12% of the variance in psychological engagement,  $R^2_{adj} = .12$ ,  $F(2, 308) = 23.03$ ,  $p < .001$ . In step 2, the variables of mother and father relationship quality explain an additional 5% of its variance,  $R^2_{adj} = .17$ ,  $F(8, 301) = 8.74$ ,  $p < .001$ . In step 3, the variables assessing teacher-student relationship quality further explain 18% of the variance in psychological engagement,  $R^2_{adj} = .35$ ,  $F(11, 299) = 16.12$ ,  $p < .001$ . Together, these variables explain 35% of the variance in psychological engagement. Results are presented in Table 13.

Teacher support,  $\beta = .25$ ,  $t = 4.08$ ,  $p < .001$ , and teacher relatedness,  $\beta = .19$ ,  $t = 2.73$ ,  $p < .01$ , contributed significantly to the model of psychological engagement. Furthermore, negative interaction with teachers is a significant predictor within this model,  $\beta = -.15$ ,  $t = -2.57$ ,  $p < .05$ .

Table 13

*Hierarchical Regression Analysis: Parent-Child and Teacher-Student Relationship Quality on Psychological Engagement*

Predictor	$\beta$	Adjusted $R^2$	$R^2 \Delta$	$F$
Step 1.		.12	.13***	12.03***
Grade	-.24***			
Ethnicity	-.02			
Step 2.		.17	.06**	8.74***
Mother Support	.04			
Mother Relatedness	.06			
Mother Negative Interaction	-.01			
Father Support	.08			
Father Relatedness	-.10			
Father Negative Interaction	-.08			
Step 3.		.35	.18***	16.12***
Teacher Support	.25***			
Teacher Relatedness	.19**			
Teacher Negative Interaction	-.15*			

Note.  $df = 11, 299$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

The third regression analysis tested the predictability of behavioral engagement by relationship quality. Grade and ethnicity entered into step 1 were not significant,  $R^2_{adj} = .01$ ,  $F(2, 308) = 2.22$ ,  $\rho = .111$ , explaining 1% of the variance in behavioral engagement. On step 2 of the analysis, the six variables of parent-child relationship quality were significant,  $R^2_{adj} = .10$ ,  $F(8, 302) = 5.41$ ,  $\rho < .001$ , and explained an additional 9% of the variance in behavioral engagement. The teacher-student relationship quality variables listed were also significant,  $R^2_{adj} = .23$ ,  $F(11, 299) = 9.21$ ,  $\rho < .001$ , explaining another 13% of its variance. In all, the variables within this model account for 23% of the variance in behavioral engagement. Father support was identified as a significant predictor of behavioral engagement,  $\beta = .31$ ,  $t = 4.62$ ,  $\rho < .001$ . In addition, teacher conflict was a significant predictor of behavioral engagement,  $\beta = -.35$ ,  $t = -5.39$ ,  $\rho < .001$ . The other variables were not found to be statistically significant. See Table 14 for results.

Table 14

*Hierarchical Regression Analysis: Parent-Child and Teacher-Student Relationship Quality on Behavioral Engagement*

Predictor	$\beta$	Adjusted $R^2$	$R^2 \Delta$	$F$
Step 1.		.01	.01	2.22
Grade	-.08			
Ethnicity	-.08			
Step 2.		.10	.11**	5.41**
Mother Support	.02			
Mother Relatedness	.05			
Mother Negative Interaction	-.17			
Father Support	.15*			
Father Relatedness	.14			
Father Negative Interaction	.11			
Step 3.		.23	.13**	9.21**
Teacher Support	.11			
Teacher Relatedness	-.00			
Teacher Negative Interaction	-.35**			

Note.  $df = 11, 299$ , \* $\rho < .05$ , \*\* $\rho < .001$

**Research question 4:** Do cognitive engagement and psychological engagement precede behavioral engagement?

**H4:** Cognitive and psychological engagement precedes behavioral engagement.

To investigate whether behavioral and psychological engagement precede cognitive engagement, a path model was tested using Mplus Version 7.2 (Muthen & Muthen, 1998-2014). Absolute and incremental fit indices for the model were adequate, with a comparative fit index (CFI) value of .92 and a root mean square error of approximation (RMSEA) value of .07. The standardized root mean square residual (SRMR) was also acceptable, yielding a value of .06. In contrast, the significance value of the model Chi-Square implies poor fit,  $p < .001$ . Although the Chi-Square test is traditionally used for determining overall model fit, it is known to be sensitive to sample size, often rejecting models with samples exceeding approximately 200 (Hooper, Coughlan, & Mullen, 2008). To reduce the impact of sample size in determining model deviance, the relative chi-square ( $\chi^2/df$ ) was calculated and found to be acceptable,  $\chi^2(149) = 2.48$ . The results from the combination of fit indices suggest that the proposed model seems plausible, although other models may exist that provide alternative explanations for the relations between these variables.

The resulting measurement model, corresponding path coefficients, and standardized regression weights are presented in Figure 2. Most were significant at  $p < .001$ , with exception of the third item within the Behavioral Engagement scale (i.e., *When I am in class, I just act as if I am working*), which was significant at  $p < .05$ . Results indicate that cognitive engagement,  $\beta = .29$ ,  $SE = .10$ ,  $p < .01$ , and psychological engagement,  $\beta = .37$ ,  $SE = .10$ ,  $p < .001$ , are significantly related to behavioral engagement. Together, cognitive and psychological

engagement account for 38% of the variance in behavioral engagement,  $R^2 = .38$ ,  $SE = .06$ ,  $\rho < .001$ .

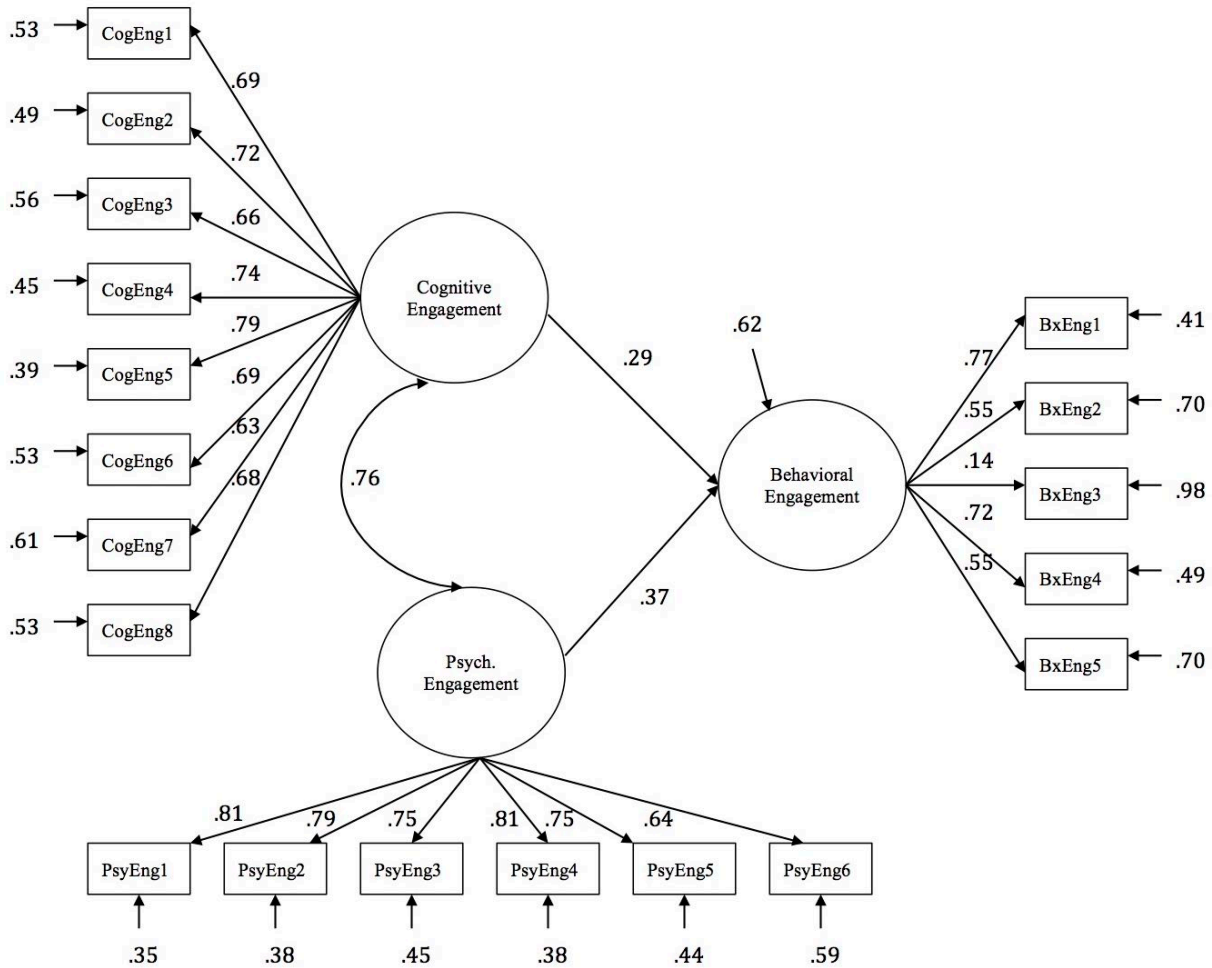


Figure 1. Confirmed model for the interactions of cognitive and psychological engagement on behavioral engagement.

## CHAPTER 5

### Discussion

Student engagement has been, and continues to be, an important topic in the field of education, particularly as it relates to achievement and school completion. It is increasingly relevant in today's culture, where the educational system struggles to meet the diverse needs and interests of our young learners, some teachers are faced with the task of demonstrating their effectiveness through student achievement, and many students experience boredom and withdrawal as they advance in grade level (Eccles et al., 1984; Finn, 1989; Fredricks & Eccles, 2002; Twenge, 2009; Willms, 2003). Student engagement has been identified as an area that is responsive to educators' intervention efforts and is a promising avenue for preventing disengagement and its related negative outcomes (e.g., problem behavior, low academic achievement, delinquency, etc.) (Appleton et al., 2006; Finn, 1989; Fredricks et al., 2004). However, parent-child and teacher-student relationships have been shown to effect school functioning, and may be a valuable tool in promoting student engagement.

The purpose of this study was to examine the qualities of support, relatedness, and negative interaction within parent-child and teacher-student relationships and their association with cognitive, psychological, and behavioral engagement. Additionally, this study explored the contributions of cognitive and psychological engagement on behavioral engagement. The role of gender, grade, and ethnicity on relationship quality and engagement was also considered.

The first research question examined whether there were significant differences in students' perceptions of relationship quality according to gender, grade level, and/or ethnicity. It was hypothesized that female and male students would report similar perceptions of support, relatedness, and negative interactions with their mothers and fathers. Conversely, it was



expected that female students would endorse higher quality relationships with teachers in comparison to male students. It was also anticipated that student perceptions of parent and teacher relationship quality would differ by grade level and ethnicity. These hypotheses were tested using multivariate analysis of variance.

Surprisingly, gender was not significant in accounting for differences in students' perception of relationship quality. These findings are perplexing, given that the literature has widely documented the finding that female students often report experiencing more positive relationships with their teachers than male students, regardless of grade level (e.g., Demaray & Malecki, 2002; Hamre & Pianta, 2001; Hughes & Kwok, 2007; Ryan et al., 1994). Rueger and colleagues (2008) found that gender did not impact students' perceptions of parent or teacher support among students in sixth through eighth grade. As expected, there were significant grade level differences in ratings of teacher-student relationship quality. Third grade students reported greater perceptions of teacher support than students in fourth and fifth grade. Likewise, they also reported having stronger feelings of relatedness to their teachers than did fifth grade students. Student perceptions of conflict with teachers also differed by grade level, with fourth grade students endorsing more negative interactions than students in third grade. Grade level differences in ratings of parent-child relationship quality were not significant in this study.

Ethnicity alone was not related to students' perceptions of parent-child or teacher-student relationship quality. Although the interaction of gender and ethnicity on ratings of maternal support and conflict was significant, results are difficult to interpret due to the small sample size.

The results from this study provide limited support for the hypotheses that perceptions of relationship quality differ by gender, grade, and ethnicity. Consistent with previous research (e.g., Goodenow, 1993; O'Connor & McCartney, 2007; Reddy, Rhodes, & Mulhall, 2003),

students' ratings of teacher support, relatedness, and conflict differed by grade, with younger students reporting more positive perceptions of the teacher-student relationship than older students. There may be several explanations for this. This may be indicative of larger class sizes or an increased focus on curricular content, rather than relational interaction, associated with later elementary school (O'Connor & McCartney, 2007). Jerome and colleagues (2009), who found that teachers also report declines in their relationships with students over time, speculate that this may reflect the changing role of the teacher in students' support networks, increases in teacher-directed instruction and independent student work. It is possible that the decline in teacher-student relationships often associated with adolescence may form its roots in late childhood (O'Connor & McCartney, 2007). Likewise, these findings may be an indicator that older children seek support from other sources within their social networks, like peers, rather than through relationships with teachers. Goodenow (1993) also suggests that as students move through grade levels and form stable perceptions of their abilities, they may rely less on external factors, like support from teachers, for input on their skill development and academic competency.

These findings conflict with previous research examining gender and ethnic differences in perceptions of parent-child and teacher-student relationship quality. When assessing student perceptions of relationship quality, Murray-Harvey (2010) found that girls reported greater perceptions of teacher support than boys. Similarly, Demaray and Malecki (2002) found that boys and girls reported similar levels of parent support, while girls tended to perceive greater support from teachers. They also found ethnic differences in students' ratings of teacher-student relationship quality, with Caucasian students reporting much more teacher support than Hispanic students. Murray and colleagues (2008) assessed teacher and student perceptions of relationship

quality and its effect on school adjustment. Interestingly, they found that teachers reported giving greater support to Hispanic and Caucasian students in comparison to African American student, although student ratings of teacher-student relationship quality did not differ significantly by ethnicity. Likewise, Wu and colleagues (2010) reported similar results in their study examining teacher-student relationship types based on student and teacher ratings of support and conflict. Their results showed that African American students were overrepresented in groups where both student and teacher reports endorsed low levels of support and high levels of conflict, as well as in groups where teachers reported a high degree of conflict but students perceived adequate teacher support.

Many studies documenting gender and ethnic differences in parent-child and teacher-student relationship quality have relied only on adult perceptions of support and conflict with children (e.g., Jerome et al., 2008; Hughes & Kwok, 2007; Hughes et al., 2008). While the results from the current study conflict with previous research examining the impact of these variables on relationship quality, this study contributes to the existing literature through its use of child-report measures to assess perceptions of support, relatedness, and conflict within parent-child and teacher-student relationships. The differences in findings may exist for several reasons. Although students have different ethnic backgrounds, the shared experience of the school community may create a common culture from which to build the teacher-student relationship. Furthermore, it is also possible that the gender and ethnic differences found in student ratings of parent-child relationships may result from differences in parent involvement, perhaps reflecting contextual stressors experienced more directly by the parent and indirectly by the child via the parent-child relationship.

Research question two was concerned with whether there were differences in student engagement according to gender, grade, and/or ethnicity. It was hypothesized that female students would endorse greater cognitive, psychological, and behavioral engagement than male students. Further, it was expected that students' ratings of engagement would vary based on grade level and ethnicity.

While gender has commonly been associated with differences in student engagement within the literature (e.g., Marks, 2000; Skinner et al., 2009), the results from this study did not support a significant role for gender in students' reported perceptions of engagement. Cognitive and psychological engagement appeared to differ most significantly by grade and ethnicity. In contrast, no group differences were evident in ratings of behavioral engagement. Third and fourth grade students reported more cognitive engagement than fifth grade students. Additionally, students in third grade endorsed greater psychological engagement than students in fourth or fifth grade. Grade-based differences in engagement are consistent with previous research by Skinner and colleagues (2009), who found that younger students tend to have higher levels of psychological engagement than older students. Marks (2000) and Fredricks and Eccles (2002) also reported declines in indicators of cognitive engagement as students advance through grade levels. Meanwhile, Fredricks and colleagues (2004) found decreases in all types of engagement from third to fifth grade.

Among the students sampled in this study, African Americans evidenced greater levels of cognitive engagement than Caucasian or Multiracial students, although no differences were found in ratings of psychological or behavioral engagement. While Lee and Smith (1995) also found positive associations between minority status and engagement in academic work, many studies examining the relationship between ethnicity and engagement have yielded negative

associations. Earlier research has documented lower engagement and higher disengagement in African American students compared to Caucasian students; however, other studies have suggested that these differences may be due to socioeconomic factors or age rather than ethnic background (Marks, 2000; Randolph et al., 2004). Socioeconomic factors were not examined within this study, but may be worth examining in future studies. Although socioeconomic data was not collected from the participants in this study, community data from the United States Census Bureau (2010) indicated a median income of \$16,418 with 32.7% of persons earning an income below the poverty level.

The third research question explored the degree to which parent-child and teacher-student relationship quality predicted cognitive, psychological, and behavioral engagement. It was hypothesized that qualities of parent support, relatedness, and negative interaction would predict student engagement. Additionally, it was expected that teacher support, relatedness, and negative interaction would predict engagement. These hypotheses were tested using hierarchical regression analyses, controlling for grade and ethnicity, and were partially supported.

The combination of variables was found to account for 23% of the variance in cognitive engagement, 35% of the variance in psychological engagement, and 23% of the variance in behavioral engagement. Teacher support contributed significantly to the model for cognitive and psychological engagement, while teacher relatedness and conflict were also important predictors of psychological engagement. Student perceptions of paternal support and teacher conflict predicted behavioral engagement, while grade and ethnicity did not contribute significantly to the model.

The finding that teacher-student relationship quality is associated with student engagement is consistent with current research (Hamre & Pianta, 2001; Davis, 2006; Skinner at

al., 2009; Klem & Connell, 2004). In general, these results provide further evidence that qualities of support and relatedness within the teacher-student relationship are related to higher ratings of all types of engagement, while the presence of conflict is associated with lower psychological and behavioral engagement. Importantly, the variables of support and relatedness within teacher-student relationships made unique contributions to student engagement even after controlling for student characteristics (e.g., grade, ethnicity) and parent-child relationship qualities. Taken together, these results support findings from other investigations of teacher-student relationship quality and its impact on student engagement (Murray, 2009; Ryan et al., 1994; Wentzel, 1998).

Also interesting was significant associations between maternal support and all types of engagement; however, mother support was not identified as a significant predictor of engagement in this model. Similar results were found for students' sense of relatedness to their mothers and fathers. Given the wealth of data supporting the association between parent-child relationships and student engagement, it was anticipated that parent-child relationship qualities would play a stronger role in predicting cognitive, psychological, and behavioral engagement. While positive parent-child relationships are undoubtedly important for promoting positive school outcomes, it is also possible that student engagement may be specific to the school setting and influenced by context-specific support. Previous studies have neglected to examine the impact of parent *and* teacher relationship quality on the subtypes of student engagement. The results of this study further highlight the significance of high quality-teacher student relationships in fostering engagement.

Research question four examined the extent to which cognitive and psychological engagement precede behavioral engagement. Results of path analysis provided adequate support

for the proposed model of engagement, revealing that cognitive and psychological engagement contribute significantly to behavioral engagement. While the results of this study support the importance of examining multiple indicators of student engagement, it also raised questions about the multidimensional nature of engagement and its measurement.

Engagement is a complex construct that likely encompasses observed and unobserved characteristics, which vary depending on the learner and their context. Historically, much of the research on school engagement has focused on measuring the behavioral aspects of engagement, such as students' grades, attendance, and participation in school activities (Jimerson et al., 2003). More recently, research has also taken an interest in examining internal indicators of engagement, such as feelings of belonging and interest in learning, which has led to the conceptualization of engagement as a meta-construct that connects several fields of study (Appleton et al., 2006; Fredricks et al., 2004). Correlational data obtained from this study revealed moderate but significant associations between cognitive, psychological, and behavioral engagement, suggesting that they are distinct forms of engagement. Researchers have stressed the importance of examining the subtypes of engagement individually, particularly when creating interventions for students, as each subtype is valuable for school performance (Appleton et al., 2008; Fredricks et al., 2004). For example, in their review of literature on student engagement, Appleton and colleagues (2008) found that cognitive engagement is associated with motivation and goal orientation, psychological engagement is linked to greater participation in and feelings of belonging at school, and behavioral engagement is related to completion of schoolwork and compliance with classroom and school rules. Lowe and Dotterer (2013) also recommend studying the subtypes of engagement separately in order to measure the unique effects of particular relationship variables on each form of engagement.

However, although enticing, this relatively new framework of engagement continues to be difficult to accurately define and assess due to considerable overlap in the conceptualization of its various subtypes. Further research is needed to more closely examine the distinctions between the subtypes of engagement, and to support the validity of this model. Finally, although cognitive and psychological engagement contributed significantly to the model for behavioral engagement, their effects were small. These findings suggest that it may be more fruitful to examine which intra-individual and environmental factors contribute to the formation of each subtype of engagement across the school years, as opposed to determining the sequence in which the subtypes develop.

### **Implications for Practitioners and Educators**

As schools continue to search for ways to promote and maintain high academic standards for students, interest in the topic of student engagement has also continued to grow. Student engagement is strongly associated with positive school outcomes, and has been identified as a variable within the learning environment that is responsive to educators' intervention efforts (Appleton et al., 2006; Finn, 1989; Fredricks et al., 2004). The findings of the present study indicate that one way to promote student engagement may be through building supportive teacher-student relationships.

Supportive and nurturing relationships with adults are necessary for successful developmental outcomes, and this is especially true in regards to teacher-student relationships. Students who have high quality relationships with teacher tend to experience better school outcomes than those without such relationships (Demaray & Malecki, 2002). With increasing curriculum demands and accountability for student performance and achievement, many teachers experience less opportunity to foster personal relationships with their students. Yet, it is through



these interactions and personal connections with teachers that many students become engaged with learning, which is important for academic success. These relational processes are important aspects of the school context and have a lasting impact on students' educational outcomes (Hamre & Pianta, 2001). As a result, educators who have knowledge of the impact of supportive teacher-student relationships on student engagement must focus their efforts on incorporating this information into partnerships with school personnel, perhaps through personal learning communities or school improvement initiatives.

This shift also presents a unique opportunity for school counselors, social workers, and school psychologists to impact student engagement. School psychologists are knowledgeable about assessment and intervention implementation, as well as contextual systems and their influences on developmental outcomes. As a result, they can offer expertise in measuring students' perceptions of support within their network of relationships and advocate for prevention and intervention programs to promote supportive teacher-student interactions. School psychologists can also consult with teachers and school staff to provide education on the impact of the teacher-student relationship quality on students' school outcomes. Furthermore, school psychologists can expand their traditional role by providing intervention directly through counseling, mentoring, or facilitating peer-to-peer support programs to help students establish positive interpersonal relationships and learn how to access the support they need.

### **Limitations of the Study and Directions for Future Research**

This study was completed to examine the role of parent-child and teacher-student relationship quality on school engagement in a sample of upper elementary students. Given the continued interest in engagement within the field of education, this study contributes to the existing research on adult-child relationship quality and its impact on three subtypes of

engagement. However, the findings obtained from the present study should be interpreted with several methodological limitations kept in mind.

This study relied exclusively on self-reported data from students, which allowed them to share information and perspectives that may not have been observable otherwise. While past research has found similarity between student and teacher ratings of relationship quality and engagement (e.g., Pianta, 1999; Skinner et al., 2009), it is nonetheless important to gather information from multiple sources. Obtaining input from teachers and parents would have been especially helpful in this study, as many students reported having difficulty understanding several questions within the measures used. Future research in this area may wish to consider including measures of parent and teacher perceptions of relationship quality and student engagement, utilizing observational data, or student interview methods. Additionally, given the increasing importance of peer relationships throughout child development, it would have been beneficial to examine the impact of peer relationship quality as well. While relationship quality has been consistently associated with student engagement, it has also been suggested that engagement, especially in the elementary grades, is associated with students' previous experiences of school success (Marks, 2000). This may also be an interesting variable to consider in future studies.

As mentioned previously, many students stated that they did not understand several questions asked within the Network of Relationships Inventory and Student Engagement Measure. Students reported having the greatest difficulty answering the reverse-coded items of the SEM, particularly the question asking *When I am in class, I just act as if I am working*. Similarly, the visual appearance of the questionnaire created through SurveyMonkey.com appeared challenging for students to follow. This was most apparent for items on the

Relatedness Assessment, as there was one question number each for mother relatedness, father relatedness, and teacher relatedness, but four actual questions beneath each number. Not surprisingly, the Relatedness Assessment had the largest amount of missing data from all the measures used. While this problem was not apparent during the pilot study, future studies utilizing an online survey format should include more detailed direction and guidance to participants for how to respond to the questions.

### **Summary**

Despite these limitations, the results of this study provide several interesting contributions to the existing literature on relationship quality and student engagement. Contrary to previous research, which has largely relied on adults' ratings of relationship quality with children, this study obtained *student* perceptions of parent-child and teacher-student relationship quality. Results indicated that gender and ethnicity did not significantly impact perceptions of the teacher-student relationship, although they were related to differences in ratings of parent-child relationship quality. Ethnicity contributed to differences in student engagement, with African American students reporting greater cognitive engagement than Caucasian or Multiracial students. These results are particularly interesting, given previous findings suggesting that ethnic minority students experience greater conflict in their relationships with teachers and may be at increased risk for disengagement from school. Perhaps most important was the finding that teacher-student relationship quality predicted student engagement, even after controlling for the effects of grade, ethnicity, and parent-child relationship qualities. Although supportive parent-child relationships are essential for positive developmental outcomes, the findings from this study suggest that engagement is influenced by context-specific support,

further indicating the critical role of the teacher-student relationship in promoting factors related to school success.

## APPENDIX A

## Human Investigation Committee Approval

WAYNE STATE  
UNIVERSITY

FILE COPY

IRB Administration Office  
87 East Canfield, Second Floor  
Detroit, Michigan 48201  
Phone: (313) 577-1628  
FAX: (313) 993-7122  
<http://irb.wayne.edu>

## NOTICE OF EXPEDITED APPROVAL

To: Jennifer Culver  
Teacher Education

From: Dr. Deborah Ellis or designee  
Chairperson, Behavioral Institutional Review Board (B3)

Date: April 17, 2014

RE: IRB #: 035614B3E

Protocol Title: Relationship Quality and Student Engagement

Funding Source:

Protocol #: 1403012910

Expiration Date: April 16, 2015

Risk Level / Category: 45 CFR 46.404 - Research not involving greater than minimal risk

The above-referenced protocol and items listed below (if applicable) were **APPROVED** following *Expedited Review* Category (#7)\* by the Chairperson/designee for the Wayne State University Institutional Review Board (B3) for the period of 04/17/2014 through 04/16/2015. This approval does not replace any departmental or other approvals that may be required.

- Revised Protocol Summary Form (revision received in the IRB Office 4/14/2014)
- Dissertation Proposal (received in the IRB Office 3/13/2014)
- Medical records are not being accessed for this study. Therefore, HIPAA does not apply.
- A waiver of consent and waiver of written documentation of consent has been granted according to 45CFR 46 116(d). This waiver satisfies: 1) risk is no more than minimal, 2) the waiver does not adversely affect the rights and welfare of research participants, 3) the research could not be practicably carried out without the waiver, and 4) providing participants additional pertinent information after participation is not appropriate.
- Parental Permission/Research Informed Consent/Information Sheet (revision dated 4/12/2014)
- Recruitment Script
- Data Collection Tool: Relationship Quality and Student Engagement

- Federal regulations require that all research be reviewed at least annually. You may receive a "Continuation Renewal Reminder" approximately two months prior to the expiration date; however, it is the Principal Investigator's responsibility to obtain review and continued approval **before** the expiration date. Data collected during a period of lapsed approval is unapproved research and can never be reported or published as research data.
- All changes or amendments to the above-referenced protocol require review and approval by the IRB **BEFORE** implementation.
- Adverse Reactions/Unexpected Events (AR/UE) must be submitted on the appropriate form within the timeframe specified in the IRB Administration Office Policy (<http://www.irb.wayne.edu/policies-human-research.php>).

## NOTE:

1. Upon notification of an impending regulatory site visit, hold notification, and/or external audit the IRB Administration Office must be contacted immediately.
2. Forms should be downloaded from the IRB website at **each** use.

\*Based on the Expedited Review List, revised November 1998



IRB Administration Office  
87 East Canfield, Second Floor  
Detroit, Michigan 48201  
Phone: (313) 577-1628  
FAX: (313) 993-7122  
<http://irb.wayne.edu>

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### NOTICE OF EXPEDITED AMENDMENT APPROVAL

**To:** Jennifer Culver  
Teacher Education

**From:** Dr. Deborah Ellis or designee \_\_\_\_\_  
Chairperson, Behavioral Institutional Review Board (B3)

**Date:** May 15, 2014

**RE:** IRB #: 035614B3E  
Protocol Title: Relationship Quality and Student Engagement  
Funding Source:  
Protocol #: 1403012910

**Expiration Date:** April 16, 2015

**Risk Level / Category:** 45 CFR 46.404 - Research not involving greater than minimal risk

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The above-referenced protocol amendment, as itemized below, was reviewed by the Chairperson/designee of the Wayne State University Institutional Review Board (B3) and is APPROVED effective immediately.

- Protocol - Data Collection method/instrument revised to reflect addition of questions regarding demographics and academic self efficacy. Receipt of revised survey and new definition sheet for students.

**APPENDIX B**

**Letters of Support**



*Michener Elementary School*


104 Dawes Street • Adrian, Michigan 49221  
Phone: 517 / 263-9002  
Fax: 517 / 265-9296  
Web Site: [www.adrian.k12.mi.us](http://www.adrian.k12.mi.us)

February 20, 2014

To Whom It May Concern:

As the building principal of Michener Elementary School, I have agreed to participate to have our third and fourth grade students complete an online survey that has been developed by Jen Culver to measure the quality of relationships between students/teachers and student/parent, and its impact on student engagement in the classroom. Students will also share demographic information, such as age, grade level, gender and ethnicity, but all information will remain confidential.

Sincerely,



Debra Risner

Michener Elementary Principal

Si necesita esta información traducida, favor de llamar a las oficinas de los Programas Estatales y Federales al 517 / 263-7205



*Administrative Offices*

785 Riverside Avenue, Suite 1 • Adrian, Michigan 49221

Phone: 517 / 263-2115

Fax: 517 / 265-5381

Web Site: [www.theadrianmaples.com](http://www.theadrianmaples.com)

February 18, 2014

Dear Jen,

Per our phone conversation and email, I am writing to provide approval for you to collect data from students in grades 3-4 at Prairie Elementary School in Adrian, Michigan. It is my understanding that your study will be completed via computer and will collect information on quality of relationships between students/teachers, students/parents, and its impact on student engagement in the classroom. In addition, all information collected is anonymous and confidential.

I would be interested to view the findings from your study when completed, if possible. My understanding is that our participation will assist you in completion of your dissertation, the final step to completing your PH.D program at Wayne State University.

Sincerely,

Debra A. Stevenson  
Principal, Prairie Elementary School  
2568 Airport Rd.  
Adrian, Michigan 49221

Si necesita esta información traducida, favor de llamar a las oficinas de los Programas Estatales y Federales al 517 / 263-7205





**Adrian Middle School 5/6**



340 E Church  
Adrian, Michigan 49221  
(517) 265-8122  
(517) 264-1365 Fax

February 24, 2014

Ms. Jen Culver,

We have received your request for our 5<sup>th</sup> grade students to be a part of your study. Given that there will be parent approval for the child to participate along with notification with information as to the use and results of the findings we will be willing to participate.

Respectfully,

Matt Schwartz  
Principal

## APPENDIX C

### Parent Permission Form

Title of Study: Relationship Quality and Student Engagement

#### Parent Permission/Research Informed Consent/Information Sheet

Title of Study: Relationship Quality and Student Engagement

#### **Purpose:**

You are being asked to allow your child to be in a research study at their school that is being conducted by Jennifer Culver, a doctoral student in the College of Education from Wayne State University, to explore how relationships between students/parents and students/teachers can affect students' engagement. Your child has been selected because s/he is a student in a grade 3, 4, or 5 class.

#### **Study Procedures:**

If you decide to allow your child to take part in the study, your child will be asked to complete a 40-minute online survey about his/her current relationship with you and with their teacher. The survey also asks about their thoughts, feelings, and behavior in class. Students will have the option to refuse to participate at any time.

Once this survey is completed, no further information is needed from your child. All student responses will be anonymous and kept confidential. The student survey will be completed online; however, paper copies of the student survey are available for review at the main office.

#### **Benefits:**

There may be no direct benefits for your child; however, information from this study may benefit other people now or in the future.

#### **Risks:**

At this time, there are no known risks to your child for participation in this study. There may also be risks involved from taking part in this study that are not known to the researcher at this time.

Please note that the following information must be released/reported to the appropriate authorities if at any time during the study there is concern that:

- Child abuse has possibly occurred,
- There is concern that your child has intent to harm him/herself or others.

#### **Costs:**

There are no costs to you or your child to participate in this study.

#### **Compensation:**

You or your child will not be paid for taking part in this study.

#### **Confidentiality:**

All information collected about your child during the course of this study will be anonymous. No identifying information will be collected as part of this study. All information will be kept confidential to the extent permitted by law.

Title of Study: Relationship Quality and Student Engagement

**Voluntary Participation / Withdrawal:**

Your child's participation in this study is voluntary. You are free to withdraw your child at any time. Your decision about enrolling your child in the study will not change any present or future relationships with Wayne State University or its affiliates, your child's school, your child's teacher, your child's grades, or other services you or your child are entitled to receive.

**Questions:**

If you have any questions about this study now or in the future, you may contact Jennifer Culver at the following phone number: 734-408-1517. If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigations Committee can be contacted at 313-577-1628. If you are unable to contact the researcher, or if you want to talk to someone other than the research staff, you may also call 313-577-1628 to ask questions or voice concerns or complaints.

**Participation:**

If you do not contact the principal investigator (PI) within a 2-week period to state that you do not give permission for your child to be enrolled in the research trial, your child will be enrolled into the research. You may contact the PI by email (jculver@wayne.edu), phone number (734-408-1517), or by returning the tear off sheet below to the PI, principal, or your child's teacher.

**Optional Tear Off:**

If you do not wish to have your child participate in the study, you may fill out the form below and return it to your child's teacher.

---

I do not allow my child, _____, to participate in this research study.	
Student Name	
_____ Printed Name of Parent	
_____ Signature of Parent	_____ Date

## APPENDIX D

### Recruitment Script

Good morning/afternoon, students,

My name is \_\_\_\_\_, and I am a *graduate student / research assistant* at Wayne State University.

Today I am here to talk to you about a research project that I am working on/*assisting with* that is about your relationships with your parents and your teachers, and how it might impact feelings about school. This information will help school staff to better understand how to help students like you.

The online survey will ask you to share your thoughts about your relationship with your parents, your relationship with your teacher, and will also ask questions about your thoughts, feelings, and behavior at school. Answering all of the questions should take about 30-45 minutes.

You will not be asked to give your name on the survey. No one at school, including your teacher, will be able to see your answers to the questions.

Forms about this project have already been sent home to your parents. The following students' parents do **not** want them to participate: (*read list of students*).

For the rest of you, I would like you to follow these instructions that have been written on the board: (*read instructions aloud*)

1. Open Internet Explorer
2. Type in the website address.
3. Select whether you would like to participate in the study by checking the “yes” or “no” box.

If you do not want to fill out the survey, please check the “no” box and exit Internet Explorer. You don't have to complete the survey if you don't want to, or you can stop the survey at any time. You will not be treated differently by anyone if you choose not to participate. You can choose to stop your participation at any time.

Raise your hand if you need my help at any time, or if you are finished. If you are not participating, you may read silently.

It is very important that you do not talk about the survey questions or your answers with other students or staff. If you have any questions, please tell an adult at school.

Thank you very much for your time.

## APPENDIX E

## Student Demographic Form and Student Survey

## Relationship Quality and Student Engagement

**\*1. Would you like to fill out this survey?**

- Yes  
 No

## Questions About You

Please answer these questions about yourself.

**2. What is your age?**

- 7  
 8  
 9  
 10  
 11  
 12

**3. Are you a girl or boy?**

- Girl  
 Boy

**4. What grade are you in?**

- 3rd  
 4th  
 5th

**5. Where did you go to school last year?**

- Alexander Elementary  
 Lincoln Elementary  
 Michener Elementary  
 Prairie Elementary  
 Other

## Relationship Quality and Student Engagement

### 6. My race (ethnicity) is:

- Black or African American  
 Hispanic  
 White/Caucasian  
 Asian or Pacific Islander  
 American Indian or Alaskan Native  
 Multiracial

### 7. What language do you and your family speak at home?

- English  
 Spanish  
 Other

Everyone has a number of people who are important in his or her life. These questions ask about your relationships with each of the following people: your mother, your father, and your teacher.

Please answer the following questions about these people. Sometimes the answers for different people may be the same, but sometimes they may be different.

### 8. How often do you and this person go places and do things together?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 9. How much do you and this person hassle or nag one another?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 10. How often do you tell this person everything that you are going through?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Relationship Quality and Student Engagement

### 11. How much do you and this person get on each other's nerves?

	Little or Never	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 12. How much do you take care of this person?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 13. How often do you and this person get mad at or get in fights with each other?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 14. How much does this person really care about you?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 15. How much does this person treat you like you're admired and respected?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 16. How often do you and this person argue with each other?

	Little or Never	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 17. How sure are you that this relationship will last no matter what?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Relationship Quality and Student Engagement

### 18. How often do you and this person disagree and quarrel with each other?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 19. How much does this person help you figure out or fix things?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 20. How much do you and this person get annoyed with each other's behavior?

	Little or None	Somewhat	Very Much	Extremely Much	The Most
Mother	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Father	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teacher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer how true these statements are for you when you are with your mother, your father, and your teacher.

### 21. When I'm with my Mother,

	Not at all true	Not very true	Sort of true	Very true
I feel accepted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel unimportant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like someone special.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel ignored.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 22. When I'm with my Father,

	Not at all true	Not very true	Sort of true	Very true
I feel accepted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel unimportant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like someone special.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel ignored.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## Relationship Quality and Student Engagement

### 23. When I'm with my Teacher,

	Not at all true	Not very true	Sort of true	Very true
I feel accepted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel unimportant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like someone special.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel ignored.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer these questions about your thoughts, feelings, and attitudes about school.

### 24. I follow the rules at school.

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 25. I get in trouble at school.

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 26. When I am in class, I just act as if I am working.

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 27. I pay attention in class.

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 28. I complete my work on time.

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 29. I like being at school.

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 30. I feel excited by my work at school.

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 31. My classroom is a fun place to be.

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Relationship Quality and Student Engagement

**32. I am interested in the work at school.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**33. I feel happy in school.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**34. I feel bored in school**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**35. I check my schoolwork for mistakes.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**36. I study at home even when I don't have a test.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**37. I try to watch TV shows about things we do in school.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**38. When I read a book, I ask myself questions to make sure I understand what it is about.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**39. I read extra books to learn about things we do in school.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**40. If I don't know what a word means when I am reading, I do something to figure it out.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**41. If I don't understand what I read, I go back and read it over again.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**42. I talk with people outside of school about what I am learning in class.**

Never	On occasion	Some of the time	Most of the time	All of the time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Relationship Quality and Student Engagement

Here are some questions about you as a student in this class. Please choose the number that best describes what you think.

**43. I'm certain I can master the skills taught in class this year**

Not at all true	Not true	Somewhat true	True	Very true
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**44. I'm certain I can figure out how to do the most difficult class work.**

Not at all true	Not true	Somewhat true	True	Very true
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**45. I can do almost all the work in class if I don't give up.**

Not at all true	Not true	Somewhat true	True	Very true
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**46. Even if the work is hard, I can learn it.**

Not at all true	Not true	Somewhat true	True	Very true
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**47. I can do even the hardest work in this class if I try.**

Not at all true	Not true	Somewhat true	True	Very true
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**APPENDIX F****Definition Sheet**

If you see a word you don't know, read this list or raise your hand for help!

- Hassle: To bother or annoy someone often and on purpose.
- Admired: To feel that someone respects, enjoys, or likes you.
- Quarrel: An angry argument or disagreement.
- Annoyed: To feel a little angry or bothered.
- Master: To learn something completely so that you can use the skill very well.

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**ABSTRACT****RELATIONSHIP QUALITY AND STUDENT ENGAGEMENT**

by

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**Advisor:** Dr. Jina Yoon**Major:** Educational Psychology**Degree:** Doctor of Philosophy

The purpose of this study was to examine the qualities of support, relatedness, and negative interaction within parent-child and teacher-student relationships and their association with cognitive, psychological, and behavioral engagement. Additionally, this study explored the contributions of cognitive and psychological engagement on behavioral engagement. The role of gender, grade, and ethnicity on relationship quality and engagement was also considered. Participants (n=311) were students in grades three through five from a suburban school district in southeastern Michigan. Perceptions of teacher-student relationship quality varied by grade level. In general, younger students reported greater teacher support and relatedness in comparison to older students. Conversely, older students perceived greater conflict within the teacher-student relationship. Student engagement also varied by grade level, with younger students reporting greater engagement than older students. Ethnicity also contributed to variance in student engagement, with African American students reporting significantly more engagement than Caucasian or Multiracial students. Teacher-student relationship quality was a significant predictor of student engagement, even after controlling for student characteristics and parent-

child relationship variables. Results of path analysis revealed that cognitive and psychological engagement contributed significantly to behavioral engagement.

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