

MAKING FRIENDS: TEACHER INFLUENCE ON STUDENTS' PEER
RELATIONSHIPS

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ABSTRACT

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A total of 236 kindergarten to eighth grade students and 15 teachers from an elementary school in a northeastern U.S. city provided information about their perceptions of teacher involvement in students' peer relationships. Students provided additional information about classroom social networks. Both students and teachers indicated that they perceive teachers to be important in student peer relationships. None of the teacher characteristics (including teacher education, years of teaching, or ethnicity) were related to teacher perceptions of involvement in students' peer relationships. In lower grade groups (kindergarten to second grade), there were significant sex differences, with boys rating their teachers as more involved than girls; sex differences were not significant in either the middle (third to fifth grade) or upper (sixth to eighth grade) grade groups. As hypothesized, there were significant differences between grade groups, with students in the lower grades rating their teacher as more involved than students in either the middle or upper grade groups, and middle grade groups rating their teachers as more

involved than the upper grade groups. Teacher and student perceptions of teacher involvement in students' peer relationships were then analyzed to determine whether these perceptions were related to classroom cohesiveness, as measured by social networks. The results were not significant, indicating that teacher and student perceptions of teacher involvement in students' peer relationships were not related to classroom social networks. This research provides a first look into both teacher and student perceptions into teacher involvement in classroom peer relationships, which school psychologists can use to help teachers construct supportive classroom environments. This research is a case study of one school, and therefore generalization from this sample is difficult. Future research should examine this element in schools of varying climate and region.

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TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iv
LIST OF TABLES.....	vii
LIST OF FIGURES	viii
CHAPTERS	
1. INTRODUCTION.....	1
Purpose of this Study.....	3
Research Questions	6
2. LITERATURE REVIEW	8
Teacher-Student Relationships	8
Peer-Peer Relationships.....	19
Teacher Influence on Peer Relationships	27
Measuring Relationships within the Classroom.....	33
Summary.....	36
3. METHOD	37
Participants	37
Measures.....	38
Procedures	42
4. RESULTS.....	45
Analysis of ClassMaps Student Form	45
Analysis of ClassMaps Teacher Form.....	56
How often do teachers rate themselves as helping their students make friends?	56
What teacher characteristics are related to their beliefs of how often they help their students make friends?.....	57
Do students believe that their teachers help them make friends?.....	58
Do girls rate their teachers as more often helping them to make friends than boys?	59

Are teachers who ethnically match their students rated as more often helping to make friends than those teachers who do not ethnically match their students?	61
Is there a difference in students' ratings of their teacher's help in making friends by grade level?.....	65
Do teachers who believe they are more helpful to their students in making friends have classrooms that are more cohesive?	66
Are students who believe their teachers are more helpful in making friends have classrooms that are more cohesive?.....	70
Additional Analysis	71
5. DISCUSSION	77
ClassMaps Student Form.....	77
ClassMaps Teacher Form	78
Teacher and Student Perceptions of Teacher Involvement in Student Peer Relationships	78
Teacher Characteristics Related to Teacher Ratings	80
Student Characteristics Related to Student Ratings	81
Teacher and Student Perceptions of Teacher Involvement and Classroom Social Networks.....	85
Limitations and Future Directions.....	86
Implications for Practice.....	87
REFERENCES	90
APPENDIX A.....	101
STUDENT MEASURES	101
APPENDIX B.....	107
TEACHER MEASURES	107

LIST OF TABLES

Table 1. <i>Social Network Centrality</i>	44
Table 2. <i>Factor Loadings of the ClassMaps with New Section.</i>	47
Table 3. <i>Internal Reliability of Factors</i>	54
Table 4. <i>Correlations among ‘Teacher Involvement with Friends’ Factor Items.</i>	55
Table 5. <i>Correlations between ‘Teacher Involvement’ Scale and Teacher Characteristics by Group.</i>	63
Table 6. <i>Student Sex and Student Perception of Teacher Involvement in Peer Relationships by Grade.</i>	68
Table 7. <i>Descriptives of Student Ethnic Match, with 3-5 grades removed.</i>	69
Table 8. <i>Grade Level Means for Student Ratings of Teacher Involvement.</i>	72
Table 9. <i>Results of Tukey’s HSD Test on Student Involvement Scores at the Grade Level.</i>	73
Table 10. <i>Student Social-Network Centrality Status Descriptives.</i>	74

LIST OF FIGURES

Figure 1. Distribution of Teacher Ratings of ‘Teacher Involvement’ Scale. 60

Figure 2. Teacher Responses to Factor Items..... 62

Figure 3. Linear Sums of Student Ratings on the ‘Teacher Involvement’ Scale. 64

Figure 4. Student Responses to 'Teacher Involvement' Scale Items. 67

Figure 5. Box and Whisker Plot of Student Ratings of Teacher Involvement by Grade,
with Teacher Means by Grade. 75

Figure 6. Regression Lines for both Teacher and Student Ratings of Teacher
Involvement, by Grade..... 76

CHAPTER 1

INTRODUCTION

Considerable research over the past few decades indicates that teacher-student relationships are important to academic outcomes, school adjustment, and motivation. Some lines of research have also examined the role of the teacher-student relationship in social outcomes. In general, students who have secure, positive relationships with their teachers show better social adjustment, competence, and have more positive peer relationships (Burchinal et al., 2002; Esposito, 1999; Howes, Matheson, & Hamilton, 1994; Meehan, Hughes, & Cavell, 2003; Pianta & Nimetz, 1991; Pianta, Steinberg, & Rollins, 1995). In contrast, children whose kindergarten and first grade relationships with their teachers are characterized as dysfunctional have been shown to have more adjustment problems and to be less socially competent up to eight years later (Birch & Ladd, 1998; Ewing & Taylor, 2009; Hamre & Pianta, 2001; Pianta, 1994; Pianta, Nimetz, & Bennett, 1997). Therefore, having positive teacher-student relationships appears to be a powerful influence in developing social competence in the classroom. In terms of whether or not there are sex differences among students, the research seems to be mixed. In general, girls are rated as having more positive relationships and interactions with their teachers than boys, while boys are generally rated as having more conflict in their relationships with their teachers than girls (Birch & Ladd, 1998; Ewing & Taylor, 2009; Furman & Buhrmester, 1985; Hamre & Pianta, 2001; Hughes, Cavell, & Willson, 2001; Kesner, 2000; Ladd, Birch, & Buhs, 1999; Saft & Pianta, 2001; Salmon, 1998). However, other research suggests that sex differences are actually very small, and may become irrelevant when other factors are taken into account (Elias & Haynes, 2008;

Hamre & Pianta, 2007; Mantzicopoulous, 2005; Murray, Murray & Waas, 2008). Results are also mixed in terms of the influence of ethnic match between teachers and students. Some research seems to indicate that teachers may rate students who ethnically match them more positively than students who do not (Howes & Shivers, 2006; Murray et al., 2008; Saft & Pianta, 2001); however, other research indicates that ethnic match does not influence teacher perception, the teacher-student relationship, or the amount of care given to students (Burchinal & Cryer, 2003; Ewing & Taylor, 2009; Hamre & Pianta, 2007; Wentzel, 2002). In terms of grade level differences, Buhrmester & Furman (1987) found that students decrease their ratings of teachers as social supports as they move toward adolescence.

Peer-peer relationships have also been established as influential in student functioning in the classroom. In general, research seems to indicate that having friends in the classroom and having positive peer relationships are related to positive outcomes and behaviors, while not having friends and peer rejection is related to negative behaviors and academic outcomes (Berndt & Keefe, 1996; Birch & Ladd, 1996; Gifford-Smith & Brownell, 2003; Ryan, Stiller, & Lynch, 1994).

Demographics have also been found to influence the peer relationships of different groups, namely student sex and grade level. Girls report greater friendship intimacy and companionship at earlier ages than boys do (Buhrmester & Furman, 1987; Furman & Buhrmester, 1985); girls also tend to list more friends than boys, while keeping their social networks much smaller (Berndt & Hoyle, 1985; Cairns, Leung, Buchanan, & Cairns, 1995). In terms of age differences, a curvilinear pattern has been

established, as social networks seem to grow into preadolescence, at which point they start to decrease (Cairns et al., 1995; Gifford-Smith & Brownell, 2003). Among early elementary school students, friendships serve as sources of entertainment, while in middle childhood, friendships are formed from shared norms and personal qualities (Gifford-Smith & Brownell, 2003). As children age, their friendships become more stable and reciprocated as children's social competencies grow, with increases in opposite-sex friendships (Buhrmester & Furman, 1987; Cairns et al., 1995; Gifford-Smith & Brownell, 2003).

Purpose of this Study

Prior research indicates that strong and positive teacher-student relationships can influence many aspects of children's social development. Teacher behavior and attitudes can also influence how children are perceived by their peers. Despite this fact, no survey that examines teacher-student relationships or classroom climate investigates the extent to which teachers are involved in their students' relationships, either from the perception of the student or the teacher.

Of the surveys that do examine teacher-student relationships, some, such as the Student-Teacher Relationship Scale (STRS) (Pianta & Hamre, 2001; Pianta & Nimetz, 1991), Children's Feelings About Their Teachers (CFATT) (Salmon, 1998), and the Young Children's Appraisals of Teacher Support (Y-CATS) (Mantzicopoulos & Neuharth-Prichett, 2003) examine student-teacher relationship factors such as warmth/closeness, autonomy/dependency, and conflict, all of which are related to traditional attachment factors (Bowlby, 1969; Pianta & Hamre, 2001). However, none of

these measures examine how involved teachers are in their students' peer relationships from either the student or teacher point of view.

Doll, Zucker, and Brehm (2004) developed the ClassMaps measure as a way to examine students' perceptions of classroom climate, whose responses could then be used to inform teachers' of how their students view the classroom culture. Going beyond the teacher-student relationship, the ClassMaps survey also examines relationships with peers, home-school relationships, student academic efficacy and self-determination, behavioral self-control, and concerns. The survey therefore provides teachers and researchers perceptual information that can be used to determine what classroom interventions could be used to improve classroom climate from the students point of view (Doll et al., 2004). The survey was developed based on evidence that students are able accurately describe their classmates' social strengths and weaknesses and interpersonal roles, and can therefore provide an accurate description of their classrooms' resilient features (Doll et al., 2004).

However, the traditional ClassMaps survey examines only student perceptions, which offers only the perspective of one group of stake-holders in the classroom. Therefore, an experimental survey for teacher agreement has been piloted and is currently being assessed for psychometric properties. This survey examines all the original ClassMaps topics, and gathers teachers' perceptions of both their own behavior as well as that of their students.'

ClassMaps (Doll et al., 2004), therefore, provides a comprehensive view of classroom climate that goes beyond simple evaluation of the teacher-student relationship.

However, as with other surveys, the ClassMaps survey does not provide information on how either teachers or students perceive the impact of teachers on students' peer relationships. As noted above, there is strong research evidence that links classroom peer relationships with academic success. By not linking this information to the other classroom climate variables, crucial pieces of both the classroom environment and the development of peer-peer relationships in the classroom have been missed.

Relationships with teachers can be crucial to developing essential nonacademic skills, and peer relationships, in particular, are important to both academic achievement and social success. These relationships with teachers may be especially important for students from disadvantaged backgrounds, such as those who live in poverty or are of minority status. Studies have shown that when teachers respond positively to a student, the student's peers are more likely to report positive things about the students (Flanders & Havumaki, 1960; Hughes, Cavell & Willson, 2001; Skinner & Belmont, 1993; White & Kistner, 1992). Thus, teachers can have a powerful influence in how children are viewed and accepted by their peers. However, research has not yet examined the degree to which teachers and students perceive that teachers are influential in helping to develop friendships in the classroom, and there is not enough information about the role of teachers in peer-peer relationships in the classroom. There is also no information as to whether or not teacher perceptions of their efficacy and impact in their students' peer relationships translates into a higher number of reciprocal friendships and greater social network status in the classrooms.

This project aims to provide a first look at both teachers' and students' beliefs about teacher influence in peer relationships, and how this is related to student social outcomes in the classroom. By providing this first glimpse into whether or not teachers and students perceive that the teacher is involved in the classroom peer relationships, this project aims to further improve upon the knowledge of the many facets of the influence of teacher-student relationships. As the ClassMaps measure already examines areas of the positive teacher and classmate behaviors that contribute to a resilient classroom environment, the teacher role in peer relationships will be included to further this instruments' ability to capture an important but often neglected feature of classroom resilience. In practice, understanding the teacher's role more fully may lead to better targeted teacher interventions to improve student outcomes.

Research Questions

Based on gaps in the current research on teacher involvement in student relationships, and the lack of research on the perceptions of either students or teachers in regards to a teacher involvement in student relationships, this research will seek to answer the following questions:

1. Do teachers believe that they are influential in their students' peer relationships?
 - a. How often do teachers rate themselves as helping their students make friends?
 - b. What teacher characteristics are associated with their beliefs of how often they help their students make friends?
2. Do students believe that their teachers help them make friends?
 - a. Do girls rate their teachers as more often helping them to make friends than boys?

- b. Are teachers who ethnically match their students rated as more often helping to make friends than those teachers who do not ethnically match their students?
 - c. Is there a difference in students' ratings of their teacher's help in making friends by grade level?
3. Do teachers who believe they are more helpful to their students in making friends have classrooms that are more cohesive?
 4. Are students who believe their teachers are more helpful in making friends have classrooms that are more cohesive?

CHAPTER 2

LITERATURE REVIEW

Teacher-Student Relationships

According to Doll et al. (2004), teacher-student relationships are related to students' abilities to handle the schools' expectations of success and cope with the students' failures. Positive relationships between teachers and students is associated with increased academic engagement and achievement, as well as student satisfaction, while isolation from the teacher or a lacking relationship is often related to student failure (Birch & Ladd, 1996, 1998; Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Doll et al., 2004; Ewing & Taylor, 2009; Hamre & Pianta, 2001; Howes, Phillipsen & Peisner-Feinberg, 2000; Ladd et al., 1999; Mantzicopoulos, 2005; Midgely, Feldlaufer, & Eccles, 1989; Pianta, 1994; Pianta et al., 1997; Skinner & Belmont, 1993; Ryan et al. 1994; Wentzel, 1996). In addition, student perception of teacher support plays a significant role in students' attitudes toward their school experience (Demaray & Malecki, 2002). Students report that caring teachers are ones who talk to them and listen to their concerns, help with work, and promote fairness and nurturing in the classroom (Doll et al., 2004). Caring is conveyed to students by the teachers when teachers give encouraging comments, constructive feedback, and have high expectations for all students (Doll et al., 2004). Another important component is what Doll et al. (2004) terms "sensitive response" of the teacher: though a teacher may not be able to immediately change or deal with students' concerns, a teacher can still reliably respond in a way that allows the student to feel the teacher understands. Students whose teachers

communicated high expectations show greater school success than those whose teachers who communicated low expectations (Brophy & Good, 1974). While this was largely examined in an academic domain, it may also be applied in a social one. Classrooms where teachers communicate high expectations of social competence and friendship have stronger networks than those where teachers have low or no expectations (Doll et al., 2004; Kemple & Hartle, 1997; Koplou, 2002; Wentzel, 1996).

A review by Stanulis and Manning (2002) noted that teachers influence the classroom social environment through both verbal and nonverbal cues. The findings in this section suggest that teacher expectation and the student-teacher relationship impact student ability to engage in the classroom learning and social environment. Teacher characteristics and attitudes may impact the type of relationship the teacher has with their students; for example, more negative attitudes regarding teacher efficacy can lead to more negative relationships with their students (Hamre & Pianta, 2007; Pianta, 1994). Therefore, by influencing teacher understanding of how their expectations and relationships impact their students, school psychologists may be able to help teachers adjust their behaviors and approaches to assure their students achieve optimal success in the classroom.

An overview of the research suggests that in early childhood, close teacher-child relationships positively affect social trajectories over the course of early schooling. Research also suggests that teacher-child closeness facilitated the development of social skills for children who were at risk adjustment problems due to family characteristics (Burchinal et al., 2002; Eposito, 1999; Pianta, Steinberg, & Rollins, 1995). In addition,

students who were rated as less socially competent, but who viewed their teachers as more supportive had greater academic success than students who did not (Baker, 1999; Mitchell, 2003), indicating that students with lower social competence may rely on their teachers to help them cope and adjust to the classroom. Investigators have also found that students with significant problem behaviors who were able to develop close, warm relationships with their teachers early in their school careers are less likely to have continuing behavior problems compared to their peers who have significant behavior problems and form conflictual and/or dependent relationships with their teachers (Hamre & Pianta, 2001). Howes et al. (1994) found that teacher-child relationships better predicted peer relationships, with students who had more positive relationships with their teachers were rated as more secure by their teachers and received higher peer sociometric ratings.

Long-term effects have also been found; teacher-rated social support in previous years was related to teacher-rated and peer-rated aggression in later years (Meehan et al., 2003). Early teacher-student relationships have been found to be associated with academic and behavioral outcomes throughout elementary and middle school (Hamre & Pianta, 2001), and the quality of early teacher-child relationships may help predict the quality later ones, with early conflictual teacher-child relationships more likely to result in conflictual relationships with later teachers (Howes et al., 2000). Kindergarten relationships that reflected a secure attachment were more predictive of fewer teacher-reported behavior problems and more teacher-reported competence behaviors in first grade, while children who had more insecure, dependent relationships with their kindergarten teacher having more behavior problems and less social competence in first

grade (Pianta & Nimetz, 1991). In addition, children who showed improvement in security in the kindergarten teacher-child relationship were more likely to have fewer teacher-reported conduct problems in the first-grade (Pianta & Nimetz, 1991). This suggests that when teachers make an effort to improve their relationships with students, it may have positive long-term effects on a student's school adjustment and success, and that teachers can be a powerful influence on students' opinions and decisions in the social realm.

In middle school, students were more likely to intrinsically value a school subject when they felt supported in their classrooms by their teachers (Midgley, Feldlaufer, & Eccles, 1989). Wentzel (1993) found that teacher preference mediated the relationship between student antisocial behaviors. In addition, students who felt more secure and supported in their teacher relationships were more motivated and adjusted at school, and felt a greater sense of control, autonomy, and engagement (Ryan et al., 1994). Research also suggests that school personnel may influence changes in psychological distress over time, and students reported greater psychological distress following a traumatic event when they also reported lower levels of school support (DuBois et al., 1992). School support had its greatest positive impact on students with low family support, suggesting that school personnel are in a prime position to help children handle psychological crises and cope with low family involvement (DuBois et al., 1992). Teacher involvement with students influences the students' attachment models in the classroom. Increased involvement may then lead to happier, more enthusiastic students, while less involvement leads may be related to more anxiety and depression (Koplow, 2002; Skinner & Belmont, 1993).

Conversely, children whose early relationships with their teachers were characterized as dysfunctional (more angry, conflictual, and/or dependent) were shown to have more adjustment problems and to be less socially competent later in the classroom (Birch & Ladd, 1998; Ewing & Taylor, 2009; Hamre & Pianta, 2001; Pianta, 1994; Pianta, Nimetz, & Bennett, 1997). In particular, negative early teacher-student relationships, characterized by higher conflict and dependency, were related to poorer work habits and a higher number of behavior and discipline referral as well as a greater likelihood of being retained when compared to students who had warmer, more open and less conflicted relationships (Hamre & Pianta, 2001; Pianta, 1994). Children that are rated by their teachers as having more conflict in the teacher-child relationship were also viewed by teachers as having poorer work habits, frustration tolerance, and competence (Pianta et al., 1997). Those who engaged in more antisocial behaviors often had more conflictual teacher and peer relationships, and were less likely to increase prosocial behaviors over time (Birch & Ladd, 1998). Skinner and Belmont (1993) suggested that when children perceive their teachers as being less involved with them, they were more likely to view the teacher as more coercive and less consistent; in contrast, students who feel their teachers offer clearer expectations, constructive help, and who are warm and affectionate are more likely to enthusiastically engage and persist in the classroom. Murray, Murray, and Waas. (2008) found that when students perceive that they are being supported socially by their teachers, they report liking school more, and when the relationship is conflicted, they report more school avoidance. In addition to this, research suggests that when students move from a more supportive teacher relationship to a less supportive one, student interest in the academic subject decreases, while moving from a

less supportive relationship to a more supportive one increases student interest (Midgley et al., 1989).

Wentzel's (1994) work with middle school students (6 through 8 grades) showed that perceived caring from teachers was related to pursuit of both prosocial and social responsibility goals, as well as to students' academic efforts and students beliefs in internal control. In general, her research indicated that students that perceive their teachers as more caring are more likely to be motivated both academically and socially, and identify caring teacher characteristics as ones that are closely aligned with authoritative styles (e.g., high warmth, high control).

Pearl et al. (2007) examined teacher-student agreement on classroom social networks. In general, as the school year passed, teachers had better agreement with their students in the spring (61% agreement) than in the fall (48% agreement). While the numbers do show a significant change in how well teachers are able to agree with their students on who belongs within a social network, it still suggests that teachers are unaware of some 39% of their students' social networks. Further analyses on this information showed that teachers are, in general, most aware of the students who are 'stars' or those who are at risk. This indicates that teachers are still missing the students who fall in between, and this is affecting their ability to identify and agree with their students about the social make-up of the classroom.

Though Spera and Wentzel (2003) and Murray et al. (2008) indicate there is minimal agreement between teachers and students in regard to mutual expectations and relationship importance, while Salmon (1998) indicates that even younger children and

teachers can agree on relationship features. Pearl et al. (2007) indicates that teachers are still somewhat perceptive as to the social structure and networking of their classrooms. It would be interesting to see to what degree teachers and students perceive the teacher role in helping to create the classroom network, and at what level they agree on the importance of the teacher in the classroom social network.

Student Sex Differences. Evidence suggests that girls have higher teacher support, while boys have higher conflict, and that girls are rated as having closer relationships with teachers, while teachers and boys are rated as having more conflictual relationships (Birch & Ladd, 1998; Ewing & Taylor, 2009; Hamre & Pianta, 2001; Hughes, Cavell, & Willson, 2001; Kesner, 2000; Ladd et al., 1999; Saft & Pianta, 2001; Salmon, 1998). Research also indicates that girls have higher levels of affection and feel that their teachers enhance their self-worth more than boys (Furman & Buhrmester, 1985). Hamre and Pianta (2001) and Ewing and Taylor (2009) found that closer teacher relationships predicted more positive behavioral adjustment for girls, while more conflicted teacher relationships predicted negative behavioral adjustment for boys (e.g., increased aggression and lower social competence).

However, other studies indicate that the sex is not the only or most prevalent factor predicting teacher-student relationships. Murray et al. (2008) reported no sex differences between either teacher perceptions of the overall relationship, school liking, and school avoidance, and student perceptions of overall relationship, school liking, and school avoidance. Elias and Haynes (2008) found that over the course of the school year, sex differences in perceptions of support and social-emotional competence did not seem

to affect academic outcomes (i.e., grades). Mitchell's (2003) model did not find any significant sex differences in perceptions of support from teachers or peers and social competence and their influence on academic and nonacademic outcomes in high-minority, low-income third-graders. Though teachers often rated female students as higher in closeness and dependency, there were no sex differences in teacher-ratings of social adjustment (Howes et al., 2000), and Mantzicopoulos (2005) found that girls were not likely to report more conflict with their teachers than boys, indicating that sex is not influencing conflict in relationships. Though Hamre and Pianta (2007) found that teachers reported higher conflict ratings with boys than girls, these differences became insignificant when ratings of problem behaviors were considered, suggesting that girls who develop significant problem behaviors are just as likely to have conflictual relationships with their teachers. As suggested by both Hamre and Pianta (2007) and Elias and Haynes (2008), it may be that when other demographic variables are significant, sex differences become secondary and insignificant. Therefore, information is needed to further understand how sex impacts the perceptions of the teacher-student relationships and its influences.

Effects of Ethnic Match of Teachers and Students. As with sex, student and teacher ethnicity is another demographic that may influence the teacher-student relationship. Differences between teacher perception and its impact on students have been studied in diverse populations. Mantzicopoulos and Neuharth-Prichett (2003) found that African-American males reported more conflict with their teachers than other ethnic and racial groups, while Kesner (2000) found that White teachers may view minority students as more dependent than White students. In terms of social competence,

some evidence suggests that there are no significant differences between White and minority populations (Malecki & Elliot, 1999, 2002). However, other studies (Elias & Haynes, 2008) indicated that teachers perceived African-American students as being lower in social competence than non-African-American students. Ladd et al. (1999) found that family background variables such as economic disadvantage and minority status were related to greater conflict in teacher-child relationships. Among African-American students, studies have found that those who report a more caring and supportive relationship with their teacher are more satisfied with school, while students who expressed dissatisfaction with school also received almost twice the number of verbal reprimands than did their satisfied peers (Baker, 1999). Kennedy (1992) reported that African-American students may be more influenced by the characteristics and contexts of the classroom; for example they may feel less comfortable participating in and asking questions in large classrooms. In addition, African-American students may be less likely to transfer learning at home to learning in the classroom than White students (Kennedy, 1992). Therefore the tone and climate of acceptance a teacher sets may be crucial for African-American students.

Student perceptions of teacher support have been found to influence academic outcomes (i.e., grades) and nonacademic factors such as school attendance in high-minority, low-income populations in urban settings and that teacher support and relationship quality may have a greater impact for minority students than for White students (Meehan et al., 2003). Research examining the effect of ethnic match between students and teachers found that in general, teachers who ethnically match their students

report more secure and positive relationships than do teachers who do not ethnically match their students (Howes & Shivers, 2006; Murray et al., 2008; Saft & Pianta, 2001). Students, however, reported no difference in relationships based on whether or not they matched their teacher ethnically (Murray et al. 2008). Rong (1996) found that White teachers rated African-American students (especially African-American boys) significantly below White students on measures assessing social and emotional health, while African-American teachers were not significantly influenced by student race. However, it should be noted that with the exception of Rong (1996), none of these studies controlled for either parental education or socioeconomic status; therefore it is unknown what relationships these variables may have with ethnic match and teacher-student relationship.

In contrast, Hamre and Pianta (2007) and Ewing and Taylor (2009) found that teachers did not report more conflicted relationships with minority students compared to White students, even when they did not ethnically or racially match their student, indicating that ethnic match was not influencing teacher interpretation of relationships. Ewing and Taylor (2009) further found that ethnic match did not predict higher quality relationships, even when socioeconomic status and/or parental education were not controlled. Burchinal and Cryer (2003) ethnic match between students and teachers was not related to the quality of care students received, or the cognitive or social outcomes of the students, when controlling for maternal education. Wentzel (2002) found that student ethnicity did not mediate the relationship between teacher behavior and student perception of teacher behavior, even when socioeconomic status was not controlled.

This research indicates that the influence of ethnic match between students and teachers is mixed. Some research indicates that ethnic differences may lead to less positive and less secure relationships, but other studies indicate that ethnic differences do not influence quality of the relationship, or the care that is received from the teachers. In addition, students and teachers may have different views on the impact of ethnic match. Therefore, information needs to be acquired on how ethnic match may influence perceptions of the student-teacher relationships and how that relationship influences other aspects of student development.

Grade Level Differences. Along with sex and ethnic match, grade level differences in may impact the influence of the teacher-student relationship. Cefai's (2007) study with elementary-aged children in Malta found that classrooms that provided protection from risk factors (such as low-socioeconomic status) were ones that promoted caring, inclusive and prosocial communities. The children in these classrooms felt that they were connected and belonged in the classroom, and teachers worked to include and engage all children, even those with emotional or behavioral problems, and had high expectations and beliefs for their students. For kindergarten students, 'caring' teachers are those who are considered by their students as being fair, attentive to student needs, having a positive affect, and being involved with their student by providing personal attention and spending time with each child (Salmon, 1998). For middle school students, 'caring' teachers have been described as having a more democratic teaching style, developing individualized expectations for student behavior, modeling a caring attitude toward their students, and providing constructive feedback (Wentzel, 1994; Wentzel, 1996). This indicates that children at different grade level feel that caring teachers have

high expectations, take students feelings and needs into account, and provide positive affect and modeling to their students.

While the definition about what makes a caring teacher may not differ strongly across grade level, the importance of the relationship does appear to change. Buhrmester and Furman (1985, 1987, and 1992) found that students reported significant decreases in teacher relationships as sources of companionship and intimacy as students aged from second to eighth grade. In early childhood, teachers serve as supplemental attachment figures, but older children, especially adolescents, may believe that they do not need teachers as much (Furman & Buhrmester, 1992). Therefore, the influence of the teacher may change as their students age, though it appears that children continue to recognize caring in teacher behaviors. Therefore, information about how grade level influences teachers' and students' perceptions of teacher impact will further understanding in the literature.

Peer-Peer Relationships

Research defines differences between friendships and the less intimate peer relationships. Friendships have been defined as “a voluntary, dyadic form of relationship that often embodi[es] a positive affective tie,” while peer relationships are viewed as “a child’s relational status in a peer group, as indicated by the degree to which they [are] liked or disliked by group members” (Ladd, 1999, p. 337). This section will review the different influences of friendships and peer relationships on classroom behavior and social outcomes, including sex and ethnic differences.

Friendships. Friends in the classroom may influence an individual student by influencing the student's motivation in regard to school success or failure (Berndt & Keefe, 1996). Students may be motivated by a desire to impress and meet friends' expectations, by the desire to emulate their friends' behaviors and attitudes, by comparisons between their own and their friends' successes, or by a desire to have the correct beliefs and make decisions that seem reasonable to their friends (Berndt & Keefe, 1996). In addition, student performance may also be affected by the quality of their friendships. Students whose friendships have more positive features have more positive attitudes toward school, are better behaved, and are higher in academic achievement (Berndt & Keefe, 1996; Doll et al., 2004), while students whose friendships are more negative are less involved in the classroom and more disruptive (Berndt & Keefe, 1996). Middle-school students that are more secure with their friends tend to have higher ratings of self-esteem and were more able to cope positively with school demands (Ryan et al., 1994). Wentzel, Barry, and Caldwell (2004) found that middle school students improved their prosocial skills when they were friends with other students with strong prosocial skills. Reid et al. (1989) indicated that friends are strong sources of emotional support and companionship across early elementary and only increase in these types of support in middle school.

Though not as studied as peer groups, nurturing friendships may have a role in increasing school liking and engagement for younger students. For older students, it may increase school motivation and future career planning, as well as decrease involvement in delinquent groups (Wentzel, 1999). In the classroom, having friends has been found to be related to a variety and social developments (Hartup, 1996). Children in elementary

and middle school are more socially competent and have fewer behavior problems themselves when they are linked with socially skilled peers who encourage adaptive, cooperative and prosocial behavior (Gifford-Smith & Brownell, 2003). In contrast, children who are friends with peers having behavior problems and who have antisocial behavior are more likely to engage in problem and antisocial behavior themselves (Gifford-Smith & Brownell, 2003). If teachers are able to influence their students' abilities to make friends, they may be able to encourage relationships with socially competent children, while helping less competent students develop prosocial skills.

Role of Peer Relationships. Peer group acceptance, on the other hand, is the index of how well a child fits into the classroom social network (Gifford-Smith & Brownell, 2003). Wentzel (1999) theorized that “social development is embedded within the contexts of social relationships and environments, and that learning is an ongoing process of interaction and then accommodation between individuals and their social worlds.” Within this model is the assumption that children learn to identify appropriate social goals. Children learn about themselves and what they need to do to accomplish these goals, and social interaction may also help children develop their motivation to accomplish goals. It is also noted in this article that children of minority status also learn about their cultural relationship to the majority culture through social interactions. Connell and Wellborn (1991) proposed that peer acceptance was related to feelings of belonging and connectedness to classroom, which enables children to engage in the classroom; peer rejection, however, leads to feelings of disengagement and causes children to withdraw from the classroom activities.

Acceptance within a social network may foster feelings of inclusion and belongingness, and thus may motivate children to explore and adjust to school, while rejection by the peer group may inhibit exploration and adjustment (Birch & Ladd, 1996; Connell & Wellborn, 1991). Rejection may also increase negative school attitudes, causing withdrawal from school experiences. The frustration of rejection could also produce aggressive or disruptive behaviors that further maladjustment with peers (Birch & Ladd, 1996). However, students may still be able to form friendships with classmates even when not included or rejected from social networks. Students who are not listed as being part of a social network may still have reciprocal friendships in the classroom, and vice versa (Gifford-Smith & Brownell, 2003). Therefore, information about both friendships and social networks may be used to determine students' social status.

Children who have positive relationships with their peers may feel more comfortable in the classroom and may be able to take advantage of the social and learning opportunities offered, while those with negative relationships with peers may develop negative attitudes that may inhibit exploration and learning (Birch & Ladd, 1996). In addition, research suggests that peer affiliation may influence the level of student motivation, because students involved in peer groups that are more motivated to succeed are more likely to achieve in school, while those who are involved in peer groups that are not motivated are less likely to achieve (Gifford-Smith & Brownell, 2003; Hartup, 1996; Kindermann, 1993). Further, peer rejection early in the school year predicted more negative school attitudes, increased school avoidance and lower performance levels amongst early elementary students (Ladd, 1990). Ladd et al. (1999) found that peer acceptance was related to greater levels of classroom participation, which

in turn was related to greater levels of classroom achievement, while peer rejection was related to lower levels of participation and thus lower levels of achievement. In addition, there is evidence that early and continued peer rejection may be a factor in later decisions to drop out of school (Hymel, Comfort, Schonert-Reichl, & McDougall, 1996), as well as juvenile and adult criminal behavior, and psychopathology (Ladd, 1999; Parker & Asher, 1987). In addition, research indicates that once a reputation has been established within a peer group, these reputations become self-perpetuating, creating situations where a student is unable to gain peer acceptance at a later time (Cairns et al., 1985; Denham & Holt, 1993; Ladd, 1999).

In spite this research, teachers and other school personnel may not realize when peer interactions are affecting student emotions and behavior (Koplow, 2002), and therefore may not know when or how to intervene. Developing prosocial behaviors is critical in gaining entry into peer groups (Wentzel, 1996). In addition, prosocial behaviors have been linked to positive outcomes such as grades and test scores (Wentzel, 1996).

Sex Differences. In general, research suggests there are some sex differences in peer relationships. Ladd and colleagues (Ladd, et al., 1999) found that girls have higher levels of peer acceptance, while boys had greater levels of peer rejection. This was proposed to be due to interaction styles; girls were more likely to engage in prosocial behaviors, while boys were more likely to engage in anti-social behaviors. As noted above, peer acceptance and rejection are related to classroom participation, which was in

turn related to achievement; this indicates that boys may be at greater risk for academic failure due to greater levels of peer rejection.

In general, research indicates that boys are more likely to play in large, less exclusive groups than girls (Berndt & Hoyle, 1985; Gifford-Smith & Brownell, 2003). In addition, boys were more likely to have more reciprocated friends than girls, indicating that boys were more likely to be connected to the friends of their friends (Gifford-Smith & Brownell, 2003). Inclusion in the large, central cluster was related to social status for boys, indicating that participation in the central cluster influenced how they were perceived by their peers. In contrast, girls' groups form numerous smaller clusters that are generally not interconnected, with peer status not related to cluster size for girls (Gifford-Smith & Brownell, 2003). This indicates that girls form smaller, more intimate and exclusive relationships while boys develop larger and more loosely connected and inclusive groups. Girls of all ages are more likely to limit the growth of their friendship groups (Berndt & Hoyle, 1985). Research also indicates that while younger (4th grade) boys list more friends than younger girls, older girls (7th grade) list more friends than older boys (Cairns et al., 1995). This may indicate that older girls are likely to list more friends, even as they appear in smaller social clusters than boys. In addition, girls report greater levels of intimacy and companionship with friends at earlier ages than boys (Buhrmester & Furman, 1987; Furman & Buhrmester, 1985, 1992).

Ethnicity and Peer-Peer Relationships. Some research indicates that family background variables, such as minority status and economic disadvantage may be related to higher levels of peer rejection (Ladd et al., 1999). Murdock (1999) looked how

negative feedback from peers may affect student feelings about their educational efficacy interacted with ethnic variables. In general, lower-income African-American students reported that their peers had lower academic aspirations than did both higher-income White students. It was also found that peer negative aspirations mediated the relationship between being from a low-income African-American background and school engagement. Overall, being from a low-income household and African-American was more related to perceptions of decreased support from their friends. This indicates that teachers may need to intervene and influence the choices of the student, as well as their peer group within African-American populations.

Grade Differences in Peer Relationships. There are some differences between the way younger children interact and form friendships and the way older children do. Children in the middle grades (4th and 5th grades) were found to have social networks that were more exclusively same-sex, and were also less complex than those of older children; children in the middle grades had more overlap between groups and less distinct group structures (Kindermann, McCollam, & Gibson, 1996). Among early elementary school students, friendships serve as sources of entertainment, characterized by sustained bouts of positive and coordinated play (Gifford-Smith & Brownell, 2003). By middle childhood, friendships are formed from shared norms and personal qualities, and are evidenced by interactions based on conversations, games, and contests (Gifford-Smith & Brownell, 2003). When heading into adolescence, friendships are evidenced by intimate, dyadic exchanges based on open communication and affection (Gifford-Smith & Brownell, 2003). As children age, their friendships become more stable and reciprocated as children's social competencies grow (Cairns et al., 1995; Gifford-Smith & Brownell,

2003), and they report greater companionship and intimacy with same- and opposite-sex friends over time, with same-sex friendships ultimately surpassing even familial relationships as sources of intimacy (Buhrmester & Furman, 1987).

In terms of peer acceptance and social networks, research indicates that as children age, their social network clusters changes in a curvilinear fashion (Cairns et al., 1995; Gifford-Smith & Brownell, 2003). In general, peer groups increase in size somewhat over the course of early and middle childhood, and then starts to decrease in size heading towards adolescence; children in middle school appear to make fewer new friends over the course of the school year than children in elementary school (Berndt & Hoyle, 1985). Peer clusters become more permeable across middle school years, meaning that students may be affiliated with more than one peer cluster (Gifford-Smith & Brownell, 2003), and were more likely to show mixed-sex social groups than elementary school students (Cairns et al., 1995).

Summary. In general, Wentzel (1999) sites research that suggests peers do not have the influence that parental or other adult (teacher) relationships may have. Even when rejected or neglected by peers, strong adult relationships can act as a protective factor (Wentzel, 1999). However, some research suggests that when adult relationships are lacking, strong, warm peer relationships and friendships may provide a moderating effect on the social support needed to accomplish academically (Dubow & Tisak, 1989).

The information suggests that both peer and teacher relationships influence student social behaviors and development in school. To understand how these relationships may be changed or influenced so that teachers and students benefit from the

best relationships in school, we must understand how teacher and student perceive their relationship with each other and with peers, and their understanding of how teachers impact student relationships with their peer groups.

Teacher Influence on Peer Relationships

Teachers may mistakenly believe that peer interaction is beyond their realm of influence (Koplow, 2002). In general, many teachers and other educators may believe that parents instruct their children in culturally appropriate behavior, while teachers are expected to provide more academic instruction (Kesner, 2000). Without teacher input and guidance, children may miss opportunities for prosocial learning, such as tolerating differences, handling rejection, and being kind and inclusive (Koplow, 2002; Pianta & Walsh, 1996). Teachers are responsible for creating controlled, balanced environments where children will have the opportunity to interact with each other and grow emotionally attached. Teachers who have these skills and knowledge in creating and managing the classroom environment may decrease later relationship conflict between students and teachers (Kemple & Hartle, 1997; Koplow, 2002; Mantzicopoulos, 2005).

Pianta and Walsh (1996) theorized that children are interacting and connected to their environment at all times, and bring their own histories and adaptive behavior to the classroom (Erickson & Pianta, 1989). Therefore, children with insecure attachments at home may translate these relationships to school, and may be less socially competent and able to develop healthy relationships with teachers and peers. Further, schools are social systems – based on individual, group, and institutional interactions. In situations where a home caregiver is less secure, a healthy, positive, and sensitive teacher-student

relationship may help lessen affects of family stress (Pianta & Walsh, 1996). When teachers intervene to guide peer relationships, it improves the chances for children to form better relationships in the future (Pianta & Walsh, 1996). Connell and Wellborn's (1991) theory of relatedness suggests that when students feel related to their contexts and environments (e.g., the school and the classroom), they can develop new competencies that allow them to adapt and thrive in the environment. Teachers may therefore be critical for creating accepting classrooms where children can develop relationships with peers. How might this information be used to improve student social outcomes? First, teachers may be able to help students adjust their attitudes towards school by helping them understand their friends' attitudes, which may help improve students' feeling about school if they realize that their friends enjoy and want to succeed in school (Berndt & Keefe, 1996). Teachers may also work to strengthen and improve the friendships of students whose relationships have negative features, thus changing student behaviors and those of their friends (Berndt & Keefe, 1996). However, currently it is still not clear how the role of teacher behavior and preference predicts peer relationships.

As Wentzel (1996) noted, schools have long had policies of developing socially responsible behavior. In order for children to develop prosocial behaviors and competencies, they are required to internalize the values and goals of the adults around them (Wentzel, 1996). Teachers provide socialization experiences within the classroom that may develop prosocial behaviors by promoting peer relationship norms and rules that they expect all their students to follow (Kemple & Hartle, 1997; Koplow, 2002; Wentzel, 1996). Research indicates that student's social and motivational behaviors at school are linked to the perceived support they receive from teachers (Wentzel, 1994, 1996). This

indicates that students may view their teachers as valuable sources of support in developing the peer relationships in the classroom.

Therefore, there is a evidence that the teachers' involvement relate to peer social relationships; however, the perceptions of students and teachers on how much influence teachers have in this role has not yet been fully explored. In an early laboratory experiment by Flanders and Havumaki (1960) found that students that were praised more by authority figures received more positive peer nominations for leadership and participation. Skinner and Belmont (1993) also found that teachers' liking for a student is unconsciously communicated to the student's peers and can influence how children perceive interactions with their teachers. Hughes, Cavell, and Willson (2001) established that information about the teacher-student relationship is a source that peers use to make judgments about classmates, and that teacher behavior within that relationship may bias peer perceptions of a student. Their research indicated that children who were rated by their peers as being in conflict with their teachers were more likely to be rated as being aggressive, and that teacher conflict contributed to assignments by peers of children being overtly aggressive, relationally aggressive, and receiving "least liked" ratings. Having teacher support contributed to being nominated as smart, a leader, and receiving "liked most" ratings. All of this indicates that peers may use the teacher-child relationship information when determining what roles each student plays in a class, and when assessing their feelings toward that student. Hughes and Kwok (2006) found that early teacher support and teacher reports of student engagement were related to later peer acceptance. In addition, children with higher levels of externalizing problems were least likely to enjoy a more supportive relationship with the teacher and peers, though previous

research indicates that they benefit the most when support is given (Dubow & Tisak, 1989; Wentzel, 1994). This indicates it is important to help teachers understand their influence on their students and support teacher efforts to develop relationships with aggressive children.

White and Kistner (1992) looked at how peer ratings of a student changed depending upon teacher tone and response to behavior in lower elementary school. The experimenters showed participants target child receiving either positive or negative feedback from a teacher, though the target child's behavior did not change. Results indicated that when the target child was rated in the positive feedback condition, that child was viewed as more likeable and more deserving of rewards. However, when that child was seen being given negative feedback, it was found that the child was judged more negatively by same-aged peers. Teacher comments seem to increase the saliency of a child's behavior for other children, both positively and negatively. This indicates that students are aware of teacher behaviors toward their peers and make judgments based on teacher behaviors.

Overall, the research suggests that the relationship between teacher and student can greatly impact how the student is able to adjust to the classroom environment, establish relationships with their peers, and may also influence students' abilities to cope outside of school. However, many of the ratings were from teachers, and therefore there is a risk of rater-bias, which may exaggerate real teacher influence (Murray et al., 2008). It is also unclear how teachers perceive their own ability to influence their students' friendships and social networks, as well as how students view their teachers as an active

resource for making friends. This research will extend the existing body of literature by examining teacher as well as student perceptions of the teacher's influence in peer-peer relationships.

Student Sex Differences. Student sex differences in the research reveal that girls are generally more secure and supported in their relationships with their teachers and are more likely to utilize these relationships for emotional and academic support in middle and high school populations (Malecki & Elliot, 1999; Ryan et al., 1994). In an interesting finding on social networks and sex, Pearl et al. (2007) found that teachers were most aware of the social networks of boys who they perceived to be at risk (i.e., aggressive and engaging in externalizing behavior) and those who were more academically able, attractive, or athletically gifted, whereas they were most aware of girls who were either academically gifted, or who were at risk for internalizing behaviors. This indicates that there are sex differences in the behaviors and abilities that teachers are most likely to perceive amongst their students. However, it does not indicate that teachers help girls make friends differently than they help boys.

Sex was not found to moderate the relationship between peer perceptions of teacher-student relationships and peer evaluations of liking (Hughes et al., 2001).

In addition, Mantzicopoulous and Neuharth-Prichett (2003) found that African-American boys reported more conflict with their teachers than other groups, while African-American girls reported the least. This suggests that ethnicity and sex may interact in how students perceive themselves in the classroom.

Student Ethnicity. Most of the studies that examined teacher influence on peer relationships were conducted in middle class, predominately White samples in localized areas of the United States (Skinner & Belmont, 1993; White & Kistner, 1992). The study by Hughes et al. (2001) did have some ethnic diversity (24% African-American, 31% Hispanic, and 44% white); however, ethnicity was not an examined variable in that research. Therefore, it is difficult to generalize these findings to minority groups or to different areas of the United States. This project will be localized to a specific region of the U.S., but will also be examining a predominately African-American population.

Grade Differences. Research indicates that teachers in early elementary grades (especially kindergarten) are more likely to promote social development over the development of academic skills (Stuhlman & Pianta, 2002). This may indicate that early elementary school teachers are more likely to recognize their influence on their student's peer relationships than teachers in upper elementary and middle school. Research also suggests that middle school children are more likely to have closer relationships to their peers than do elementary school children, and middle school students are more likely to be disengaged from and not as close to their teachers as elementary school students are (Lynch & Cicchetti, 1991). However, it should be noted that since the middle school students in this study have multiple teachers, they were asked to rate their homeroom teachers; therefore, the results may have been skewed somewhat because other teachers were not considered. In addition, the research was conducted on an upper-middle class, largely White population; therefore, it would be difficult to generalize these findings to wider populations. Other studies indicated that as students age, they have decreases

perceptions of social support from parents, teachers, and classmates as their age increases (Malecki & Elliot, 1999).

Measuring Relationships within the Classroom

Teacher-Student Relationships. Research studies have employed multiple methods of examining the teacher student relationship: the Student Teacher Relationship Scale (STRS) (Pianta & Hamre, 2001); My Family and Friends (Cauce et al., 1990; Murray et al., 2008; Reid et al., 1989); Teacher Relationship Inventory (Hughes & Kwok, 2006); Classroom Life Measure (Wentzel, 1994); Young Children's Appraisals of Teacher Support (Y-CATS) (Mantzicopoulous & Neuharth-Prichett, 2003); the Survey of Children's Social Support (SOCSS) (Mitchell, 2003); Children's Feelings About Their Teachers (CFATT) (Salmon, 1998). These measures, especially the STRS, have been researched and have strong validity and reliability. However, most of these measures do not look at the social support provided by the teacher, and those that do not ask specific questions in regards to the teacher's role in the development of children's friendships. Another disadvantage is that the teacher measures (the STRS and the My Family and Friends – Teacher Form) must be completed for each individual child, which can tax a teacher's time and resources. The ClassMaps measure, however, allows children to respond about their relationship with their teachers in terms of support and role in development of friendship, as well as allowing teachers to respond about their classroom overall without having to discuss each individual child.

ClassMaps were developed based on the idea that children are able to identify specific aspects of their classroom, such as peer behavior and student-teacher

relationships, and that this information can be used to inform teachers and other school personnel about the resiliency or problems in the classroom (Doll et al., 2004). Specific to this research, we will be using items related to student-teacher and peer-peer relationships.

Friendships. Gifford-Smith and Brownell (2003) noted that the most popular method of determining friendships is to use reciprocal nominations. In this method, friendships are measured by whether or not the students' nominations were reciprocated (Berndt & Hoyle, 1985). Therefore, information about friendships will be explored using this method.

Social Networks. As noted by Cairns and Cairns (1994), it is difficult to track peer groups because of the constant restructuring and composition changes; "they are not only moving targets, but also changing targets" (p. 92). In order to do a network analysis, the researcher needs to know not only whether the individual fits into the social network, but with whom they fit. The social networking system proposed in this study is based on one discussed in Cairns and Cairns (1994) and detailed in Gifford-Smith and Brownell (2003). Social networks provide a more detailed examination of the ecology of peer groups and how their relationships are embedded within the classroom ecology; thus, social network analysis strives to identify the patterns of children's affiliation within the peer group (Gifford-Smith & Brownell, 2003). This method is based upon two assumptions. The first is that while an individual child may have only limited knowledge of the classroom, information from all the students can be used to complete the classroom picture. In general, Cairns and Cairns (1994) found that most students commit omissions

rather than commissions, which means they forget to include people to a group instead of including those that do not belong. However, while some of the participants may omit some members of a group, others will give the need information to complete the group information. The second assumption is that participants can provide information about the composition of groups to which they do not belong. Children observe and understand more than they directly experience, which means every child in a class can describe much of the basic social structure of the class (Cairns & Cairns, 1994; Cairns et al., 1985; Gifford-Smith & Brownell, 2003). This allows for thorough examination of peer groups, even in classrooms where not all students participate in the social network assessment. In general, a 50% rate of participation is recommended (Cairns & Cairns, 1994; Kindermann, McCollam, & Gibson, 1996). Participant responses generate group clusters and boundaries, allowing researchers to capture the placement of the persons who are the most salient in the social structure, and to determine who does not have a group (Cairns et al., 1985). In general, Cairns and Cairns (1994) describe the questions as non-threatening and easy to answer. Students are asked to identify which students “hang around together a lot.” When necessary, follow-up prompts are utilized to ensure that respondents include themselves and other-sex groups. The students answer the questions without the aid of classroom roster, to insure that the students are reporting only on groups that are most salient (Gifford-Smith & Brownell, 2003). The results produce a co-occurrence matrix, which represents the number of occasions any persons co-occurred in the same group. The diagonal of this matrix summarizes the sheer number of times an individual was named in any group, giving a measure of the person’s social salience.

Summary

Research indicates that teachers can play a critical role in situations where parental involvement or relationships are lacking (Oppenheim et al., 1988; Sroufe, 1983). The teacher-student relationship is critical to more than academic development; it is also related to social outcomes (Hamre & Pianta, 2001; Howes et al., 1994; Pianta & Nimetz, 1991). Other research on the topic indicates that teacher behavior and attitude can inform peer opinion and behavior towards an individual student (Flanders & Havumaki, 1960; Hughes et al., 2001; Skinner & Belmont, 1993; White & Kistner, 1992). Having relationships in the classroom has also been shown to be positive outcomes, such as classroom engagement, academic achievement and better prosocial behaviors (Berndt & Keefe, 1996; Birch & Ladd, 1996; Gifford-Smith & Brownell, 2003; Hartup, 1996; Ladd, 1990; Ryan et al., 1994; Wentzel et al., 2004). However, teachers may not always be cognizant of their influence, or may not believe that they are able to influence peer-peer relationships. Therefore, it is important to further explore both teachers' and students' perceptions of teachers' influence in their students' relationships. In addition, this influence also needs to be examined in relation to the overall cohesion of the classroom to better understand the dynamic nature of the classroom social environment.

CHAPTER 3

METHOD

Participants

Participants for this study included teachers and their students in kindergarten through eighth grade (ages 5 to 15 years old) at a local elementary school, as part of a larger study examining friendships among elementary aged students. The population of the school was approximately 374 students and 18 teachers. Data was collected in the 2008-2009 school year.

Each grade had two classrooms with approximately 20 students per grade. From demographic information obtained from the Philadelphia School District for the 2008-2009 school year, the ethnic breakdown of the school was 98% African-American, and less than 1% each Hispanic, European-American, and other ethnicities. Most students came from low-income families, with approximately 87% on free or reduced-price lunch. Approximately 50% of the students are anticipated to be female. Only children whose parents consented were included in the study. In order to encourage students to have their parents sign and return the consent form, a contest was held at each grade level (kindergarten through second, third through fifth, and sixth through eighth), where the classroom that returned the most consent forms received a pizza party sponsored by the principal investigator. To ensure that students and parents did not feel coerced into participating in the research, parents were given the option to accept or decline participation for their child. Regardless of the parent decision, if they reviewed and returned the consent form, it was counted towards the pizza party. After parents gave

consent for their child to participate, students were asked to give written assent prior to any data collection. Children also had to provide written assent to participate. All children with parental consent chose to participate.

The ethnicity of the teachers was 35% African-American ($n = 6$) and 65% White ($n = 11$), based on the information collected from a self-report demographics survey. The mean number of years overall teaching experience for the teachers was 8.00 years, with a range of 0 to 20 years ($SD = 6.42$). The mean number of years teaching at the school was 5.50 years, with a range of 0 to 16 years ($SD = 5.29$). The majority of the teachers were female (18% male, 82% female). The mean number of students in a classroom was 20, with a range of 17 to 26 ($SD = 2.32$). Teachers were recruited by personal visits by the larger study's principal investigator at weekly team meetings. Teachers were provided consent forms where they could choose to participate with no penalties for nonparticipation. Teachers were neither asked to spend more time beyond their regular working hours nor were they compensated for their participation. Upon completion of the consent form, teachers were given a packet which included a demographic questionnaire, as well as the *ClassMaps – Teacher Agreement* survey (see Appendix B). All 18 teachers were targeted for participation; one teacher chose not to participate. Thus, a total of 17 teachers participated in this study.

Measures

ClassMaps Survey: (see Appendix A) The ClassMaps survey was developed as an alternative assessment strategy to evaluate classroom climate from the children's point of view (Doll et al., 2004). The survey was normed on elementary and middle school

students from urban areas in the southwestern U.S., in a low SES, high minority population (47% Hispanic, 3% African-American, 47% White, 3% other) (Doll, Zucker, & Brehm, 1999; Zucker, Brehm, & Doll, 2000). The children could answer each item using a four-point scale: Never, Sometimes, Often, or Almost Always. The survey contained eight sections: Believing in Me (8 items); My Teacher (7 items); Taking Charge (8 items); My Classmates (6 items); Following the Class Rules (6 items); Talking with My Parents (7 items), and Kids in this Class (5 items). The average alpha for each section is .79, ranging from .56 to .93. Sections related to academic efficacy, teacher-student relationships, and home-school relationships were significantly and negatively correlated with school absences, while work completion was negatively correlated with school absences and sections with items of self-determination. Grade point average was significantly and positively related to items of academic self-efficacy, self-determination, peer relationships, and home-school relationships.

For this the purpose of this project, additional questions were added in the same format as those used in the ClassMaps survey, titled My Friends, containing 6 items developed to assess how children perceived teacher influence on their peer relationships. The items in the section included:

1. My teacher wants us to be friendly to our classmates.
2. My teacher makes sure nobody plays alone.
3. My teacher is someone I can talk to about my friends.
4. My teacher helps kids in this class get along when they have a disagreement or a fight.
5. My teacher helps me make friends.

6. My teacher says good things about my friends.

ClassMaps – Teacher Agreement: The ClassMaps – Teacher Agreement scale was designed to parallel the original ClassMaps survey. As with the student’s survey, teachers could answer each item using a four-point scale: Never, Sometimes, Often, or Almost Always. The questions were composed following the style and content of the ClassMaps survey. There are eight sections in the survey, based on the standardized ClassMaps measure: Student Self-Efficacy (8 items); My Behavior Towards My Students (7 items); Student Efficacy (8 items); Friendships (6 items); Following the Class Rules (6 items); School and Home Communication (7 items); My Students Worry That...(8 items); and Student Behavior (5 items). For the purposes of this project, a ninth section was added, My Students’ Friends, which was similar to the student version. The six items in this section included:

1. I want my students to be friendly with each other.
2. I make sure nobody plays alone.
3. My students can talk to me about their friends.
4. I help my students get along when they have a disagreement or a fight.
5. I help my students make friends.
6. I say nice things about my students’ friends.

Friendship Survey: Information used to develop the children’s social network was collected using the *Friendship Survey*. On this survey, children were asked to identify their name, the date, school name, teacher name, age, grade, sex, and ethnicity at the top of the survey. Children were then asked to name the kids in the class they liked to hang out with, and of those the children named, they were asked to circle the three children

they most liked to hang out with, and to put a star next to the name of the one child with whom they most liked to hang out. They were also asked to name any children they did not like to hang out with. Finally, they were asked to name any kids in the class who liked to hang out together, with prompts reminding them to consider both boys and girls, and to draw a circle around each group (see survey in Appendix B).

From this information, the percentage of reciprocated top three friendships could be determined. Following the method of Cairns and Cairns (1994), students were not provided with class lists or photographs to evaluate the salience of peers to their classmates. After determining reciprocal friendship information, a social network analysis was conducted. Three measures of network centrality were derived: group centrality, individual centrality, and social network centrality, details of which were taken from Gifford-Smith and Brownell (2003) and Cairns and Cairns (1994). Individual centrality refers to the centrality of a particular individual in comparison to his or her classmates. It is determined by identifying the member within the larger classroom with the highest number of nominations. The classification is then determined based on the cut-off scores listed above, comparing individuals to the index of the most central person. Group centrality refers to the centrality of a particular cluster in comparison to the larger classroom network. It is determined by identifying the two members within a group who received the highest number of nominations and taking an average of their scores. The group with the highest group centrality index is considered to be the most central or nuclear group. Cut-off scores determine the classifications of nuclear (70% or greater of the index of the most central group), secondary (between 31% and 69%), peripheral (30% or lower) or isolated (0%). Finally, the social network centrality is determined by

comparing the group network and the individual centrality score, and determining which is the smaller of the two. Whichever score is smaller is the social network centrality score. Social network centrality consisted of four different categories, as described in Cairns and Cairns (1995): nuclear (3), secondary (2), peripheral (1), or isolated (0). Nuclear centrality indicated a person was a high centrality member of a high centrality group. Secondary centrality indicated that a person could be a high centrality member of an intermediate group, or an intermediate member of a high centrality group. Peripheral centrality indicated that a person was either a low centrality member of any group or belonged to a low centrality group. Isolated status meant that a person was not nominated for membership in any group. Further breakdown of determining social network centrality based on individual centrality and group centrality is listed in Table 1. Research done using this methodology (Gest, Farmer, Cairns, & Xie, 2003) suggests that it is useful with urban and minority populations (Cairns & Cairns, 1994; Estell, Cairns, Farmer, & Cairns, 2002), and that the social network map is consistently related to the observed patterns of classroom interaction among peers, strengthening the validity of this measure.

Procedures

Teachers sent their students home with consent forms for parents to read and sign; teachers also had the option of having the investigator speak to the class about the consent forms and the research prior to sending the consent forms home.

Research personnel entered each classroom at a time scheduled with the teacher to ensure maximum convenience. A minimum of 2-3 research personnel were present at the

majority of data collection sessions. Student questionnaires were given on a classwide-scale, except in cases where it was deemed more developmentally appropriate for the personnel to administer the measures in small groups or individually; this exception was made for students in the younger grade levels, who required more support to complete the surveys, or when children asked the examiners for help completing the survey. For children in the younger grade level (K-2), the surveys were administered individually to make sure the students understood the questions and how to respond.

Upon entering the classroom, the investigators and personnel explained the purpose and the goal of the research to the students. The students were told that the researchers wanted to know about the students' friendships and collect student input into how to improve school and classroom atmosphere. After the students had given written assent, they were provided a packet of surveys, which included the *Friendship Survey* and the *ClassMaps* survey. Examiners were available to help the children read and understand how to complete the survey if needed. To accomplish this, examiners would move around the classroom and engage students who appeared to be having difficulty completing the survey; the students would be asked if they needed help reading or understanding items. If the students indicated they needed help, the examiner read or explained the items to the student.

Table 1. *Social Network Centrality*

Social Network Centrality	Individual Centrality	Cluster Centrality
“Nuclear” = 3	High	High
“Secondary” = 2	Medium	High
“Secondary” = 2	High or Medium	Medium
“Peripheral” = 1	Low	High or Medium
“Peripheral” = 1	Any	Low
“Isolated” = 0	Any	Belongs to No Cluster

CHAPTER 4

RESULTS

Analysis of ClassMaps Student Form

Prior to conducting the analyses on this project's research questions, a Principal Components factor analysis with Varimax rotation was conducted to determine the factor structure of the ClassMaps-Student Form, including the newly added section, because this research project used a new section with questions believed to examine a new factor. The ClassMaps survey was originally developed through a systematic piloting procedure (Doll et al., 1999, 2004; Zucker et al., 2000), in which eight factors were identified within the survey. Based on Doll and colleagues (1999, 2000, and 2004) previous research indicating eight factors, and the belief that the new section was a separate factor, nine fixed factors were entered in to the analysis. Results of the analysis are listed in Table 2.

Results indicated that the new items created for this project did factor together to create a new factor, which has been labeled 'Teacher Involvement with Friends.' One item was deleted from the Teacher Involvement with Friends ("My teacher wants us to be friendly to our classmates"), and was not used in subsequent analysis, as it appeared to be part of a separate factor that was not part of the questions analyzed in this project. The rest of the items showed a factor structure similar to that found by Doll and colleagues (1999, 2000, 2004); however, two original ClassMaps items were not included in the eight-factor structure, "In this class, I can guess what my grade will be when I turn in my work," and "I find and fix my mistakes before turning in my work." The rest of the items in the section titled "Taking Charge" loaded onto other factors, and thus did not match

with Doll and colleagues (1999, 2000, 2004). The results of the analysis therefore suggest that while the original ClassMaps items do fall into eight factors, the factors in this analysis appear to load onto the items in a way that is somewhat different than what is reported by Doll and colleagues (1999, 2000, 2004). As predicted, a new ninth factor loaded onto the items that were included in the Classmaps survey, and thus this new factor was used to analyze the research questions for this project. The subsequent analysis used the new eight factors that were derived from this ClassMaps analysis, with the two items removed, as well as the new ninth factor that had been included in the ClassMaps survey.

Factor scores were also derived from the factor analysis, and each factor score was transformed into a *T* score. After the factor analysis was conducted, the internal reliability was determined by calculating Cronbach's alpha for the items with substantial loadings from each factor. Information about the mean and standard deviation are also provided in Table 3. The subscales from the factor analysis had satisfactory internal reliability, except for the factor named Perceptions of Learning. Perceptions of Learning had an alpha of .58, which is considerably weaker than the other factors.

The factor items were analyzed to see if the different items were correlated. The analysis revealed that all of the items within the Teacher Involvement with Peers factor correlated together at the $p < .001$ level, and can be seen in Table 4. Because the new factor loaded on the questions in the new section and had satisfactory internal reliability, the new Teacher Involvement with Peers factor was then used in subsequent analysis of the student data. The *T* score factor had a mean of $M = 50.00$, with a standard deviation of 10.00. The range ran from a minimum of 25.40 to a maximum of 77.64

Table 2. *Factor Loadings of the ClassMaps with New Section.*

Item and Scale	Factors								
	I	II	III	IV	V	VI	VII	VIII	IX
Classmate Worries									
I worry that other kids will do mean things to me	.78								
I worry that other kids will tell lies about me	.79								
I worry that other kids will hurt me on purpose	.83								
I worry that other kids will say mean things about me	.80								
I worry that other kids will leave me out on purpose	.74								
I worry that other kids will try to make my friends stop liking me	.70								
I worry that other kids will make me do things I don't want to do	.74								
I worry that other kids will take things away from me	.70								

Table 2, continued.

Item and Scale	Factors								
	I	II	III	IV	V	VI	VII	VIII	IX
Self-perception/self-awareness		.77							
I can do my work correctly in this class		.59							
I can do as well as most kids in this class		.49							
I can help other kids understand the work in this class		.54							
I can be a very good student in this class		.75							
I can do the hard work in this class									
I can get good grades when I try hard in this class		.69							
I know that I will learn what is taught in this class		.55							
I expect to do very well when I work hard in this class		.47							
My teacher thinks I do a good job in this class		.49							

Table 2, continued.

Item and Scale	Factors								
	I	II	III	IV	V	VI	VII	VIII	IX
I work as hard as I can in this class		.47							
When the work is hard in this class, I keep trying until I figure it out		.44							
I know the things I learn in this class will help me outside of school		.45							
Parent Involvement and Support									
My parents and I talk about my grades in this class			.75						
My parents and I talk about what I am learning in this class			.74						
My parents and I talk about my homework in this class			.65						
My parents help me with my homework when I need it			.54						
My parents and I talk about ways that I can do well in school			.69						

Table 2, continued.

Item and Scale	Factors								
	I	II	III	IV	V	VI	VII	VIII	IX
My parents and I talk about good things I have done in this class			.72						
My parents and I talk about problems I have in this class			.63						
Peer Following of Class Rules									
Most kids work quietly and calmly in this class				.66					
Most kids in this class listen carefully when the teacher gives directions				.75					
Most kids follow the rules in this class				.76					
Most kids in this class pay attention when they are supposed to				.81					
Most kids do their work when they are supposed to in this class				.73					
Most kids in this class behave well even when the teacher isn't watching				.70					

Table 2, continued.

Item and Scale	Factors								
	I	II	III	IV	V	VI	VII	VIII	IX
Perceptions of Teacher									
My teacher listens carefully to me when I talk					.61				
My teacher helps me when I need help					.62				
My teacher respects me					.76				
My teacher likes having me in this class					.68				
My teacher makes it fun to be in this class					.63				
My teacher is fair to me					.69				
Perceptions of Class Friends									
I have a lot of fun with my friends in this class						.63			
My friends care about me a lot						.71			
I have friends to eat lunch with and play with at recess						.69			

Table 2, continued.

Item and Scale	Factors								
	I	II	III	IV	V	VI	VII	VIII	IX
I have friends that like me the way I am						.70			
My friends like me as much as they like other kids						.68			
I have friends who will stick up for me if someone picks on me						.68			
Classmate Behavior									
Kids in this class argue a lot with each other							.64		
Kids in this class pick on or make fun of each other							.78		
Kids in this class tease each other or call each other names							.79		
Kids in this class hit or push each other.							.74		
Kids in this class say bad things about each other							.78		
Perceptions of Learning									

Table 2, continued.

Item and Scale	Factors								
	I	II	III	IV	V	VI	VII	VIII	IX
I want to know more about the things we learn in this class								.59	
I learn because I want to and not just because the teacher tells me to								.60	
I can tell when I make a mistake on my work in this class								.44	
Teacher Involvement with Friends									
My teacher makes sure nobody plays alone									.63
My teacher is someone I can talk to about my friends									.64
My teacher helps kids in this class get along when they have a disagreement or a fight									.69
My teacher helps me make friends									.72
My teacher says good things about my friends									.62

Table 3. *Internal Reliability of Factors*

Factor	Cronbach's Alpha
Classmate Worries	.91
Self-perception/self- awareness	.86
Parent Involvement and Support	.86
Peer Following of Class Rules	.88
Perceptions of Teacher	.88
Perceptions of Class Friends	.84
Classmate Behavior	.86
Teacher Involvement with Friends	.82
Perceptions of Learning	.58

Table 4. *Correlations among 'Teacher Involvement with Friends' Factor Items.*

	Item 57	Item 58	Item 59	Item 60	Item 61
Item 57. My teacher makes sure nobody plays alone	---	.47**	.47**	.42**	.43**
Item 58. My teacher is someone I can talk to about my friends		---	.53**	.53**	.46**
Item 59. My teacher helps kids in this class get along when they have a disagreement or a fight			---	.52**	.52**
Item 60. My teacher helps me make friends				---	.53**
Item 61. My teacher says good things about my friends					---

** $p < .001$

Analysis of ClassMaps Teacher Form

Due to the small sample size of teachers, a factor analysis could not be conducted on the teacher ClassMaps form. Based on the results of the student form, it was assumed that the factor structure of the teacher form would be sufficiently similar to create a linear composite score of the new section, My Students' Friends, by summing up the scores for each question, excluding the one question that did not factor in with the others. This composite was then used in subsequent analyses, except where otherwise specified. Analyses were conducted on these data to determine information about distribution and averages (see Figure 1). As can be seen, the distribution for teacher ratings is bimodal, with a negative skew. Subsequent analyses were conducted to examine the research questions proposed in this project. The results of the teacher ratings of their involvement in their students' peer relationship were $M = 15.53$, $SD = 3.04$. The minimum score was 9, with a maximum of 19.

How often do teachers rate themselves as helping their students make friends?

For this analysis, data was used from the 15 teachers who had completed all of the survey questions. Based on the scale's scoring rubric, the lowest possible score was 4, while the highest possible score was 20. The actual score range of the teachers who responded was 9 to 19. Thus, no teacher received the lowest possible score, and even teachers who scored at the lower end of the range felt that they were at least sometimes influential in their students' peer relationships.

To further analyze this question, teachers were divided into the high (teachers who rated themselves as above the mean of 15.53) or low group (teachers who rated themselves below the mean) on the composite score. This division corresponds with a naturally occurring split that creates the two subgroups, which can be seen in Figure 1. Results indicated that 8 of the 15 (53.3%) teachers fell into the low group in their involvement with a mean of 13.25 and a standard deviation of 2.19. The high group, which included 7 of the 16 teachers (46.7%), rated themselves as a mean of 18.14 with a standard deviation of 1.07 on their involvement with their students' peer relationships.

An item analysis examined the differences in responses for teachers in the low group versus teachers in the high group. Descriptive results can be seen in Figure 2. Overall, the most frequent response to items was "almost always," with "often," "sometimes" and "never" following in that order.

What teacher characteristics are related to their beliefs of how often they help their students make friends?

Of the 17 teachers surveyed for this project, 15 completed all of the questions required to compute the Teacher Involvement composite. As discussed above, a bimodal distribution of teacher scores indicated two separate groups, the high and low involvement groups. With the bimodal split in the data, each group was separately analyzed to determine if teacher characteristics influenced the groups differently. Pearson correlations were run to determine if teacher age, education level, or years of teaching were significantly related to the different groups' ratings. In both the low and

high teacher involvement groups, none of the explored teacher characteristics was significantly related to teachers' ratings. As these results within each teacher involvement group were not significant, the data was examined as a whole to see if there were any patterns across the entire sample, using Spearman correlation to address the bimodal nature of the data. There were no significant correlations between teacher involvement and age, education level, and years of teaching (see Table 5). Teacher's age and education level were then compared for the high versus low teacher involvement groups using *t*-tests. Results showed no differences between groups for teacher's age ($t[13] = .42, p = .68$) or education level ($t[13] = 1.09, p = .30$).

To explore the categorical teacher characteristics with teacher ratings of their involvement in their students' peer relationships, chi-square tests were used. Teachers in the high involvement group did not differ from those in the low involvement group on either the grade taught ($\chi^2 [2, N = 15] = 2.41, p = .30, \phi = .401$), or teacher ethnicity ($\chi^2 [1, N = 15] = 1.03, p = .31, \phi = .26$).

Do students believe that their teachers help them make friends?

The raw data were examined to determine the way students responded to each item as well as to the items overall. This was done by creating a linear sum score from the raw data. The results are shown in Figure 3. All subsequent analyses used the linear composite score.

Overall, student ratings of their teacher's involvement in their peer relationships ranged from five, which was the lowest possible score, to a score of 20, which was the highest possible score on the scale. From this scale, the midpoint of the scale would have

been 12.5; however, the mean score was 14.78, with a median of 15, with a skew of $-.49$, indicating that overall, students felt their teachers were more helpful than would have been expected in their peer relationships. When looking closer at the results, 151 students rated their teacher as higher than the mean score of 14.78, while 115 students rated their teacher as lower than the mean score. The mode of students (55 total students) had the highest rating of 20, indicating that most students felt that their teachers were important in their peer friendships. In addition to this, an item analysis indicated that on every item in the Teacher Involvement scale, the most common answer was “almost always” (see Figure 4).

The Intraclass Correlation (ICC) was calculated to determine whether or not the data violated the assumption of independent responses. The ICC was calculated to be $.082$, and the DEFF design effect was calculated to be 2.52 . Based on this information, the ICC was determined to be high. This indicates that the student scores appear to be non-independent due to nesting within classrooms. This DEFF was then used to calculate the N for future student analyses. Due to this clustering factor, as well as differences in variables between groups at various levels of the analysis, t -tests were conducted to examine how what differences there were between students of different characteristics.

Do girls rate their teachers as more often helping them to make friends than boys?

This question was analyzed using t -tests to determine whether there were significant differences between the ratings of teacher involvement given by girls compared to the ratings assigned by boys. Sex information is provided below in Table 6.

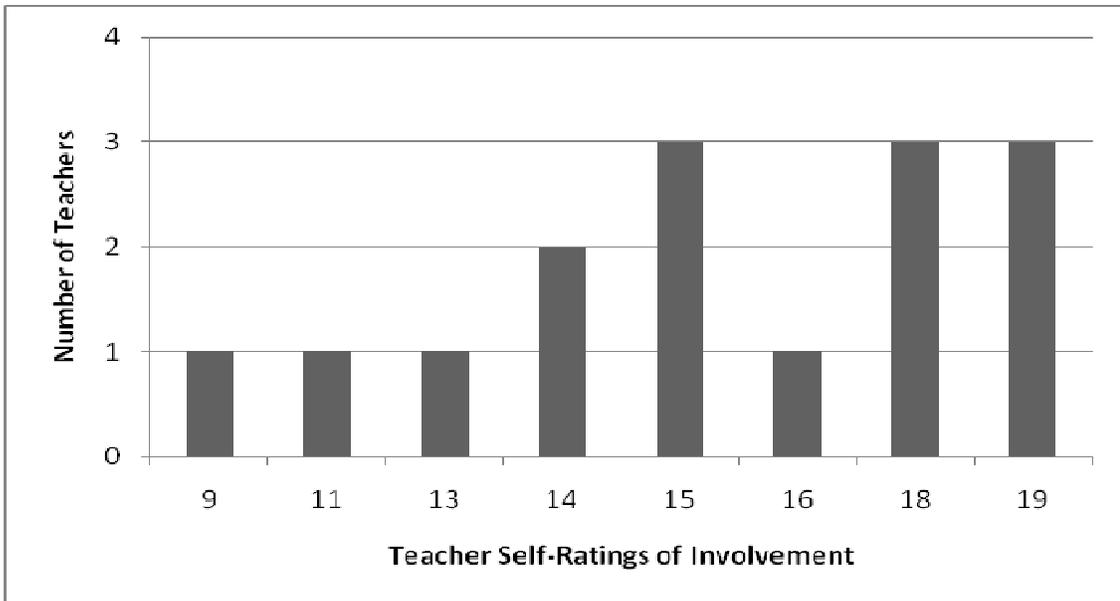


Figure 1. Distribution of Teacher Ratings of ‘Teacher Involvement’ Scale.

Results from this analysis indicated that there was no significant difference between sexes on ratings of teacher involvement in student peer relationships, $t(88.23) = -2.26, p = .01, \text{Cohen's } d = -.48$. To further examine the role of student sex on perceptions of teacher involvement in students' peer relationships, t -test analyses were conducted at each grade-group level. Results indicated that for the lower grade group (grades Kindergarten to second grade) boys' ratings of teacher involvement ($M = 57.54$) was significantly higher than for girls ($M = 52.01$), $t(28.08) = -3.45, p = .001, \text{Cohen's } d = -1.33$. For both of the middle grades (grades three through five) and the upper grades (grades six to eight), there were no significant differences by sex, ($t[25.73] = -.09, p = .54, \text{Cohen's } d = -.04$; $t[28.86] = -.47, p = .32, \text{Cohen's } d = -.18$, respectively).

Are teachers who ethnically match their students rated as more often helping to make friends than those teachers who do not ethnically match their students?

A t -test was conducted to examine whether or not students who ethnically match their teachers rated their teachers as higher in involvement with their peer relationships as compared to students who do not ethnically match their teachers (see Table 7). Results indicated that there was no significant difference in teacher involvement ratings between those who ethnically matched their teachers and those who did not, $t(73.81) = .69, p = .75, \text{Cohen's } d = .16$. However, a descriptive analysis revealed that there were no students who ethnically matched their teachers in grades three through five, as all teachers were white and all students were African-American. Therefore, the analysis was re-run excluding data from the students in the middle grades, but was still not significant, $t(50.79) = .55, p = .71, \text{Cohen's } d = .16$.

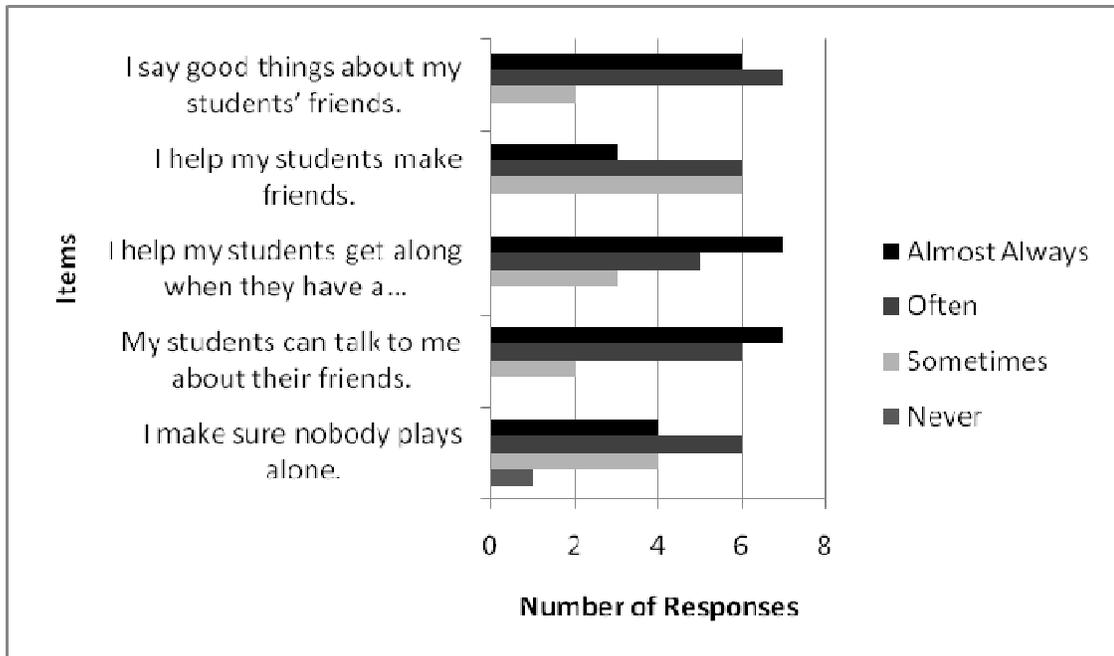


Figure 2. Teacher Responses to Factor Items.

Table 5. *Correlations between ‘Teacher Involvement’ Scale and Teacher Characteristics by Group.*

	Teacher Characteristics	Correlation
Teacher Low Group	Level of Education	.21 [†]
	Years Teaching	.28 [†]
	Teacher Age	.28
Teacher High Group	Level of Education	.09 [†]
	Years Teaching	.72 [†]
	Teacher Age	.04

* $p < .05$

† = Pearson Correlation

‡ = Spearman Correlation

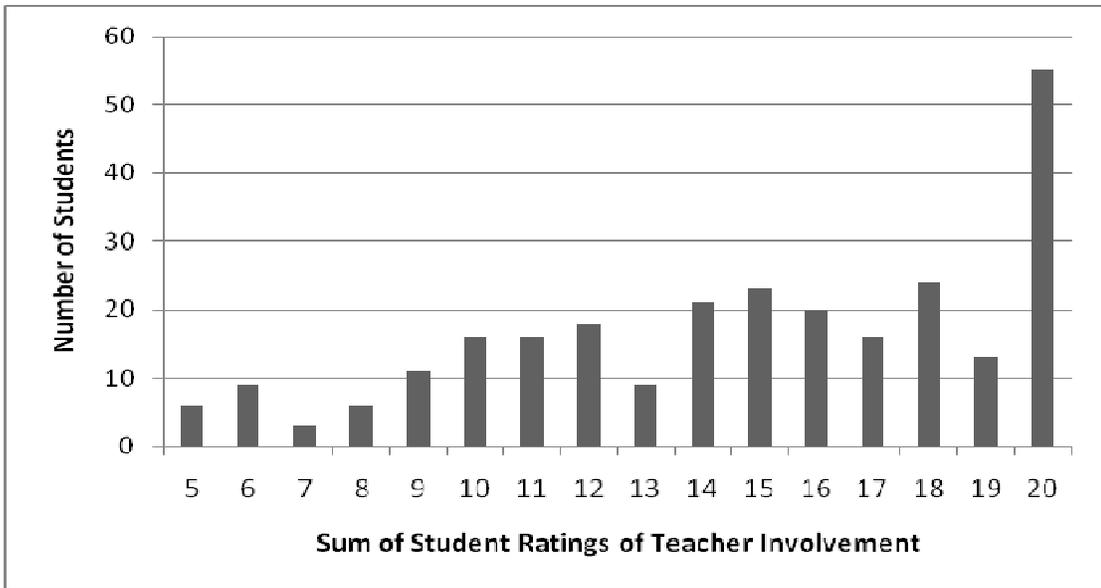


Figure 3. Linear Sums of Student Ratings on the ‘Teacher Involvement’ Scale.

To further examine this question, differences on ratings of teacher involvement between those who ethnically matched their teachers versus those who did not was compared for boys and girls. The results were not significant for either girls ($t[28.17] = -.29, p = .39, \text{Cohen's } d = -.11$) or boys ($t[22.62] = 1.57, p = .07, \text{Cohen's } d = .69$). Student ratings of teacher involvement were also compared between those who ethnically matched their teachers versus those who did not within the lower and upper grade levels. As there were no students in the middle grades who ethnically matched their teachers, analyses were not run comparing the middle group to the lower or upper grade groups. Analyses were instead run comparing students who ethnically matched their teachers and those who did not in both the lower and upper grade groups. The results were not significant for either those in the lower grade groups ($t[25.40] = -.43, p = .34, \text{Cohen's } d = -.18$) or the upper grade group ($t[25.40] = .83, p = .21, \text{Cohen's } d = .34$).

Is there a difference in students' ratings of their teacher's help in making friends by grade level?

Given the small sample size of 17 classrooms, students were broken into three grade groups: Kindergarten through second grade (youngest group), third through fifth grade (middle group), and sixth through eighth grade (oldest group). Students were grouped this way based on previous research that suggests that there are attitude and perceptual differences between different educational grade levels, such as lower elementary, upper elementary, and middle school. Descriptive information about student ratings of teacher involvement in peer relationships by grade level can be found in Table 8. Student ratings of teacher involvement for each grade level were analyzed using a

one-way analysis of variance. Results indicated significant differences between grade levels, $F(2, 91) = 6.97, p < .002, MSE = 89.97, \eta_p^2 = .13$. A Tukey's HSD test indicated that those in the youngest grade level rated their teachers as significantly more involved in their friendships ($M = 54.67, SD = 9.01$) than the oldest grade groups ($M = 45.84, SD = 9.46$), but was not significantly different from the middle ($M = 50.77, SD = 9.98$). Third to fifth graders also rated their teachers as significantly more involved in their peer relationships than those in the oldest grade group. Results are shown in Table 9.

Do teachers who believe they are more helpful to their students in making friends have classrooms that are more cohesive?

This question involved some exploratory analysis to determine the best course of data analysis. Initially, a logistic regression analysis was planned for the data. However, inspection of the data indicated that logistic regressions could not be run, because the distribution of the students of higher SNC status (those in the nuclear or secondary classification) versus those of lower SNC status (those in the peripheral or isolated status) came very close to violating the 80-20 rule of distribution in the dependent variable. Frequencies of SNC are listed below in Table 10.

Based on this information, it was determined that a chi-square test would be more appropriate to analyze the data, based on the fact that a chi-square test would not be adversely affected by clustering or other issues. The first analysis examined whether or not teachers who rated themselves as being high in involvement in their students' peer relationships had more students in the high SNC category. Results of the analysis were not significant, $\chi^2(1, N = 322) = .44, p = .51, \phi = .04$, suggesting that those teachers who

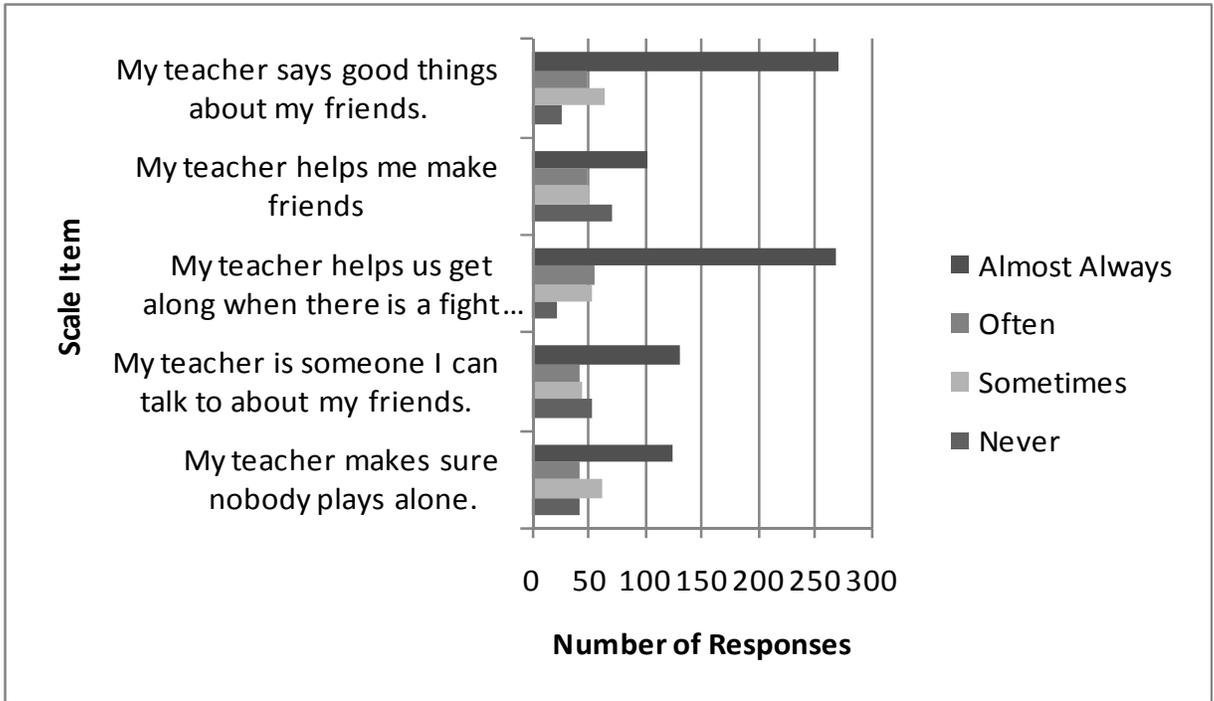


Figure 4. Student Responses to 'Teacher Involvement' Scale Items.

Table 6. *Student Sex and Student Perception of Teacher Involvement in Peer Relationships by Grade.*

	Boys		Girls	
	<i>M</i>	<i>N</i>	<i>M</i>	<i>N</i>
Overall	51.73	104	49.32	129
Kindergarten – Second Grade	57.54	38	52.01	41
Third Grade – Fifth Grade	50.52	31	50.70	42
Sixth Grade – Eighth Grade	46.48	35	45.66	46

Table 7. *Descriptives of Student Ethnic Match, with 3-5 grades removed.*

	<i>N</i>	Mean	Standard Deviation
Ethnic Match	65	51.09	9.15
Girls	39	49.00	9.37
Boys	26	54.23	8.00
Kindergarten – Second Grade	34	54.60	8.25
Sixth Grade – Eighth Grade	31	47.25	8.64
Non-Ethnic Match	63	50.31	11.02
Girls	32	49.56	11.28
Boys	31	51.07	10.87
Kindergarten – Second Grade	30	55.36	9.89
Sixth Grade – Eighth Grade	33	45.71	10.05

rated themselves as more involved did not have significantly more students in the more highly popular social categories.

Analyses were also conducted to see if teachers who rated themselves as higher in involvement with their students' peer relationships had students with higher percentages of reciprocal relationships. After examining the descriptive properties of both variables, it was determined that nonparametric analyses were needed. Based on the irregular distribution of the reciprocal percentage data, a nonparametric correlation (Spearman's rho) was conducted. The results were found to be non-significant, $r_s = -.09$, $p = .16$.

Are students who believe their teachers are more helpful in making friends have classrooms that are more cohesive?

This question involved some exploratory analyses to determine the best course of data analysis. However, as noted above, further inspection of the data indicated that a logistic regressions could not be run because the distribution of the students of higher SNC status (those in the nuclear or secondary classification) versus those of lower SNC status (those in the peripheral or isolated status) came very close to violating the 80-20 rule of distribution. Therefore, a chi-square test was conducted to determine whether or not students who rated their teachers as high in involvement in their peer relationships were more likely to be in the high SNC status group. Results of the analysis were not significant, $\chi^2 (1, N = 235) = 1.19$, $p = .28$, $\phi = .07$. This indicates that children who rate their teachers as being high in their involvement in students' peer relationships were not significantly different in SNC status compared to students who rated their teachers as low in involvement.

Additional Analysis

As was noted above, grade level differences were found to be a significant predictor of students' ratings of teacher involvement in students' peer relationships. Therefore, a trend analysis was conducted to further examine the relationship between student grade level and student ratings, as well as teacher mean by grade. This is represented in Figure 5. Student ratings of teacher involvement were regressed on students' grade level, and were found to be significant, $r^2 = .62$, $F(1, 377) = 618.27$, $p < .001$. The analysis indicated that $Y_{\text{STUDENT RATINGS}} = 17.19 - .598X_{\text{GRADE}}$. The equation indicated that as grade level decreased, student ratings of teacher involvement increased (see Figure 6).

A regression analysis was then conducted on teacher ratings of their involvement in their students' peer relationships for the purposes of estimating the teacher intercept and slope. Given the small sample, this regression was not expected to be significant, and the results indicated that it was not ($r^2 = .13$, $F(1, 13) = 1.97$, $p = .18$). However, the trend was similar to that of the regression on student's perceptions, such that as the grade the teacher taught increased, the more their ratings of their involvement in peer relationships decreased. The results of both analyses were then visually compared (Figure 5). As can be seen, both students and teachers showed a decrease in ratings of teacher involvement in peer relationships with grade increase; however, the students showed a steeper decline in ratings.

Table 8. *Grade Level Means for Student Ratings of Teacher Involvement.*

	Grade Level		
	<i>N</i>	<i>M</i>	<i>SD</i>
Kindergarten – Second Grade	79	54.67	9.01
Third Grade – Fifth Grade	75	50.77	9.98
Sixth Grade – Eighth Grade	82	45.84	9.46

Table 9. Results of Tukey's HSD Test on Student Involvement Scores at the Grade Level.

	Mean Student Involvement Score	Significance Level		
		K – 2 nd Grade	3 rd – 5 th Grade	6 th – 8 th Grade
Kindergarten – Second Grade	54.67	---	>.05	<.01
Third Grade – Fifthe Grade	50.77	---	---	<.01
Sixth Grade – Eighth Grade	45.84	---	---	---

Table 10. *Student Social-Network Centrality Status Descriptives.*

Social Network Status (SNC)	<i>N</i>	%
High SNC	253	72.5
Nuclear	103	29.5
Secondary	150	43.0
Low SNC	96	27.5
Peripheral	78	22.3
Isolated	18	5.2

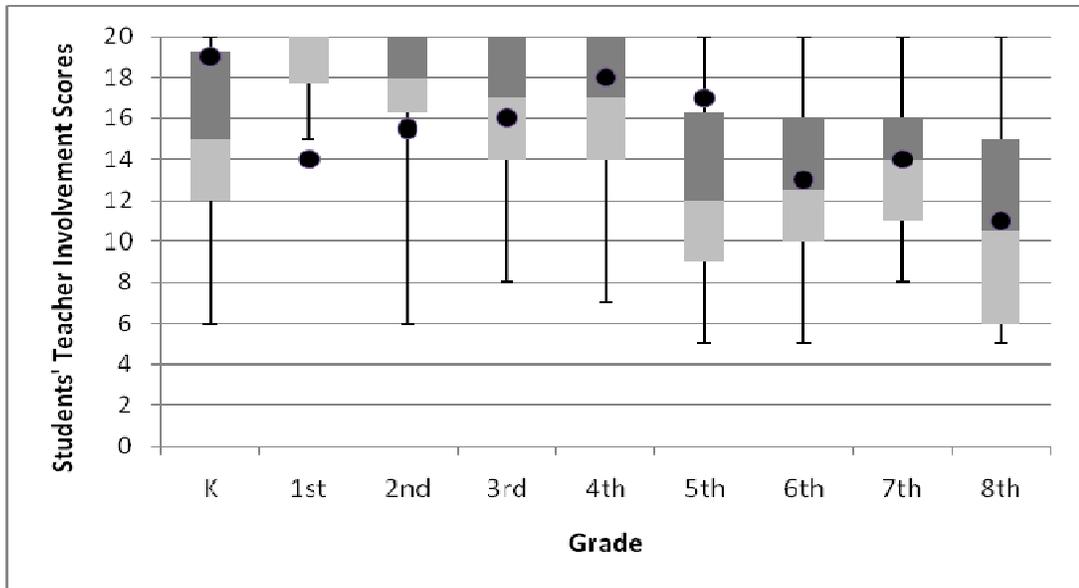


Figure 5. Box and Whisker Plot of Student Ratings of Teacher Involvement by Grade, with Teacher Means by Grade.

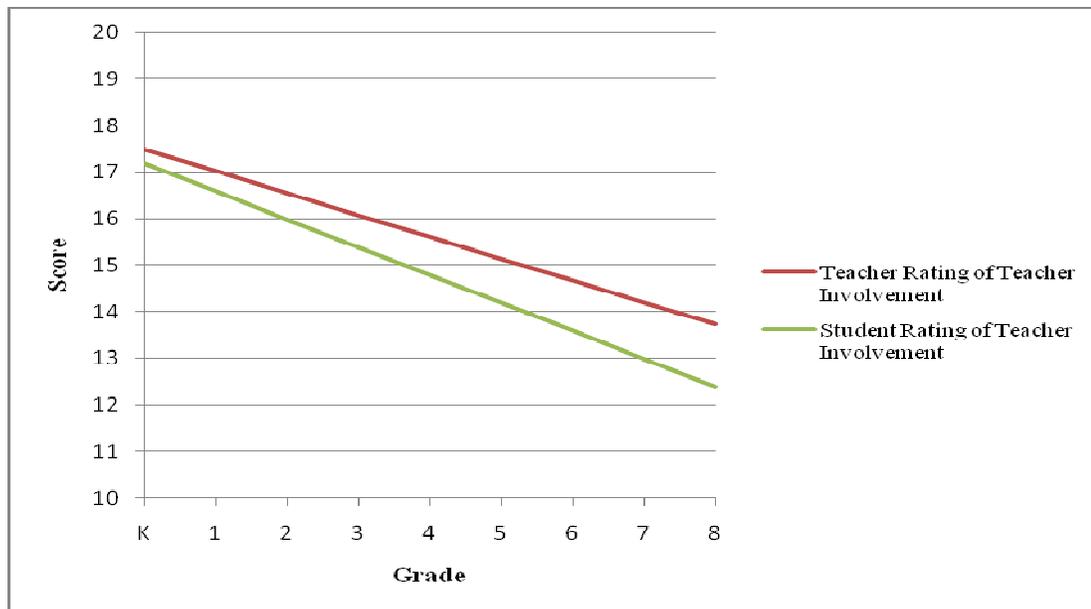


Figure 6. Regression Lines for both Teacher and Student Ratings of Teacher Involvement, by Grade.

CHAPTER 5

DISCUSSION

ClassMaps Student Form

Since the research questions for this project were contingent on new questions that had been styled after and administered with the ClassMaps questionnaire, the start of the analysis was to determine the factor structure of the new questions within the ClassMaps. Research by Doll and colleagues (1999, 2000, and 2004) indicated that the ClassMaps questionnaire contained eight factors. As expected, the new items developed for this study did fall together into a ninth item.

However, the results of the factor analysis indicated that two original ClassMaps questions were factored out of the original eight factors, which was part of the section called “Taking Charge” by Doll and colleagues. These questions were “In this class, I can guess what my grade will be when I turn in my work,” and “I find and fix my mistakes before turning in my work.” During the data collection, it was noted by the primary investigator that these two questions appeared to confuse the students in this sample; several students asked for clarification or otherwise indicated that they did not understand what the question was asking them. These two questions may have posed some difficulty in comprehension for this group, which may have contributed to their removal from this factor structure. Some students may have difficulty with the wording or conceptualization of these questions, and this should be a consideration when ClassMaps are used with similar populations in the future.

One of the newly added questions, “My teacher wants us to be friendly to our classmates,” was also factored out of the “Teacher Involvement with Friends” factor. Upon further examination of this question, it appears to be asking the students about their perceptions of their teachers’ desires about student peer relationships, while the other questions in the factor ask the students about their perceptions of their teachers’ actions regarding student peer relationships. Therefore, this question may be too abstract for students to report with the same consistency as the other questions within this section. Thus, this question was not included in the subsequent analyses or factor scores. Because of the strong internal reliability for this scale, it was determined that the factor scores for this scale were acceptable to use in the analysis without this one item. The theoretical assumptions upon which the questions and section were devised, however, appeared to be validated by the obtained results.

ClassMaps Teacher Form

Given the small sample size of teachers included in this project, it was not possible to conduct a similar factor analysis on the teacher version of the ClassMaps form. Therefore, it was assumed, for subsequent analyses, that the teacher form followed the same factor structure as the student form, and that the additional questions would also constitute a separate ninth factor. Future research with a larger sample size will be needed to determine if the teacher form fully follows the same structure as the student form.

Teacher and Student Perceptions of Teacher Involvement in Student Peer Relationships

The first two questions posed within this project explored whether or not teachers and their students believed that the teachers were influential in their students' peer relationships. The results of these analyses indicated that both teachers and students do feel that teachers are influential in their students' peer relationships. Both teachers and students rated the teachers as above the mean in involvement in student's peer relationships. Though no teacher perceived themselves as always being helpful in their students' peer relationships, all of them reported that they were at least sometimes helpful in aspects of their students' peer relationships. Similarly, the majority (57%) of students rated their teachers as being above the average of 14.78, and 21% of all students rated their teacher with the highest score of 20. These results were somewhat surprising, given previous research and reviews by Koplow (2002) and Kesner (2000), which suggested that teachers often mistakenly believe that peer interaction is outside of their sphere of influence or responsibility. Kesner (2000), suggests that many teachers and other educators feel that parents are responsible for teaching their children culturally acceptable ways to interact and build relationships, while teachers are responsible for the academic development of children. In addition, the majority of the teachers in this school (12 out of 17) taught upper elementary to middle school students (third through eighth grade). Previous research by Stuhlman and Pianta (2002) suggested that early elementary school teachers are more likely to promote social development in their classrooms, while teachers in the upper elementary and middle school grades more often focus on academics, and are less involved in their student's peer relationships. However, research by Pearl and colleagues (2007) indicated that teachers are generally more aware of the relationships and social networks of students who they perceive to be at risk. As many of

the students in this sample come from a high need, at-risk background, the teachers in this school environment may make more of an effort to be aware of the peer interactions and social relationships in their classroom, and may expend more effort to be involved in these relationships and guide their students in how to interact, even in the older grades.

Teacher Characteristics Related to Teacher Ratings

The next goal of this study was to examine the teacher characteristics that were related to responses on the “Teacher Involvement with Peer Friendships” scale. Unfortunately, none of the characteristics examined (teacher education level, years teaching, grade level taught, teacher ethnicity, and age of the teacher) were found to be related to the teacher’s involvement with their student’s peer relationships. There may be several explanations for this result. First, it may be that the sample size of teachers was too small. Thus, characteristics that may be significant predictors of teacher involvement practices may not have been identified in this project that would otherwise be found within the larger population. Another explanation may be that there are other characteristics, specific to school or other student variables, which were not explored in this research project. For example, the influence of teacher sex was not explored because of the very low number of male teachers. At this time, there is no research that examines the influence on teacher sex on their perception of influence on classroom peer relationships. It is also possible that the results found in this study may be related to the sample population. Research has indicated that teacher ethnicity is related to teacher perceptions about their students’ social and academic competence (Howes & Shivers, 2006; Murray et al, 2008; Saft & Pianta, 2001). However, many of the studies that

previously examined teacher influence on peer relationships were conducted on students from middle-class background, with predominantly White students (Skinner & Belmont, 1993; White & Kistner, 1992). Results in this study may be different from those in the existing literature, as youth in this project were predominantly African American, and from low socioeconomic backgrounds in an urban environment. The population used in this study has not yet been examined in the previous research, and the results of this project offer a first look at what be different in this group relative to those that have already been studied.

Student Characteristics Related to Student Ratings

Further analyses were conducted to see what student characteristics were related to students' ratings of teacher involvement. The characteristics that were examined for this project included student sex, ethnic match with their teacher, and student grade level. In terms of sex, the initial results indicated that there were significant differences between boys and girls. However, further analysis indicated that the significant differences between boys and girls occurred in the lower grade levels (Kindergarten to second grade), but not in the upper grades (third through eighth). Boys in the lower grade levels rated their teachers as more involved in their peer relationships than girls in the lower levels. The initial hypothesis, which was that girls would rate their teachers higher than boys, was based on previous research that suggested that girls are often reported as having closer relationships with their teachers than boys, while boys often report having more conflict with their teachers than girls (Birch & Ladd, 1998; Ewing & Taylor, 2009; Hamre & Pianta, 2001; Hughes et al., 2001; Kesner, 2000; Ladd et al., 1999; Saft &

Pianta, 2001; Salmon, 1998). It was initially believed that having a close, warm relationship would be related to a teachers' involvement in their peer relationships. However, these opposite findings that boys rated their teachers as more involved in their peer relationships indicates that closeness may be a separate construct from involvement. Instead, it may be that teachers feel it is necessary to get more involved in the peer relationships of student's with whom they have more conflict (or more concern). When teachers have a warmer, closer relationship with students, they may feel that the student is more socially competent and, therefore, does not need teacher intervention in classroom peer relationships. In contrast, teachers may feel the need to intervene more when they view a student as having poorer social skills or engaging in more aggressive or inappropriate play, as with boys (and especially boys at risk; Pearl et al., 2007).

Teachers have been found to be more aware of boys' play, especially if they perceive the boys' as being at-risk for aggressive or externalizing behaviors (Pearl et al., 2007). Thus, it could be expected that if teachers are more aware of the play of boys within the classroom, perhaps they make more efforts to get involved in or control that play. However, given that these differences in the perceptions of teacher involvement based on student sex were not seen in the upper grade levels, combined with the result that there were grade level differences in the reports of teacher involvement in general (with less involvement in the older grades) it appears that grade level may be a more critical influence on student's perceptions of their teacher's involvement than student sex. More information is needed in future studies to explore how the teacher's approach to student conflict may affect the teacher's impact on student's peer relationships, especially for relationships that are typically found to have high levels of conflict.

When examining grade level differences, results indicated that as students increase in grade level, their ratings of their teachers' involvement in their peer relationships decreases significantly. Students in the lowest grade group level (kindergarten to second grade) and the middle grade group (third to fifth grade) rated their teachers as higher in involvement than students in the upper grade group level (sixth to eighth grade). This is consistent with prior research conducted by Buhrmester and Furman (1985, 1987, and 1992), that indicated that as students age, their perceptions of their teachers as sources of companionship decreases, as does their feelings about the intimacy of their relationship with their teacher. The lack of significant differences between the lowest grade group and the middle grade group indicates that students in this elementary school range continue to view their teachers as a source of social support. Grade related differences in teacher's involvement in student's peer relationships may also reflect a curricula shift that occurs in later grades. In younger, elementary grades, which traditionally are considered to be kindergarten to fifth grade, social relationships and behaviors are included as a focus within the curriculum of the classroom (e.g. teaching children to be kind and respectful to one another), whereas in older grades, curriculum focuses more exclusively on academic content (Stuhlman & Pianta, 2002). Therefore, teachers may feel that their students' peer relationships are beyond their realm of expertise or influence when it is not part of their classroom curricula.

To explore the differences in teacher involvement by grade level more closely, a supplemental trend analysis was conducted to determine whether or not students' ratings of their teacher's involvement decreased in a linear fashion from younger to older students. The results indicated that a linear decrease does occur with increasing student

age. In addition, a trend analysis was conducted on teachers' ratings of their own involvement in their students' relationships. Although this analysis was not significant, results indicated that teachers' ratings showed a similar trend as the students, with a less steep slope for the teachers' line relative to the students' line (see Figure 5). This indicates that teachers perceive less of a difference in their role in their student's relationships across grades than the students feel about their teachers.

The overall finding that teachers are more involved in their students' peer relationships in the early years of elementary school but that this involvement reduces with age is expected, as students develop and become more independent (Furman & Buhrmester, 1992). However, this sense of independence and shift to focus on peers felt by students may not, in reality, reflect a true level of independence. Although teachers agree that their involvement in their student's peer relationships is less in older grades than younger grades, the level of involvement that teachers may feel continues to be necessary in older grades is clearly higher than what the student's believe. Perhaps in student's desire to be more independent, they lessen their ratings of teacher's involvement, while teachers still remain invested in their student's peer relationships, and rate themselves as continuing to have an impact in this area.

Ethnic match between students and teachers was also examined, and did not show any effect on student's ratings of their teacher's involvement. This finding suggests that teachers of any race can be influential on student's peer relationships, and that ethnic match is not necessary to be involved in student's social lives. This is consistent with prior research that showed that ethnicity and ethnic match do not significantly influence

students' feelings towards their teacher in regards to closeness or involvement (Murray et al., 2008). Murray and colleagues (2008) was one of the few to systematically examine ethnic differences in student populations, and this research project extends findings to elements of ethnic match between teacher and students in African-American student populations. Since most of the students did not ethnically match their teachers in this sample, these students may have been accustomed to not having teachers who ethnically match themselves throughout their schooling. Since having a teacher who does not match them ethnically is standard for these students, they may not perceive any differences in their teachers' involvement in their peer relationships based on race. This result should be interpreted with caution, however. No students in the middle grades had teachers that they matched ethnically. Therefore, the population of students in these middle grades could not be examined on their ratings of their teacher involvement to determine whether or not ethnic match was a significant variable. In addition, there were more students that did not ethnically match their teachers than students who did ethnically match their teachers, offering a highly disproportionate distribution. There was also a lack of ethnic diversity in this project among both the teachers and the students. Due to the difference in sample sizes and lack of diversity, interpretation and generalization are difficult. Finally, this project was not able to compare students of different socioeconomic status levels, a variable which often conflicts with ethnicity. Therefore, further research that is able to compare students on both ethnicity and socioeconomic status will help to fill in more comprehensive information in this area.

Teacher and Student Perceptions of Teacher Involvement and Classroom Social Networks

Finally, neither teachers' nor students' ratings of their teacher's involvement in student's social relationships was related to student's social network status or to the number of reciprocal friendships in the classroom, which are often used as measures of the classroom climate (Cairns & Cairns, 1994; Doll et al., 2004; Gifford-Smith & Brownell, 2003; Pianta & Hamre, 2001; Wentzel, 1996). It is possible that while teachers and students perceive teachers as involved in peer relationships, teachers may not directly influence the friendships that form within the classroom. Instead, teacher's involvement may focus more on assisting in resolving conflicts between friends, or encouraging group cooperation to further curriculum goals (Kemple & Hartle, 1997; Koplow, 2002). More attention is needed to explore the exact focus of teacher involvement in peer relationships within the classroom. However, this study does highlight their importance in social relationships, and how their role, although changing, remains important across grades.

Limitations and Future Directions

As has been noted, there were some sampling issues that may have affected the results of this project. First, the sample of teachers was fairly small, which meant that it was not possible to run a factor analysis on the teacher form of the "Teacher Involvement" questions. A larger population of teachers is needed to fully evaluate both the internal consistency of the measure, and well as a more complete picture of the perspective of teachers on their involvement with their student's social lives. Also, when looking at the social network status, there were very few students in the isolated category, and the number of students in the peripheral category was fewer than students in either the secondary or nuclear category. Although it is not desired to find more isolated or

peripheral students, future studies with higher numbers of students will likely produce more students within those categories, and allow a stronger analysis of this variable.

This population was limited to one school with low levels of diversity (98% African American student population). In order for the results to be generalized, future research must compare findings of more diverse populations of both teachers and students. Examination of other personal, classroom, or school characteristics may also help identify factors that are more influential in the degree to which teachers get involved in their students peer relationships than those that were explored in this study.

Another limitation was that the results of this project were not related to any overall school climate or perspective towards how teachers should interact with their students or what the school's policy was on social development or a prosocial behavior curriculum. This project was conducted in one elementary school which had just begun to transition into a school-wide positive behavior support system, and therefore was experiencing a climate and policy change. The results in a school does not employ this perspective or has a different discipline style may be different from the one found in this research.

Implications for Practice

The results of this project demonstrated that both teachers and students do perceive teachers as having influence in their students' peer relationship in the classroom. As previous research has established, teachers can serve as supplemental attachment figures, especially for young children (Cefai, 2007; Erickson & Pianta, 1989; Furman &

Buhrmester, 1992; Hamilton & Howes, 1992). Though the students' feelings of intimacy and companionship with their teachers may decrease over time (Furman & Buhrmester, 1985, 1987, and 1992), this does not mean that students do not need, or want, their teachers to show them care, respect, and support (Lynch & Cicchetti, 1991; Wentzel, 1994, 1996). Indeed, having support in the school environment can be key in helping even older students survive difficult circumstances or trauma (DuBois et al., 1992).

Previous research has shown that teachers may believe that active involvement in the peer relationships of their students is outside of their realm of control within the classroom or required intervention, especially as students age and academic concerns dominate teachers' time in class (Koplow, 2002). However, teachers may be able to continue to help students by fostering an accepting, caring environment that can help students develop friendships and increase engagement and connectivity to the classroom across all grades (Connell & Wellborn, 1991; Kemple & Hartle, 1997; Mantzicopoulos, 2005; Stanulis & Manning, 2002). This study offers a first look at the perceived role of teachers in student's peer relationships across grades, and suggests that regardless of teacher or student characteristics, teachers can have a strong impact on their student's social development, even into the middle school years. With current issues and concerns related to bullying in school, it has become increasingly important for teachers to actively involve themselves in their students' peer relationships and provide guidance and learning on how to develop healthy peer interactions. By creating more cohesive classrooms, teachers can create a supportive environment where children feel safe to learn, and that they belong in their classroom and are cared for by their teachers and peers

(Pianta & Walsh, 1996). More information is needed, however, to identify exactly how to train teachers to better accept this responsibility and meet their student's social needs

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APPENDIX A

STUDENT MEASURES

FRIENDSHIP SURVEY

What is your name? _____

Date: _____

School Name: _____

Teacher

Name: _____

Age: _____

Grade: _____

Are you a BOY or a GIRL? (circle one)
one)

Ethnicity: (circle

Asian

Black

White

Latino

Multiple

Other

1. Are there any kids in your class that you like to hang out with?

Who are they? (Use first names only; plus last initial if needed)

2. Circle the names of the 3 kids you most like to hang out with.

3. Put a STAR * next to the name of the ONE kid you most like to hang out with.

4. Do you see this person just at school , or also other places ?

Where else?

5. Are there any kids in your class that you don't like to hang out with?

Who are they? (Use first names only; plus last initial if needed)

6. Are there kids in your class who like to hang out together?

Who are they?

Remember to think about Boys and Girls!

Remember to put yourself if you hang out with a group!

Draw a  CIRCLE around each group!

ClassMaps [2007]

DIRECTIONS: THESE QUESTIONS ASK WHAT IS TRUE ABOUT YOUR CLASS. FOR EACH QUESTION, CIRCLE THE CHOICE THAT IS TRUE FOR YOU. DO NOT PUT YOUR NAME ON THE PAPER. NO ONE WILL KNOW WHAT YOUR ANSWERS ARE.

I am a: BOY / MALE GIRL / FEMALE

I am in the ____ grade.

Believing in Me

- | | | | | |
|---|-------|-----------|-------|---------------|
| 1. I can do my work correctly in this class, | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 2. I can do as well as most kids in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 3. I can help other kids understand the work in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 4. I can be a very good student in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 5. I can do the hard work in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 6. I can get good grades when I try hard in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 7. I know that I will learn what is taught in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 8. I expect to do very well when I work hard in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

My Teacher

- | | | | | |
|--|-------|-----------|-------|---------------|
| 9. My teacher listens carefully to me when I talk. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 10. My teacher helps me when I need help. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 11. My teacher respects me. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 12. My teacher likes having me in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 13. My teacher makes it fun to be in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 14. My teacher thinks I do a good job in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 15. My teacher is fair to me. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

Taking Charge

- | | | | | |
|--|-------|-----------|-------|---------------|
| 16. I want to know more about the things we learn in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 17. In this class, I can guess what my grade will be when I turn in my work. | | | | |

- | | | | | |
|---|-------|-----------|-------|---------------|
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 18. I work as hard as I can in this class. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 19. I find and fix my mistakes before turning in my work. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 20. I learn because I want to and not just because the teacher tells me to. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 21. When the work is hard in this class, I keep trying until I figure it out. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 22. I know the things I learn in this class will help me outside of school. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 23. I can tell when I make a mistake on my work in this class. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

My Classmates

- | | | | | |
|---|-------|-----------|-------|---------------|
| 24. I have a lot of fun with my friends in this class. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 25. My friends care about me a lot. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 26. I have friends to eat lunch with and play with at recess. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 27. I have friends that like me the way I am. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 28. My friends like me as much as they like other kids. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 29. I have friends who will stick up for me if someone picks on me. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

Following the Class Rules

- | | | | | |
|---|-------|-----------|-------|---------------|
| 30. Most kids work quietly and calmly in this class. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 31. Most kids in this class listen carefully when the teacher gives directions. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 32. Most kids follow the rules in this class. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 33. Most kids in this class pay attention when they are supposed to. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 34. Most kids do their work when they are supposed to in this class. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 35. Most kids in this class behave well even when the teacher isn't watching. | | | | |
| | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

Talking With My Parents

- | | | | | |
|---|-------|-----------|-------|---------------|
| 36. My parents and I talk about my grades in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 37. My parents and I talk about what I am learning in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 38. My parents and I talk about my homework in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 39. My parents help me with my homework when I need it. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 40. My parents and I talk about ways that I can do well in school. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 41. My parents and I talk about good things I have done in this class | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 42. My parents and I talk about problems I have in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

I worry that

- | | | | | |
|---|-------|-----------|-------|---------------|
| 43. I worry that other kids will do mean things to me. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 44. I worry that other kids will tell lies about me. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 45. I worry that other kids will hurt me on purpose. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 46. I worry that other kids will say mean things about me. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 47. I worry that other kids will leave me out on purpose. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 48. I worry that other kids will try to make my friends stop liking me. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 49. I worry that other kids will make me do things I don't want to do. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 50. I worry that other kids will take things away from me. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

Kids In This Class

- | | | | | |
|---|-------|-----------|-------|---------------|
| 51. Kids in this class argue a lot with each other. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
|---|-------|-----------|-------|---------------|

- | | | | | |
|---|-------|-----------|-------|---------------|
| 52. Kids in this class pick on or make fun of each other. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 53. Kids in this class tease each other or call each other names. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 54. Kids in this class hit or push each other. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 55. Kids in this class say bad things about each other. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

My Friends

- | | | | | |
|--|-------|-----------|-------|---------------|
| 56. My teacher wants us to be friendly to our classmates. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 57. My teacher makes sure nobody plays alone. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 58. My teacher is someone I can talk to about my friends. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 59. My teacher helps kids in this class gets along when they have a disagreement or a fight. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 60. My teacher helps me make friends. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 61. My teacher says good things about my friends. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

APPENDIX B

TEACHER MEASURES

Teacher Demographic Questionnaire

Name: _____

Grade: _____

Sex (circle one): Male Female

What is your highest level of education obtained? (circle one)

High School Diploma

Masters Degree

Bachelors degree

Doctorate Degree

Teaching certification

What is your ethnicity? (circle one)

White

Latino

Black

Multiple Ethnicities

Asian

Other: (specify: _____)

What is your age? (circle one)

21-25

26-30

31-35

36-40

41-45

46-50

51-60

61-70

71+

How many students do you have in your class? _____

How many students in your class have an IEP? _____

How long have you been teaching overall? _____

How long have you been teaching at Duckrey Elementary School? _____

Do you work with any co-teachers/SSAs in your classroom? (circle one)

Yes No

Do you manage/teach in any additional extra curricular activities? (circle one)

Yes No

If so, which activities? _____

Do you participate in any administrative committees or groups? (circle one)

Yes No

If so, which committees/groups? _____

- | | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
|---|-------|-----------|-------|---------------|
| 34. Most kids do their work when instructed in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 35. Most kids in this class behave even when I am not watching. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

School and Home Communication

- | | | | | |
|--|-------|-----------|-------|---------------|
| 36. My students and their parents talk about their grades in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 37. My students and their parents talk about what they are learning in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 38. My students and their parents talk about their homework in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 39. My students' parents help them with their homework for this class when it is needed. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 40. My students and their parents talk about ways that they can do well in school. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 41. My students and their parents talk about good things they have done in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 42. My students and their parents talk about problems they have in this class. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

My Students Worry that...

- | | | | | |
|--|-------|-----------|-------|---------------|
| 43. My students worry that other kids will do mean things to them. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 44. My students worry that other kids will tell lies about them. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 45. My students worry that other kids will hurt them on purpose. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 46. My students worry that other kids will say mean things about them. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 47. My students worry that other kids will leave them out on purpose. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 48. My students worry that other kids will try to make their friends stop liking them. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 49. My students worry that other kids will make them do things they don't want to do. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 50. My students worry that other kids will take things away from them. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

Student Behavior

- | | | | | |
|---|-------|-----------|-------|---------------|
| 51. Students in this class argue with each other. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 52. Students in this class pick on or make fun of each other. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 53. Students in this class tease each other or call each other names. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 54. Students in this class hit or push each other. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 55. Students in this class say bad things about each other. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |

My Students' Friends

- | | | | | |
|--|-------|-----------|-------|---------------|
| 56. I want my students to be friendly with each other | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 57. I make sure nobody plays alone. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 58. My students can talk to me about their friends. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 59. I help my students get along when they have a disagreement or a fight. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 60. I help my students make friends. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |
| 61. I say good things about my students' friends. | NEVER | SOMETIMES | OFTEN | ALMOST ALWAYS |