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# Factors Influencing Grade Six Students' Perceptions of Teachers

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# FACTORS INFLUENCING GRADE SIX STUDENTS' PERCEPTIONS OF TEACHERS

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An Abstract of the Thesis Presented
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Less than one percent of U.S. school districts have invited student feedback in the school improvement process (Matthews, 2000). Students have valuable perceptions of how teachers interact with them and these perceptions can be a useful tool to improve schools (Tyack & Cuban). The purpose of this study was to examine sixth grade students' perceptions of teachers and the relationship of these perceptions to achievement, gender, socioeconomic status and grade configurations.

This study utilized sixth graders' responses to sixteen items selected from the Students Speak: My Education and My Future Aspirations survey developed at the National Center for Student Aspirations at the University of Maine. The sixteen items all involve student perceptions of their teachers. A Chronbach's Alpha of 0.8491 established reliability of the scale. Data were collected from 6,346 sixth grade students in 139 Maine schools. Achievement, socioeconomic, and grade configuration data were obtained for each school.

Utilizing SPSS, correlations and multiple regression were used to determine the relationship between sixth grade students' perceptions of teachers and achievement, gender, socioeconomic and school grade configuration.

Key findings from the analysis of results are as follows:

1. Higher school MEA reading achievement scores are associated with more positive students' perceptions of teachers

2. Sixth grade male students have less positive perceptions of teachers than do sixth grade female students

3. The higher the percentages of free and reduced lunch students in a school, the less positive the students' perceptions of teachers

4. Sixth graders who are the oldest in a school grade configuration (K-6, 1-6, 3-6, or 4-6) have a more positive perception of teachers than do sixth graders in other grade configurations.

The use of student perception data in our schools has two major implications. The first implication is the building of a knowledge base about the importance of student perceptions as a valuable tool in the teaching and learning process. The second implication is related to the implementation of organizational structures that support and value the development of positive relationships between teachers and students. These data have the potential for providing teachers, educational leaders and policy makers with a new resource that will assist in improving teaching and learning in our public schools.

## DEDICATION

I dedicate this work to my husband

Al LaPlante

and to my children

Matthew and Samuel Schmonsees.

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# CHAPTER 1

# INTRODUCTION TO THE PROBLEM

## The Research Problem

Students have valuable perceptions of how teachers interact with them and these perceptions can be a useful tool to improve schools (Tyack & Cuban, 1995). Students are at the heart of our schools. Yet as the consumers, their opinions are not regularly solicited. Less than one percent of U.S. school districts have invited student feedback in the school improvement process (Matthews, 2000). Researchers need to work with new data sources that contribute to the teaching and learning process. One source of under-utilized data is students' perceptions of their relationships with teachers. The purpose of this study was to examine sixth grade students' perceptions of teachers and the relationship of these perceptions to achievement, gender, socioeconomic status and grade configurations.

As we look to improve our schools and classrooms, we need to understand the changes in our society and their impact on education. Educating children and ensuring their social competence in the world today has become a major challenge for American public schools. Since 1960, many initiatives have been undertaken to improve public schools. As the standards movement has accelerated, there has been increased pressure for greater student achievement. The need to foster responsibility, respect, and to develop social skills in students has also become a major focus. As expectations for our schools have increased in terms of meeting the needs of all students, the social, behavioral and academic failure levels have become unacceptably high (Pianta & Walsh, 1996). The

heterogeneous mixing of diverse student populations in our schools challenges teachers with students who are academically and socially diverse. On a day-to-day basis, many of our children have less contact with significant adults in their lives. Schools and teachers are under substantial pressure to compensate for our changing social fabric.

In most public schools, educational leaders and teachers have no voice in the decision as to who will occupy their schools and classrooms. While the principle of public schooling lies at the heart of democracy, a complex problem develops as to how teachers meet the needs of the expanding variety of students set before them (McLaughlin, 1996). While there are many personal characteristics of students attending public schools that cannot be changed, educators can look to alter the ways in which they interact with students of different gender, academic ability and socioeconomic status. The interaction between teachers and students has been most frequently studied from the perspective of the teacher. This is problematic since research indicates that students perceive things differently from teachers (Rohrkemper, cited in Weinstein, 1979). This mismatch often leads to student needs being unmet. In order to alter the way teachers interact with students, teachers need to have accurate information regarding how students perceive their teachers' relationship with them. Rather than wait for problems to surface or escalate, teachers could seek information from their students with respect to the student view of the need or problem. Students' perceptions of their relationships with teachers could be used in a proactive and prevention-based approach.

Building quality relationships with students in classrooms is one area that has been neglected in undergraduate, graduate and in-service training. Most educators have taken only one or two undergraduate courses in child development and the focus has been on

cognitive development (Goodlad, 1991; Pianta & Walsh, 1996). Interestingly, for teachers, building positive relationships with students in the classroom is a component that has been directly tied to the primary source of teacher satisfaction and reward (Lortie, 1975). It also supports adult learning theory related to internal incentives (Knowles, 1978). For adults, the learning resource of highest value is experience. Positive experiences with students supports motivation and desire to succeed as a teacher. Gathering and reflecting on student perceptions relates directly to teacher interest and satisfaction, thereby benefiting both teacher and student

The next section provides an overview of the research study components that were designed to investigate sixth grade students' perceptions of teachers.

## Study Overview

In investigating the relationship between sixth grade students' perceptions of teachers and achievement, gender, socioeconomic status and school grade configuration, a number of data sources were utilized. The student subjects of this study are broadly representative of Maine students. The data include school-level student perception data from 6,346 sixth grade students from 139 Maine schools, collected in 1999. Sixth grade students were selected in order to examine school configurations. Data were obtained from schools were sixth graders are the oldest students in the school grade configuration (K-6, 1-6, 3-6, 4-6), where sixth graders as the youngest students in the school grade configuration (6-12, 6-8), and where sixth graders are in the middle of the school grade

configuration and are neither the oldest or youngest in the school grade configuration (K-7, K-8, K-12, 3-8, 5-8).

This study used two main data sources. The first source was Students Speak: My Education and My Future Aspirations Survey. Sixth graders' responses to sixteen items were selected from the Students Speak: My Education and My Future survey developed at the National Center for Student Aspirations at the College of Education and Human Development at the University of Maine were utilized. The Students Speak survey was designed to gather information on aspirations and related issues pertinent to Maine students. It allowed students to express their perceptions of several factors contributing to student aspirations. The survey contains questions related to eight conditions that influence a student's ability to identify and set goals for the future, while being inspired in the present to work toward those goals (Quaglia & Fox, 1998). The eight conditions are labeled: belonging, heroes, a sense of accomplishment, fun and excitement, a spirit of adventure, curiosity and creativity, leadership and responsibility, and confidence to take action. The items selected for the purpose of this study relate to student perceptions of teachers on seven of these eight conditions and are reflected in 16 items on the Students Speak: My Education and My Future Aspirations survey. No items on the condition related to confidence to take action were included, as the survey questions did not relate directly to student perceptions of good teachers.

The second data source was the three-year average (1996-1999) of school achievement performance scores for fourth grades in math and reading from the Maine Educational Achievement test. The Maine Educational Assessment is required for all students in Maine at grades four, eight, and eleven. Socioeconomic data are based on the

percentage of free and reduced-fee lunch participants as reported by school administrators. School administrators reported grade configurations of their schools. Gender data were self-reported by students.

This study provides findings that add to the literature on teaching and learning. The research includes information that assists school leaders and teachers in:

1. Recognizing the variation which exists in student perception data across schools
2. Understanding how teacher relationships with students correlate with higher achievement
3. Raising awareness of student perception differences as they relate to gender
4. Raising awareness of student perception differences as they relate to socioeconomic status
5. Understanding how different grade configurations relate to student perceptions of teachers

## Summary

Social changes in the United States and the standards movement have created major challenges for the American public school. At the core of our schools and classrooms are the relationships between teachers and students. While there are many personal characteristics of students attending public schools that cannot be changed, educators can look to understand and alter the ways in which they interact with students of different gender, academic ability and socioeconomic status. Student perceptions of teachers are based on relationships with their teachers. Research indicates teachers and students

perceive things differently and this can lead to students' needs being unmet (Rohrkemper, 1985, cited in Weinstein, 1979). The available studies support the validity and usefulness of student perceptions (Weber & Manatt, 1992). Findings from a number of investigations indicate that a positive relationship with a teacher is associated with better than expected or improved outcomes for both students at-risk and non-risk samples (Garmezy, 1994; Pederson, Faucher, & Eaton, 1978; Werner and Smith, 1980).

In Chapter 2, a literature review will provide a framework for studying how sixth grade students' perceptions of teachers relate to achievement, gender, socioeconomic and grade configuration.

# CHAPTER 2

# REVIEW OF THE LITERATURE

## Introduction

Less than one percent of U.S. school districts have invited student feedback in the school improvement process (Matthews 2000). Shor (1996) writes of students coming to occupy the "enabling center of their educations, not the disabling margins" (p.200). Students have valuable perceptions of how teachers interact with them and these perceptions can be a useful tool to improve schools (Tyack & Cuban, 1995). Developing relationships with students and providing an academically and socially supportive environment is a complex process requiring knowledge, skills, and a commitment that cannot be left to chance. The purpose of this study was to examine sixth grade students' perceptions of teachers and the relationship of these perceptions to achievement, gender, socioeconomic status, and grade configurations.

The review of literature provides a summary of research findings on student and teacher interactions that are the basis from which students form perceptions of teachers. Historical perspectives will be introduced so readers will have an understanding of the role that relationships have played in teacher education over time. Connections between students' perceptions of teachers and academic achievement are explored. Gender and socioeconomic status considerations are discussed. Grade configuration literature is summarized.

## Historical Perspectives

Personal relationships between teachers and students are embedded in the history of education. Glantz (1998), in a treatise on the origins and evolution of human relations, found that strong interconnected bonds were crucial to survival. This type of bonding was evident in the personal relationships between teachers and students in Greece and in the Middle Ages. Piaget and Dewey advanced the importance of the social context of learning (Nodding, 1984). Bowlby (1979) supported this premise in his work on relationship formation. He suggested that all humans are happiest and best able to deploy their talents when they are confident one or more persons will come to their aid should difficulty arise.

Prior to 1960, teacher education focused on content and methodology. The 1960's, however, saw a new emphasis on the importance of the human dimension of teaching. In the past decade, relationships between students and teachers have received a great deal of attention in the literature. In the 1970's, Paulo Freire wrote about classrooms where student voices were barely heard. Knowledge was treated as residing with the teacher and this knowledge was "deposited" into students' heads (Kordalewski, 1999). In the last decade, educational theorists and researchers began to advocate that schools become places that focus on nurturing children and increasing positive interactions between students and teachers (McLaughlin & Talbert, 1993; Noddings, 1992). Nodding (1992) said:

> It is time to take full account of the social changes that have swept through the second half of the twentieth century. If the traditional family is an anachronism, or

> if, for whatever reasons, families cannot meet the needs for caring, other institutions must meet that need. I will argue that the school cannot achieve its academic goals without providing caring for its students (p. 13-14).

Caring relationships between teachers and students create possibilities and opportunities for academic as well as interpersonal learning to occur. During the last ten years, much has been written about student and teacher relationships, with the preponderance from the teachers' perspectives. Some recent studies have revealed some interesting information on how students view their teachers. In a survey conducted by the National Center for Student Aspirations, Students Speak: My Education and My Future, fewer than half of the 8,000 high school respondents from the United States said they admire and respect their teachers. Even fewer saw their teachers as role models. Twenty-five percent of the students reported teachers did not care about their problems and feelings and another twenty-nine percent did not know if teachers cared about them. (Quaglia & Fox, 1998). In Student Aspirations, A Decade of Inquiry, aspects of the relationships between teachers and students were explored in efforts to: 1) improve interpersonal relationships between teachers and students; and 2) improve academic performance of students. The student aspirations research relates to the work of Nelson and Jones (1990) who identified three aspects of student and teacher interactions: attitudes, nonverbal behaviors, and strategies used by teachers. The three aspects of student and teacher interactions are all observable teacher behaviors from which students form perceptions that impact their beliefs. Researchers who have studied classrooms emphasize the importance of the teachers' verbal and nonverbal behaviors as information for students. Galloway (cited in Woolfolk & Brooks, 1985) observed that when students

listen, they hear the words and they observe the behaviors and expressions of the teacher to obtain further information. Students translate their interpretations into their own beliefs about the learning process and their actions.

One major facet of classroom climate is the interaction between teachers and students (Brophy, 1986; Good, 1987). Welage (1989) asserts that for all students, personal relationships with teachers have a greater capacity to motivate and engage students than do traditional forms of social control that emphasize obedience to authority and conformity to rules. Why are some children engaged in the learning process in classrooms while others are not? Researchers attribute these distinct motivational orientations to the interpersonal cognitive processes that are a key aspect of students' functioning in the classroom (Bandura, 1986; Dweck & Elliot, cited in Wentzel 1997; Wigfield & Eccles, 1990). These interpersonal processes are important to understanding the complex nature of the classroom. McKay's (1997) work on the "elusive essence of a superlative teacher" added to the literature on qualities of successful teachers. Her conclusions indicate that to be judged as an outstanding teacher, one must have: positive relations with students, a belief in students' ability to learn, a classroom environment based on respect and trust, and the acquisition of life-long learning habits. This is especially true for children who have lived in situations where relationships have been unstable or in turmoil (Roberts, 1996). Relationships with teachers are an essential part of the classroom and can be utilized as a resource for enhancing a child's development. Teachers are in a powerful position to model, strengthen and support the capacity to "successfully adapt in the face of adversity and develop social, academic, and vocational competence despite severe stress or the stress of everyday living" (Rirkin & Hoopman, cited in Henderson,

1991). Building capacity for strong student and teacher relationships for all students holds promise for American public schools.

The following section will provide a more detailed understanding of students' perceptions of their relationships with teachers in order to support the rationale for using students' perceptions as a tool in educating children and ensuring their social competence.

## Students' Perceptions of Relationships with Teachers

Students' perceptions of their relationships with teachers are a critical source of information for schools. Students' perceptions of teachers are based on the relationships they have with their teachers, and evidence supports the view that relationships between teachers and students can shape the course of a child's development (Pederson et al., 1978; Pianta et al., 1995; Werner & Smith, 1980). It is interesting to note less than one percent of U.S. school districts have invited student feedback in the school improvement process (Matthews, 2000). Few schools routinely utilize students' perceptions as a mechanism for getting feedback from students on their relationships with teachers in order to improve classrooms and schools. Students have valuable perceptions of how teachers interact with them and these perceptions can be a useful tool to improve schools (Tyack & Cuban, 1995). March (cited in Tuckerman, 1995) concluded that students were competent judges of instructional delivery and that their judgments were considerably freer from bias than previously believed. It would appear appropriate to give students a role in the feedback system of schools as they work in schools day after day (Omotani, 1996).

" A caring, competent and qualified teacher is the most important ingredient in

educational reform and the most frequently overlooked" (National Commission on Teaching and America's Future, 1996, p.3). The relationships between teachers and students play a prominent role in the development of academic and social competencies in the school years (Birch & Ladd, 1966; Pianta & Walsh, 1996; Wentzel, 1997). Researchers agree that teachers influence both the academic and social development of students (Brophy & Good, 1974). Good teachers are able to manage the mastery of content and the social relations of the classroom in such a way that fosters student learning. Noblit, Rogers, and McCadden (1995) describe caring as a value that is grounded in relationships, the kind of relationships good teachers have cultivated for years. A proliferation of recent research on caring teachers establishes a recurring theme about good teachers. Good teachers care about their students. Teachers describe this caring as how they interact with students and how students relate to them as teachers (Dempsey, 1991). Similarly, students repeatedly bring caring into their discussions of perceptions of "good teachers" (Rogers & Webb, 1991). Rogers and Webb (1991) investigated students' perceptions of teachers whom the students identified as "caring" adults. Their research suggests that teachers show caring by words of praise, by advising, by listening, by showing concern for the individual, by providing a safe, secure environment, by being fair, by making school fun, and by helping. These observable actions are the necessary components of a good teacher's skills in the eyes of students. Good teachers are those who are able to translate knowledge, wisdom and experience into actions that are observable actions by students (Bosworth, 1995). Coburn (1989) asked students to identify who influenced them to succeed. Seventy-seven percent of the students queried identified teachers as positive influences on them. Students also described

the teacher behaviors and attitudes which were helpful to them as students, such as "respected me" (reported by 80% of the students); "listened to me" (77%); "had a positive attitude" (72%); "were concerned" (71%); "were honest" (70%); "provided advice when I asked" (69%); "were patient" (67%); "made school interesting" (66%); "were open minded" (65%); "encouraged me to set goals" (65%); and "had high expectations" (65%). These findings suggest that teacher actions observed by students can be used to support student academic and social development. How does the relationship between a teacher and a student translate into student perceptions?

This relationship between a teacher and student is a dyadic system, which becomes patterned, and these patterns reflect relationships shared by two individuals (Hinde, 1987). Teacher and student relationships are asymmetrical, in other words, the teacher is more mature and has greater weight in determining the quality of the relationship. Regulation at the relationship level is enacted through individual codes, according to Sameroff (1989), and the teacher can have great influence (Pianta, 1999) in the delivery of codes to a student. The key to these positive relationships appears to be the ability or skill of the adult to read a child's signals accurately, to respond on the basis of these signals, to convey acceptance and emotional warmth, to offer assistance, to model behavior, and to enact appropriate structures and limits for the child's behavior (Pianta, 1999). A teacher's style of relating to a student evokes different response in each child, depending on the type of relationship history they have with parents or other significant adults in their life (Lynch & Cicchetti, 1992; Pianta, 1994). How a teacher reads a child's signals and responds, and how the student reads the teacher's interaction with them in the classroom is intricately tied to perceptions. Perceptions act as filters for information about the other's behavior.

These filters can be important in guiding relationships between teacher and students because they tend to be self-fulfilling.

Understanding how a student perceives the teacher's relationship with them may provide educators with information that can help teachers enhance a child's competence. approach. In other words, we do not need to wait until a child experiences difficulty, but we need to create an information flow that allows teachers to understand a child's needs from the student's perspective. Teachers are quite familiar with reactions from a student when the student's needs are not met in the classroom. Only half of students completing the Students Speak: My Education and My Future Aspirations 6-12$^{th}$ Grade Survey grade reported that teachers handled disruptive students well (Quaglia, 1998).

Recent studies suggest that data from preschool periods predict elementary school outcomes with 75% accuracy (Pianta & McCoy, 1997). "With respect to the timing of preventative interventions, longitudinal studies have concluded that by the end of third grade children's pathways through school are fairly set (Alexander & Entwisle, 1988; Alexander et al., 1995 p.16)". How can we use student perception information about their relationships with teachers to develop new pathways that can enhance the competence of a student? This may be especially important for children whose relationships with adults have been compromised or where significant conflict has existed within the relationship. The very nature of the inability to successfully navigate social settings such as the classroom are linked to the inability of social contexts to appropriately regulate a child's emotional and social development. (Pianta, 1999). Teacher and student relationships are ideal resources for preventive intervention since they can be available to all children in our public schools.

Teachers and children represent the heart of schools. Adult-child relationships typically have been recognized as an important key to a child's healthy development. For growing numbers of children, key sources of healthy adult-child relationships are found in the school setting. Teachers can function as an important source of safe, secure and positive relationships. The formation of high quality relationships with teachers provides a student with emotional support and increases the opportunities that they have to access and to learn new information and skills. Birch and Ladd (1996) found that the relationships children form with significant others in the school environment serve as important motivators. Murdock (1999) reports teachers play an important role in students' motivation in school. Teachers who care are likely to increase motivation in the students with whom they work. Boiclair's (2000) research found intrinsic motivation could be increased if a student feels connected to someone such as a warm and caring teacher. A caring teacher, who motivates students, has a positive impact on relationships.

Teachers' involvement with individual students has a powerful impact on children's perceptions of the teacher (Skinner & Belmont, 1993). This finding indicates that teachers' liking for students is communicated to children and has a strong influence on the way students interact with teachers. Relationships with teachers can influence children's beliefs about themselves and about others (Rutter, 1990). Unfortunately, students perceive themselves as receiving less teacher support and being less engaged than teachers perceive (Fraser, 1991). Teachers may not realize a problem exist for a student. Although such variables as intelligence, socioeconomic status and gender may affect students' academic behaviors, these variables do not completely explain academic performance. Students within any given ability level differ in motivation, achievement and perceptions of their

ability (Schunk, 1992). The available studies support the validity and usefulness of student perceptions (Weber & Manatt, 1992). Findings from a number of investigations indicate that a positive relationship with a teacher is associated with better than expected or improved outcomes for both students at-risk and non-risk samples (Garmezy, 1994; Pederson, Faucher, & Eaton, 1978; Werner and Smith, 1980).

Currently, more needs to be known about the profile of children's relationships with teachers during early adolescence (Lynch & Cicchetti, 1997). Students go through more changes between the ages of 10 and 14 than at any other time in their life, other than the first 18 months (Swaim S. & Fager, 2002). We need to harness information from student perceptions as a resource for enhancing student competence. This study investigates the relationship between sixth grade students' perceptions of teachers and achievement, gender, socioeconomic status, and school grade configuration. It is a study about teachers from students' perspectives.

## Achievement

A number of factors regarding teacher and student interactions and student academic achievement have been identified, such as teachers' attitudes and behaviors toward students (Brookover, 1996) and teachers' beliefs about students (Anderson, 1997). Research does support the assumption that good teachers facilitate learning and enhance student academic achievement (Liu, 1997). One factor that contributes to student achievement is the interaction of teachers and students (Brophy, 1989; Good, 1987). Weinstein found that elementary students see their teachers as projecting higher

achievement expectations and offering more opportunity to higher achievers (Weinstein, 1979). Students see treatment from teachers not only applying to other students, but also to their own personal treatment (Brattesani, Weinstein, & Marshall, 1984). Wigfield and Eccles (1990) have found that students' perceptions of ability decrease across the elementary years. This has important implications for student-teacher relations. By mid-elementary years, teachers' beliefs about students relate strongly to students' own beliefs. Around grade three, children begin to develop a conception of ability as a factor underlying performance, which implies that teacher beliefs about a student's achievement, when communicated in some fashion, may become more influential.

Connell (1990, p. 30) concluded, "Students who feel emotionally secure with classmates and teachers are more likely to be active participants in class and to exert more effort in their work, thus maintaining or enhancing their academic achievement." This perceived support from teachers was found to be a predictor of young adolescents' motivation and academic achievement (Wentzel, 1997). Feedback is important to teachers and, as Tuckerman's (1995) work shows, teachers are more receptive to feedback from students than from supervisors.

Other educational research also demonstrates a strong relationship between academic success and life context (Coleman, 1985). Children need their emotional and social development needs met before they are ready to learn. As Noddings (1988) said:

> My guess is that when schools focus on what really matters in life, the cognitive ends that we now pursue so painfully and artificially will be achieved more naturally. It's obvious that children will work harder and do things, even odd things like adding fractions for people they love and trust (p. 10).

Hayes, Ryan and Zseller (1994) found that caring fosters both the emotional and the intellectual growth of students. The research indicates that positive relationships between teachers and students can make a difference in academic success or failure (Chaskin, 1995). Caring, positive teacher-student relationships respond to the basic psycho-social need for independence and connections, belonging and membership, safety and respect, and social competency. Intellectual development is based on the gratification of certain emotional needs such as trust. Satisfaction of these basic psycho-social needs serves as a cooperative force with cognitive learning (Menniger cited in Hayes, Ryan, Zseller, 1994, p.3). Fraser (1991) supports this concept by identifying teaching that provides emotional satisfaction resulting in more and better learning of the traditional public school curriculum. Students in Fraser's study also showed more growth in the complex areas of emotional and social learning.

The fact that relationships between students and teachers are the foundation for learning has special impact for minority and at-risk students (McDermott, 1977) and low achieving students (Babad, 1991). There is considerable evidence that students of different achievement levels have different types of interactions with their teachers. Good (1987) found that high achieving students had more positive contacts with their teachers, while low achieving students had a greater proportion of conflicts with their teachers. Good (1987) showed that teachers used the following behaviors with low-achievers: less frequent and less informative feedback, fewer opportunities to respond, and less effort required. Data collected by him suggest that high achievers are provided with more interaction opportunities with teachers. Wentzel (1997) suggests that an extensive literature review indicates teachers prefer to have students who are cooperative,

conforming, cautious, and responsible rather than independent, argumentative, or disruptive. Students who have poor social skills are apt to have less positive relationships with teachers.

A missing factor in the research is the relationship between student achievement and students' perceptions of teacher behavior. However, Marsh (cited in Tuckerman, 1995) concluded that students were competent judges of teachers; Fraser (1991) found that students could accurately describe actual classroom environments; and Sechrest (1962) reported that students possessed an accurate awareness of teachers' nonverbal communication about their academic performance. If positive student and teacher relationships can make a difference in achievement, and students are accurate sources of information on those relationships, then student information on their perceived relationships with teachers is a crucial piece that can contribute to practices supporting increased achievement.

From the studies that are available, what do students tell us about their relationships with teachers? Bosworth (1995) found that most classroom interactions between students and teachers are neutral, with little time or space for personal interaction. Research, however, supports the premise that some classrooms are more supportive than others (Goodlad, 1983; Liu, 1997). Students who feel emotionally secure are more likely to be active participants in class and to exert more effort into their work, thus maintaining or enhancing their academic achievement (Carbello, 1994). The work of Rogers and Webb (1991) further supports that how teachers and students interact is critical to the learning process. Due to the fact teachers' interactions with students occur so frequently and quickly (Jackson, 1968) teachers may not be able to "process" those

interactions, and therefore, may not realize the impact of their interactions (Schunk, 1992). Despite the importance of the topic, Brophy & Good (1986) observed that there has been limited study of the link between teacher behavior and student achievement. As schools look to expect similar academic achievement for all students, teachers could use student perception data to modify their interactions and promote increased achievement for all students.

## Gender

Teachers benefit from an understanding of gender differences as they relate to students' perceptions to ensure equal opportunities for boys and girls. Students' perceptions of their interactions with teachers have been found to vary by sex (Jackson 1968). Most studies of gender differences in student and teacher interactions were conducted prior to 1985 (Schunk, 1992).

Myra and David Sadker (1994) have extensively researched gender issues in public schools. They found that girls are systematically denied opportunities in areas where boys are encouraged to excel, often by well-meaning teachers who are unaware they are transmitting sexist values. The results of gender difference studies (Sadker, 1994) suggest that girls thrive in elementary school more often than do boys. Two factors seem to contribute to this finding. First, the demands placed on students are more easily accepted by girls because the activities defined as appropriate for young girls are less active and more verbally and intellectually orientated. Secondly, the majority of elementary school teachers are female, and they appear to treat girls more favorably.

On the other hand, boys receive more criticism and teacher disapproval than do girls (Lahaderne, 1968). Studies support the premise that girls have more favorable attitudes towards school and their teachers (Sadker, 1994). The literature indicates that the primary difference relative to gender is quantitative in nature: boys tend to have more interactions of all kinds with teachers. A general theme emerges from student differences related to gender. Teachers tend to be reactive rather than proactive in their interactions with students. Jackson (1968) describes the rapid pace of classroom demands on a teacher as an influence for this reactionary approach to providing students attention in the classroom.

Research suggests that gender differences, as they relate to students' perceptions of teachers, may serve as a source of information that could be used to inform classroom teachers as they seek to build relationships with students. Utilizing student perceptions and implementing small changes in how teachers interact with boys and girls may have a potentially powerful impact in building a capacity for strong student-teacher relationships for both genders.

## Socioeconomic Status (SES)

Socioeconomic status is a variable over which children have no control. School-age children are dependent on family circumstances that cause them to enter or avoid poverty. The number of eligible children in the free or reduced-fee federal lunch program most frequently measures school poverty. It is noteworthy that the U.S. has the highest rate of child poverty among industrialized nations, nearing three times that of most

economically advantaged nations (Reed and Saulter, 1990). A growing trend is the disparity in the distribution of wealth in the United States. The number of Americans living below the poverty level has steadily increased over the past three decades from 24.2 million in 1969 to 35.6 million in 1997 (Dalaber & Naifeh, 1998.)

The impact of children in poverty has affected our schools. Teachers find themselves dealing with children who come to school daily with unmet needs. They report seeing more children with identified learning disabilities. The Carnegie Commission reported concluded increased numbers of young children are growing up in compromised situations that affect brain development, learning, and socialization (Young, 1994). Veteran teachers claim they now see more children with social, behavioral and academic needs. National research has consistently found poverty to be one of the strongest indicators of student educational risk (O'Hare, 1997). Rand Corporation (cited in O'Hare, 1997) studied the extent to which achievement test scores could be attributed to family background. They found seven connections. The characteristics are parental education and income levels, family size, and mother's age at the time of the child's birth, mother's working status, ethnic/racial background and whether the family consists of one or two parents. Public schools face the challenge of overcoming inequities that children bring with them by way of their family.

Greg Duncan and Jeanne Brooks-Gunn (1997) found that family income is more strongly related to children's ability and achievement than it is to children's emotional outcomes. Children who live below the poverty line for multiple years suffer the worst outcomes. The timing of poverty is also important. Children experiencing poverty in preschool and early years have lower rates of school completion than those experiencing

poverty in later years. Low socioeconomic children are often missing the relationships and security that children from affluent homes are provided with.

Socioeconomic status of students is a factor that has been shown to influence teachers in their interactions with students. Research leads us to the conclusion that teachers treat students differently as a result of SES, and Weinstein and Middlestadt (1979) have shown that students are aware of this differential treatment. Knapp, Shields, and Turnbull (1995) showed that higher SES children got more of the teachers' praise and rewards, while lower SES children received more criticism and punishment. They also provided strong support for the impact of SES on teachers' interactions with students. In their study, teachers considered SES the most important factor in predicting success of first graders. The fact that relationships between students and teachers are the foundation for learning has special impact for minority and at-risk students (McDermott, 1977) and low achieving students (Babad, 1991). There is considerable evidence that students of different achievement levels have different types of interactions with their teachers. Good (1987) found that high achieving students had more positive contacts with their teachers, while low achieving students had a greater proportion of conflicts with their teachers. Good (1987) showed that teachers used the following behaviors with low-achievers: less frequent and less informative feedback, fewer opportunities to respond, and less effort required. Data collected by Good suggest that high achievers are provided with more interaction opportunities with teachers.

Wentzel (1997) suggests that an extensive literature review indicates teachers prefer to have students who are cooperative, conforming, cautious, and responsible rather than

independent, argumentative, or disruptive. Students who have poor social skills are apt to have less positive relationships with teachers.

Current research continues to support the importance of setting high standards for all students regardless of socioeconomic status. How students of different SES perceive their interactions with teachers can provide information that may help to positively alter the nature of the teacher and student interactions

## Grade Configuration

The construct of school structure and grade configuration housed within a specific school has been studied in school improvement initiatives. Research results found in the literature indicate that grade organization seems to be an incomplete measure due to different attributes of the programming within the grade configurations of different schools (Swaim & Fager, 2002). Studies of whether students' perceptions of their interactions with teachers vary based on grade configuration are absent from the literature.

Concern over the education of young adolescents (ages 10-15) has increased in recent years. Psychologists believe that this time period encompasses a critical stage in human development (Dusek, 1985). The importance of the adult/child relationship at this developmental stage has been identified in recent studies (Lynch & Cicchetti, 1997). Psychologists identify this period of puberty as one of value formation, social group identification, and learning shifts. School reform at this level has called for small learning communities. This middle level construct has been described as less decentralized, more

heterogeneously grouped, and involving more team teaching. Achievement and engagement with academics has been linked with smaller schools settings.

Lee & Smith (1992) found that young adolescents fare better in schools in which this age group is not isolated. The results also suggest that students of this age in smaller schools are likely to demonstrate higher achievement and more engagement with academics. Their work also provides empirical support for eliminating schools exclusively devoted to middle grades and providing students with interactions with peers of a variety of ages.

In a related study, Perry (1986) looked at grade level organization and academic achievement of middle grade configurations. The configuration showed no consistent effects on the academic achievement of sixth graders. This finding may be related to the fact that, in theory, a middle school is not defined only by grade organization, but also by actual practices employed by teachers. Johnson (1982) said: "Most experts appear to agree that significant results are not simply the result of grade organization. If there are important differences to be identified, they are most likely to be programmatic differences." (p. 107).

A personalized environment with strong teacher and student relationships is a product of deliberate and strategic choices about organizational structures and routines (Maeroff, 1990). A study by Becker (1987) reported a significant advantage to locating the sixth grade in the elementary rather than a middle school span. Interestingly, Becker also found that the elementary school advantage declined as student socioeconomic status rose. In fact, sixth graders in the upper tail of the SES distribution performed slightly better in non-elementary settings (Wihry, Coladarci, & Meadow, 1992). In 1998, there

were a total of 723 public schools in Maine with 38 different grade configurations (Geher, 2000). These different grade configurations varied depending upon district needs and available space. A recent study conducted by the Northwest Regional Educational Laboratory suggested that factors, which should be included in grade configuration decisions, include socioeconomic background of the student population and school system goals for student achievement.

There is some evidence in the literature that suggests while grade organization does not seem to make a difference academically; it may affect emotional and social adjustment (Routt, 1975). Sixth grade students in an elementary, self-contained (K-6) grade configuration experienced fewer social and emotional problems than students in a middle, departmentalized school grouping. Multiple classes organized by content area, an increased number of specialists, and large networks of adult responsibility for children can contribute to breakdowns in teacher and student relationships.

## Summary of the Literature

Students have valuable perceptions of how teachers interact with them and these perceptions can be a useful tool to improve schools (Tyack & Cuban, 1995).
The research indicates that positive relationships between teachers and students can make a difference in academic success or failure (Chaskin, 1995). If positive student and teacher relationships can make a difference in achievement, and students are accurate sources of information on those relationships, then student information on their perceived relationships with teachers is a crucial piece that can contribute to practices supporting

increased achievement. Students' perceptions of their interactions with teachers have been found to vary by sex (Jackson 1968). Socioeconomic status of students is a factor that has been shown to influence teachers in their interactions with students. Research leads us to the conclusion that teachers treat students differently as a result of SES, and Weinstein and Middlestadt (1979) have shown that students are aware of this differential treatment. It does appear that in schools where there is a personalized environment with strong teacher and student relationships, it is the product of deliberate and strategic choices about organizational structures and routines (Maeroff, 1990). Information on grade configurations as they relate to student perceptions of teachers is absent from the literature.

The research design outlined in Chapter 3 addresses how sixth grade students' perceptions of teachers are related to achievement, gender, socioeconomic, and school grade configuration.

# CHAPTER 3

# METHODOLOGY

## Introduction

The appropriateness and utility of using students' perceptions of teachers and their relationship with achievement, gender, socioeconomic status, and school grade configuration have been articulated through the literature reviewed. Chapter 3 provides an overview of the methodology utilized in this research study. The chapter is divided into six sections. In the first, research goals and questions are identified, in the second section, the research sample is described. The third section offers a review of the instruments used to collect data. Limitations of the study are outlined in section four. The fifth section outlines the plan for data analysis. Chapter 3 concludes with a discussion of the significance of this study.

## Research Goals and Questions

This study has been designed to examine factors influencing sixth graders' perceptions of student/teacher interactions and the relationship of these perceptions to achievement, gender, socioeconomic status (SES), and grade configurations. The research question that formed the basis of this study is:

What is the relationship between students' perceptions of teachers and academic achievement, gender, socioeconomic (SES) and school grade configuration?

Three main questions will be answered in the study.

1. Are the relationships of each predictor variable (achievement, gender, socioeconomic status, and grade configuration) with the dependent variable (students' perceptions of teachers) statistically significant?

2. How well do the predictor variables (achievement, gender, socioeconomic status, and grade

configuration), collectively and individually, explain variation in the dependent variable (students' perceptions of teachers)?

3. Which predictor variable (achievement, gender, socioeconomic status, and grade configuration) is the best predictor of the dependent variable (students' perceptions of teachers)?

Based on the literature review and the researchers experience, the following directional hypotheses were being investigated:

1. More positive students' perceptions of teachers will be found in schools with higher school achievement

2. More positive students' perceptions of teachers will be found in schools with higher school SES

3. More positive students' perceptions of teachers will be obtained from females

4. More positive students' perceptions of teachers will be obtained from students where sixth graders are the oldest in the school grade configuration

To address these research questions, data were collected from sixth grade Maine students, school administrators, and the Maine Department of Education. A reliability

analysis was used to determine the validity of the students' perceptions of teachers scale used in this research (See Appendix A and Appendix B). The data were then studied using the appropriate statistical methods in order to determine the relationship of students' perceptions to achievement, gender, socioeconomic, and school grade configuration.

## Research Sample

The sample consists of responses from 6,346 students in 139 schools in Maine. The sample was selected by utilizing the sixth grade responses from sixth through eighth grade students participating in the Students Speak survey. The sample size was of adequate size to address the relationship between student perceptions and the other variables. Grade six student data was selected in order to obtain a sample where the relationship between student perceptions and grade configuration could be studied.

## Instrumentation

Two instruments were used in this research. The student perception data were obtained from 16 questions from the Students Speak Survey. Students reported their gender as part of the Students Speak survey. School administrators provided information on school grade configuration and school socioeconomic status. The data for all variables were obtained from the same groups of individuals during the same time period.

Achievement data were obtained from the Maine Department of Education. Reading and math achievement data for a three-year period were obtained for each participating school.

## Student Speak: My Education and My Future Aspirations Survey

The Students Speak Survey is based on over two decades of research on student aspirations. The Students Speak Survey allowed students to voice their perceptions of several factors contributing to the total learning environment. Factor analysis was applied to the Students Speak Survey. Scales were then created for factors with two or more elements. One such factor was student perceptions of teachers. Utilizing SPSS, a reliability analysis was conducted on the scale in order to establish that the sixteen items measured the same phenomenon. The scale had a Cronbach's Alpha of 0.8491, which establishes that a high correlation among items exists. This calculation also determined that no weak items existed on the student perception of teachers scale. The sixteen questions comprising the scale are as follow:

1. Teachers respect my thoughts.
2. Teachers value my opinions.
3. Teachers care about my problems and feelings.
4. Teachers expect me to succeed.
5. I have a teacher who is a positive role model for me.
6. Teachers tell me I do a good job when I try my best.
7. Teachers care about my success in class.

8. Teachers make learning exciting.
9. Teachers support me when I try something new.
10. Teachers discourage me from asking questions.
11. Teachers allow me to explore topics that I find interesting.
12. Teachers expect me to be a good decision maker.
13. Teachers show respect for students.
14. Teachers say things to hurt or insult me.
15. Teachers handle disruptive students well.
16. Teachers help me to succeed.

Students' responses to the statements above were coded as follows:

| | |
|---|---|
| Strongly agree | 1 |
| Agree | 2 |
| Don't Know | 3 |
| Disagree | 4 |
| Strongly Disagree | 5 |

Therefore, the lower the mean of the student perception score, the stronger the agreement with the statement. Grade six individual student scores were averaged in order to get a mean score for each school. Student perception data were coded to ensure confidentiality.

Results from a total of 11,824 students in grades six, seven and eight were obtained in the Students Speak Survey initiative. For the purpose of this study, 6,346 grade six student responses were selected in order to study the relationship between student perceptions of teachers and school grade organization. The use of one grade level provided a uniform sample with a sufficient size. On the student questionnaire, students

identified themselves as either male or female. Since gender is a categorical variable, it was coded as such for the purpose of statistical analysis.

As part of the Students Speak survey, school administrators were asked to complete a descriptive report of their school including grade configuration. Student data were obtained from schools that had three distinctive patterns of grade organization.

1. Sixth graders (2,237) as the oldest students in the school grade configuration (K-6, 1-6, 3-6, 4-6)
2. Sixth graders (2,954) as the youngest students in the school grade configuration (6-12, 6-8)
3. Sixth graders (1,860) as in the middle of the school grade configuration (neither the oldest nor youngest in the school grade configuration (K-7, K-8, K-12, 3-8, 5-8)

Grade configuration is a categorical variable and was coded as such for the purpose of statistical analysis. Administrators also reported on the socioeconomic level of the school. Percentages of free and reduced-fee lunch students for each school were utilized to reflect the socioeconomic level of a school.

## Maine Educational Achievement Test (MEA)

Information on Maine Educational Achievement school scores was obtained from the Maine Department of Education. The Maine Educational Achievement Test (MEA) components used in this research were norm referenced and were comprised of "common" questions in reading and mathematics. Three-year averages for grade four were obtained for reading and math from 1995-96, 1996-97, and 1997-98 school years and were used to

establish school achievement scores. These three years were selected since the same test formats and scoring were used in all three years. Additionally, the sixth graders used in this study would have been participants in the MEA during the 1995-1996 school year and would be part of the three-year average.

## Limitations of the Study

The following limitations have been noted:

1. The Students Speak Survey: My Education and My Future data were developed to provide school communities with a "snapshot" of students' perceptions of themselves and their learning environment. This survey has been used in Maine and elsewhere in the United States. The data used in this study are from Maine students at the sixth grade level. Data are self-reported by students.
2. The Maine Assessment Test of Basic Skills was developed for use in Maine. Since test data are only available for grades four, eight, and eleven, data used contained the three-year average composite school scores for grade four. Data are school-based information. Grade Six Students Speak data was not necessarily from the same sample that comprised the three-year average composite Maine Educational Achievement scores.
3. Initial Students Speak data was collected from individual students and combined to provide school based information. The school-based information provides a more global look at students' perceptions than individual student profiles.

## Data Analysis

The purpose of this study is to gain a better understanding of the relationship between students' perceptions of teachers and achievement, gender, socioeconomic, and grade configuration. Data were analyzed using the Statistical Package for Social Science (SPSS).

## Subscale Reliability

A reliability analysis was performed on the student perception of the "good teachers" scale for the sixth grade students. A Cronbach's alpha of .8491 (see Appendix A and Appendix B) establishes the reliability of the scale. Each school participating in this study was assigned a code in order to ensure confidentiality and anonymity. Student perception data were averaged to obtain one score for sixth graders from each school (see Appendix C).

## Correlational Analysis

The first question was answered through the use of a Pearson correlation, t-test, and analysis of variance (ANOVA). Tukey and Scheffe post hoc tests were also utilized. The question addressed whether the relationships of each predictor variable with the dependent variable were statistically significant. Correlations were tested for statistical

significance using a one tailed test since the following directional hypotheses are being investigated:

1. More positive students' perceptions of teachers will be found in schools with higher school achievement

2. More positive students' perceptions of teachers will be found in schools with higher school SES

3. More positive students' perceptions of teachers will be obtained from females

4. More positive students' perceptions of teachers will be obtained from students where sixth graders are the oldest in the school grade configuration

## Multiple Linear Regression Model

Multiple regression was used to identify what combination of the four-predictor variables (gender, SES, school grade configuration, and achievement) correlated better with the dependent variable (student perceptions of teacher interaction) than any one-predictor variable alone. Two questions were answered through the statistical use of multiple linear regression.

1. How well do the predictor variables (achievement, gender, socioeconomic status, and grade

configuration), collectively and individually, explain variation in the dependent variable (students' perceptions of teachers)?

2. Which predictor variable (achievement, gender, socioeconomic status, and grade

configuration) is the best predictor of the dependent variable (students' perceptions of teachers)?

## Significance of the Study

Since less than one percent of U.S. school improvement initiatives utilize student perceptions as a tool for school improvement, the results of this study have the potential for providing teachers, educational leaders, and policy makers with a new resource to assist in improving teaching and learning in order to meet the needs of students in the twenty-first century. These results add to the literature pertaining to the contributions student perceptions can make to school improvement initiatives in the classroom. This study will aid in the understanding of how achievement, gender, SES, and school grade configuration relate to students' perceptions.

# CHAPTER 4

# RESULTS

## Introduction

This chapter provides results to the question of how sixth grade students' perceptions of teachers relate to achievement, gender, socioeconomic status, and grade configurations. The analysis of data found a significant relationship between MEA reading achievement and more positive students' perceptions of teachers. Male sixth grade students were found to have less positive perceptions of teachers than sixth grade female students. The data analysis showed that the higher the percentage of free and reduced lunch students in a school, the less positive the perception of teachers were. Finally, sixth graders who are the oldest in a school grade configuration (K-6, 1-6, 3-6, 4-6)) have the most positive perception of teachers.

This chapter is divided into six sections, the first five of which address results from the statistical procedures outlined in the previous chapter. In conclusion, a summary of the results is provided.

## Student Perception Scale

A scale related to student perceptions of teachers was utilized to address the research questions. Utilizing SPSS, a reliability analysis was conducted on the scale. It was important to establish that the sixteen items measured the same phenomenon. The student perceptions of teachers scale had a Chronbach alpha of 0.8491 establishing reliability of

the scale utilized (see Appendix A and B). This calculation also determined that no weak items existed on the student perceptions of teachers scale.

The value of each individual student's response was added to provide a total score representing each individual student's perception of his or her teacher. The student scores for each school were averaged to provide a mean student perception score for the school. Low scores represented more positive students' perceptions of teachers. Student perception data were coded to ensure confidentiality (refer to Appendix C). The student perception data from 139 schools ranged from a low mean of 20.80 (more positive students' perceptions of teachers) to a high mean of 73.00 (less positive perception of teachers) indicating a wide variation in the means in students' perceptions of teachers across the schools in the study. The following table provides a breakdown of the range of student perception scores.

Table 4.1. Range of Mean Students' Perception Scores and Number of Schools in Each Range

More Positive Perception Score — Less Positive Perception Score

| 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 |
|---|---|---|---|---|---|
| 20 schools | 113 schools | 13 schools | 3 schools | 0 schools | 2 schools |

## Correlation Analysis

Question 1 tested whether the relationships each predictor variable had with the dependent variable were statistically significant. Descriptive statistics for MEA

reading and math achievement scores were run (see Appendix D). The relationships of students' perceptions of teachers and MEA scores were measured using a Pearson Correlation. As indicated in Table 4.2, the results were significant at the 0.01 levels ($r$ (6346) = .039, $p < .01$) indicating a relationship between reading achievement scores and more positive student perceptions of teachers. Achievement correlations did not indicate a statistically significant relationship between MEA math scores and students' perceptions of teachers.

Table 4.2. Achievement Correlations

| | | MEAR | MEAM | Student perceptions of teachers |
|---|---|---|---|---|
| MEAR | Pearson Correlation | 1.000 | .777** | -.039** |
| | Sig. (2-tailed) | | .000 | .002 |
| | N | 7191 | 7191 | 6346 |
| MEAM | Pearson Correlation | .777** | 1.000 | -.015 |
| | Sig. (2-tailed) | .000 | | .239 |
| | N | 7191 | 7191 | 6346 |
| Student perceptions of teachers | Pearson Correlation | -.039** | -.015 | 1.000 |
| | Sig. (2-tailed) | .002 | .239 | |
| | N | 6346 | 6346 | 6358 |

** Correlation is significant at the 0.01 level (2-tailed).

Student perceptions of teachers and socioeconomic status (as measured by using school free or reduced lunch percentages) were analyzed with a Pearson Correlation

The correlation was significant at the 0.01 ($r$ (6358)= .045, $p < .01$) level (see Appendix E). Schools with higher SES tended to have students with more positive perceptions of teachers and schools with lower SES have less positive perceptions of teachers. In other words, SES is related to student perceptions of teachers.

The relationship of gender and student perceptions was studied using a between group t-test (see Appendix F). The t-test was used to determine whether differences between male and female mean scores have occurred by chance or whether a true difference exists. A t value yielding a p of .05 or lower was considered sufficient to conclude that male and female mean scores can be generalized to the populations represented by the samples used in the study. A significant difference was found between male (M=36.0580; SD =12.1918) and female (M=33.5956; SD=10.6946) perceptions of teachers demonstrating that females have more positive perceptions of their teachers than males ($t$ (6347) = 8.54, $p < .05$).

Finally, the relationship between school grade configuration and student perceptions was studied through the use of analysis of variance (ANOVA). This test determines whether the three mean scores are chance values generated from repeated samples from the 3 groups or represent different populations. Sixth grade students were grouped as follows: Sixth graders as the oldest students in the school grade configuration (K-6, 1-6, 3-6, 4-6); sixth graders as the youngest students in the school grade configuration (6-12, 6-8); and sixth graders as in the middle of the school grade configuration (neither the oldest nor youngest in the school grade configuration (K-7, K-8, K-12, 3-8, 5-8).

Results from analysis of variance show significant differences between the groups. Results from the analysis of variance provided an $F$ value of 29.732 (see Appendix G).

The means and standard deviations were as follows for the three grade configuration groups:

| | | |
|---|---|---|
| Oldest students | M=33.2130 | SD=10.6758 |
| Middle students | M=35.8188 | SD=12.1118 |
| Youngest students | M=35.4399 | SD=11.5778 |

In order to determine if the differences among the 3 scores were significant a one-way ANOVA was run. Results from the analysis of variance, $F(2,6214) = 29.73$, $p < 0$, showed that there was a significant difference between the three groups. Tukey and Scheffe post hoc tests were run in order to indicate which groups were different. Results of the post hoc tests indicate sixth grade students who are the oldest in a school grade configuration have significantly more positive perceptions of teachers than students in the two other grade configurations analyzed.

## Regression Model

Two questions were answered using a multiple linear regression model with student perceptions as the dependent variable and the following independent variables: achievement, gender, socioeconomic status, and school grade configuration. Dummy or categorical variables were created for the regression model creating a grade level variable with 2 levels. The effect of the other category gets picked up in the intercept. Therefore, the "middle" category was left out but is picked up in the intercept. The variables youngest child and MEA math became insignificant in the presence of the other variables at the 95% confidence level. Post hoc tests show there is not a statistically significant

difference between the perceptions of the youngest and middle students, the distinction comes into play with the "oldest group". The best regression model was made up of the oldest child (K-6 school grade configuration), male gender, MEA reading and percentage of students receiving free or reduced lunch. (see Appendix H)

The first question addressed through the use of multiple regression answered the question of how well the predictor variables (achievement, gender, socioeconomic status, and grade configuration), collectively and individually, explain variation in the dependent variable (students' perceptions of teachers). As shown in Table 4.3, the R squared was .025, which means that only 2.5% of the variability within the dependent variable, student perceptions, can be explained by the regression model. Although the regression was statistically significant ($F$ (4,6333) = 40.12, $p < .1$), the R value suggests that the predictor variables, collectively, do not explain the variation well in the dependent variable. This result is not surprising given the variety of variables that predict student satisfaction with teachers.

Table 4.3. Correlation of Predictor Variables

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .157[a] | .025 | .024 | 11.40231 |

a. Predictors: (Constant), MEAR, Male Gender, Oldest Child, Percentage of Students Receiving Free or Reduced Lunch, 1998-99

b. Dependent Variable: Student perceptions of teachers

In inferential statistics, in order to conclude the results are generalizable, we must reject the possibility the results are chance findings. When the null hypothesis is rejected, one is able to generalize to the population. Based on the results presented in Table 4.4, each of the four predictor variables (MEA reading, males, sixth graders who are oldest in a school grade configuration and percentage of students receiving free or reduced lunch) are significantly associated with the dependent variable within the model, allowing rejection of the null hypothesis since the coefficient of each variable is different than zero.

In investigating the relationship each predictor variable had with the dependent variable when all the other predictor variables are held constant (Table 4.4), the relationship of each of the 4-predictor variables was as follows:

1. Oldest Child in a school grade configuration (K-6, 1-6, 3-6, 4-6) had the most positive perceptions of teachers.
2. Male sixth grade students have a less positive perception of teachers than do sixth grade female students.
3. Students in schools with a higher percentage of students receiving free or reduced lunch have a less positive perception of teachers.
4. Students in schools with higher MEA reading scores have a more positive perception of teachers.

This analysis confirmed the directional hypothesis set forth in Chapter 3.

Question 2 asked which predictor variable has the most effect on student perceptions of teachers. The two most significant variables were the oldest child in a school grade configuration and the male gender variables, with the male gender variable a slightly stronger.

Table 4.4. Coefficients

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 36.050 | 1.137 | | 31.694 | .000 |
| | Male Gender | 2.509 | .287 | .109 | 8.756 | .000 |
| | Oldest Child | -2.519 | .310 | -.101 | -8.136 | .000 |
| | Percentage of Students Receiving Free or Reduced Lunch, 1998-99 | .033 | .010 | .044 | 3.461 | .001 |
| | MEAR | -.009 | .003 | -.035 | -2.776 | .006 |

a. Dependent Variable: Student perceptions of teachers

## Summary

This study of students' perceptions of teachers and the relationship of these perceptions to achievement, gender, socioeconomic status, and grade configuration utilized a subscale with a high reliability. Research findings indicated that achievement; gender, socioeconomic status, and school grade configuration were all significantly associated with the dependent variable. However, these variables when studied together do not explain variation in student perceptions of teachers.

Key findings from the analysis of results are as follows:

1. The higher the school MEA reading achievement scores, the more positive the students' perceptions of teachers

2. Sixth grade male students have less positive perceptions of teachers than do sixth grade female students

3. The higher the percentage of free and reduced lunch students in a school, the less positive the students' perceptions of teachers

4. Sixth graders who are the oldest in a school grade configuration (K-6, 1-6, 3-6, 4-6) have the most positive perception of teachers than sixth graders in other grade configurations.

Chapter five will provide final reflections on the use of student perceptions in the improvement of teaching and learning.

# CHAPTER FIVE

## DISCUSSION

This study investigated the relationship between sixth grade students' perceptions of teachers and achievement, gender, socioeconomic status, and school grade configuration. Key findings were:

1. The higher the school MEA reading achievement scores, the more positive the students' perceptions of teachers
2. Sixth grade male students have less positive perceptions of teachers than do sixth grade female students
3. The higher the percentage of free and reduced lunch students in a school, the less positive the students' perception of teachers
4. Sixth graders who are the oldest in a school grade configuration (K-6, 1-6, 3-6, 4-6) have the most positive perception of teachers.

This final chapter offers a summary of the research and a discussion of the significant findings. The chapter is divided into four sections: Building a Knowledge Base and Addressing Organizational Structures; Discussion of the Four Major Findings with Implications for School Leaders, Teachers and Policy Makers as they relate to achievement, gender, socioeconomic and school grade configuration; Possibilities for Future Research; and Summary.

What are the primary implications of these research results for school leaders, teachers and policy makers? The use of student perceptions data in our schools has two major implications. The first implication is the building of a knowledge base about the

importance of student perceptions as a valuable tool in the teaching and learning process. The second implication is related to the implementation of organizational structures that support and value the development of positive relationships between teachers and students. The practice and policy implications that follow are based on research that suggests successful school reform efforts place a value on relationships, collaborations, and shared responsibility for children (Knoff & Batsche, 1994).

## Building a Knowledge Base and Addressing Organizational Structures

The National Commission on Teaching spent two years studying and debating how to ensure that every child in the United States has access to the teaching they need to meet the demands of the 21st century. They determined that the single most important determinant of student achievement was the classroom teacher (Darling-Hammond, 1997). School leaders generally agree that any educational institution's most important resource is its teachers. Mounting research suggests that the quality of leadership and school staff are major factors in school success. Milbury McLaughlin (1986) states:

> The ambitious goals for American Education must be achieved on a classroom by Classroom basis Success for all students depends ultimately on what teachers do in their classroom, on the teacher's ability and willingness to provide educational environments necessary to meet the country's educational goals (p. 5).

In a study of 90 leaders (Bennis, 1985) all identified learning as the foremost quality that was needed to run their organization. The ability to foster learning as a school leader creates a dynamic organization that has the capacity to adjust and change. Self-

renewing systems can only exist if they have access to new information (Wheatly, 1992). Those in school leadership positions need to create learning organizations where student perception information is valued. Access to research and information about student perceptions needs to be made available to practioners. School leaders can promote the infusion of new research and information by sharing it with colleagues.

However, the facilitation and leadership of teacher growth is a complex and human endeavor. Working with student perception information is as a new feedback source for teachers. The school leader needs to create a climate and learning organization that supports the use of student perception information in a positive and constructive manner. As school leaders and teachers gain new insights into the students' views of the teaching and learning process, organizational changes need to be made in order to create environments that truly serve the needs of a variety of learners. Teachers need to be involved in the use of student perception information and develop practices that allow them to meet the needs of students of who differ in achievement, gender, and socioeconomic levels.

What are the implications of using student perception information for building this knowledge base and what organizational structures need to be addressed in order to meet the needs of all students? The implications of using student perception data will be addressed by looking at each of the four research variables.

## Achievement

This research found that the higher the school MEA reading achievement scores, the more positive the students' perceptions of their teachers. This study's finding that the higher the MEA reading achievement scores, the more positive the students' perceptions of teachers are not surprising to the researcher. Do higher achievement scores lead to more positive student perceptions of teachers or do more positive perceptions of teachers lead to higher achievement? The statistical analysis of data in this study of students' perceptions did not prove causation. The fact that both are desirable in our schools and classrooms is of importance.

Newmann and Wehlage (1995) linked student achievement to effective habits of adults-namely teacher growth. In a 1998 ASCD research study, teachers' motivation for growing as professionals was studied. Seventy three percent of the teachers identified the improvement of student achievement as motivation for professional growth. We know that relationships between teachers and students can make a difference in academic success or failure (Chaskin, 1995). Student perceptions of teachers are based on the relationships they have with their teachers, and evidence supports the view that relationships between teachers and students can shape the course of a child's development (Pederson et al., 1978; Pianta et al., 1995, Werner & Smith, 1980). John Goodlad (1990) wrote about how the complexity of the student and teacher relationship is such that there is little likelihood that a teacher just acquires the skills necessary to make these relationships work.

Teacher and student relationships are asymmetrical. In other words, the teacher is more mature and has greater weight in determining the quality of the relationship. From the literature, it is understood that the key to positive student relationships is the skill of the teacher in accurately reading and responding to a child's signals (Pianta, 1999). Development of these skills is needed in the education of educators. For teachers, the strengthening of a knowledge base in this area directly links with a primary source of teacher satisfaction (Lortie, 1975), and supports adult learning theory related to internal incentives (Knowles, 1978). As the results of this research have suggested, a relationship exists between achievement and more positive student perceptions.

As the standards movement accelerates, the focus on relationships between teachers and students can be lost in the drive to achieve standards. Maine is one example of what is evolving around the standards movement. In February of 1989, members of the Commission on Maine's Common Core of Education began the deliberation and debate on what knowledge, skills, and attitudes Maine students need by the time they graduate from high school. The Common Core Commission stated, "Schooling cannot be separated from a student's identity, self-esteem, and feelings. Educational systems must not label children nor employ grouping methods that exclude children from quality education." The Commission established six guiding principles that were the foundation for the content areas standards that were later developed. These six Guiding Principles were:

Each Maine student must leave school as:

- A Clear and Effective Communicator
- A Self-Directed and Life Long Learner

- A Creative and Practical Problem Solver
- A Responsible and Involved Citizen
- A Collaborative and Quality Worker
- An Integrative and Informed Thinker

These Guiding Principles cannot be achieved without a focus on the relationships between students and teachers. Yet, arguably, these principles have become lost in the standards quest. Nodding (1992) said:

> It is time to take full account of the social changes that have swept through the second half of the twentieth century. If the traditional family is an anachronism, or if, for whatever reasons, families cannot meet the needs for caring, other institutions must meet that need. I will argue that the school cannot achieve its academic goals without providing caring for its students (p. 13-14).

As we look to increase student achievement, the very foundation necessary for the acquisition of content skills is not given a high priority in the standards quest.

It was interesting to note the high to low variation in the student perception levels among the schools represented in this study. Collection of student perception data as part of the statewide achievement-testing program could enhance the value of the academic information obtained and addresses the foundations of the Maine Learning Results Guiding Principles by providing the students' perspective on the acquisition of content skills and knowledge.

These guiding principles have much to do with the implementation of organizational structures that support and value the development of positive relationships between teachers and students. There are three changes that schools could consider that would

enhance the ability for teachers to build positive relationships with teachers. These changes involve reorganizing personnel, maintaining appropriate class size, and lengthening the teacher work year.

School leaders and teachers can take an active role in the review of how personnel can be utilized in such a way that teachers are provided more time to interact with students. The finding in this study that student perceptions and achievement are linked is particularly important for low achieving students. For many of our academically challenged children, their day is spent outside of the regular classroom working with a variety of adults who assist them with their academics. While the intent is to provide extra support for the child, the result often is a day comprised of many interactions with many adults. In an effort to lessen the fracturing of a student's day and intervene before problems escalate, the role of counselors and school psychologists could be shifted. A more proactive approach, in which school leaders, counselors and psychologists are utilized, as consultants to assist teachers to create optimal relationships with their students prior to problems surfacing would serve our students well. Decreasing the number of paraprofessional staff utilized to support large class sizes and increasing the amount of classroom teachers would also lead to less fracturing of a student's day.

The number and needs of students in individual classrooms need to be addressed in relation to student perception. Class size policy usually has focused on minimums and maximum numbers of students. School leaders and teachers know that the differences in class composites can be significant from year to year. Schools in which student perceptions of teachers are less positive would benefit from lower class sizes that allowed teachers a greater opportunity to build relationships with students.

Time is an important element needed in order to develop and to nurture relationships. Lengthening the school year for teachers would provide time for home visits where a deeper understanding and connection could be made with students and their families. This additional time also would permit needed professional development in the area of student and teacher relations. Many of the planning and preparation needs of teachers could be conducted outside of the student school year if additional teacher time were provided, leaving more time during the student year for teachers to focus on relationships and the achievement of their students. Practices such as looping where teachers spend two years with the same students needs to be given serious consideration as a means of allowing the extended time for development of relationships between teachers and students.

## Gender

This research found that sixth grade male students have less positive perceptions of teachers than do sixth grade female students. Equal opportunities for all children are a goal of the American public school. Well-meaning teachers often are unaware they are treating boys and girls differently in the classroom (Sadker, 1994).

Educators need to be provided learning opportunities in the area of adult development in order to better understand how their own backgrounds impact their interactions with students. This is particularly true in the area of gender. Our adult life cycle takes shape and evolves from our earlier family history (Walsh, 1993). Each school

leader and teacher brings his/her own personal history to the school setting and these histories help shape our interactions with students. We need an awareness of our own beliefs and biases in able to look at gender issues in the school setting.

From an organization perspective, the recruitment and allocation of male and female personnel in schools needs to be addressed. During the first half of the 19th century, the majority of teachers were white and middle class. Despite the fact that the number female teachers increased during this period, the positions with the highest authority and prestige went to men who shaped the American public school (Tyack & Hansot, 1982). This remains true today, with the majority of school leaders continuing to be male. Our elementary school staffing patterns have few male teachers. Efforts need to be made to have a fairly equal distribution of genders across our schools at all level, both in the classroom and in leadership positions.

School leaders and mentor teachers need improved skills in gender data collection techniques that can be used in the feedback process for teachers. The research on student perceptions of teachers contributes to the literature, finding that boys have less positive perceptions of teachers than do girls, and this is an issue as it relates to student achievement. Jackson (1968) discussed the rapid pace of classroom demands as influencing teachers to use a reactionary approach to providing students with attention. The literature indicated boys have more interactions with teachers, and there may be a qualitative issue of teacher relations with male and female students.

## Socioeconomic Status

This research found that the higher the percentage of free and reduced fee lunch students, the less positive the perception of teachers. This is an important finding, especially in light of the fact that the number of Americans living below the poverty level has steadily increased since 1969 (Dablaber & Naifeh, 1998). Poverty is one of the strongest indicators of educational risk (O'Hare, 1997). We know that low socioeconomic status children often are in need of the relationships that safeguard children coming from more affluent homes (Duncan & Brooks-Gunn, 1997). We\also know that teachers treat low and high socioeconomic status students differently because of SES (Weinstein & Middlestadt, 1979). More teacher support and attention is given to students from higher SES backgrounds. It is also interesting to note that most teachers are from middle class backgrounds (Tyack & Hansot, 1982). Utilizing student perception data and strategies to change interaction patterns with students of various socioeconomic levels will provide caring teachers with information that will assist them in modifying their interactions with low socioeconomic status children.

From an organizational standpoint, training resources for low socioeconomic schools could be provided by state and federal agencies serving schools. School systems could improve their public relations campaign to promote a greater understanding of the differences across our schools that relate to student perceptions. The media use of comparative test score information without explanation of the population differences

perpetuates the inequalities of the resource bases available to our students. Recruitment of personnel from a variety of socioeconomic backgounds could enhance opportunities for students.

## Grade Configuration

The research conducted in this study provided valuable information on the relationship of student perceptions to grade configurations. In this study, grade six students' perceptions data were utilized in order to study the relationship between perceptions and grade configuration. There were three configurations for sixth graders:

1. Sixth graders as the oldest in the school grade configuration (K-6, 1-6, 3-6, 4-6)
2. Sixth graders as the first or youngest in the school grade configuration (6-12, 6-8)
3. Sixth graders as in the middle of the school grade configuration (neither the oldest or youngest in the school grade configuration, K-7, K-8, K-12, 3-8, 5-8).

Sixth graders who are the oldest in a school grade configuration have the most positive perception of teachers.

The grade configuration literature indicates that the practices of creating a school environment with strong teacher and student relationships are a strategic choice about the organizational structures and routines (Maeroff, 1990). Educational leaders and teachers need to begin identifying and sharing those practices which support the development of positive perceptions in students. Those practices need to be incorporated into all configurations in order to promote increased achievement and positive student

perceptions. The identification of practices that promote positive student perceptions could ultimately lead to implications for grade configuration decisions in our public schools.

## Future Research

There are ample opportunities for continued research in the area of student perceptions. The following section will present a number of the possibilities that became evident in this regard as a result of this study. It is suggested that the recommendations for future research could lead to improved policies and practices for teaching and learning.

1. Tools for collecting student perception data should be researched and further developed. There are several interview scales and student questionnaires available for assessing student and teacher relationships (Pianta, 1999). However, they do not lend themselves to easy implementation and they do not have strategies for practice linked to them. The use the 16-item scale used in this research could possibly be developed further as a tool for teacher use with the class as a whole as well as with individual students. Accompanying strategies for addressing each item in the classroom need to be developed for practice

2. This study focused on sixth graders only. Comparative studies at other grade levels offer an opportunity for research, which could expand the use of student perception data.

3. Study of gender differences across the 16 subscale items could provide more specific information regarding implications for practice.

4. Students' perceptions of teachers could be explored through qualitative research. Student interviews could increase the depth and quality of the research inquiry by providing first hand information.

5. A more extensive investigation into the perceptions of low and high achieving schools offers an area for further study. The study of other factors contributing to low mean student perception scores (more positive perception of teachers) and high means student perception scores (lower student perception of teachers) could provide information for improved practice.

6. Longitudinal studies of student perceptions could add to our understanding of student perceptions and how student perceptions may increase or decrease across the K-12 school years. Such study may guide where increased interventions may be needed to maintain positive student and teacher relationships.

## Summary

Students have valuable perceptions of how teachers interact with them, and these perceptions can be a useful tool to improve schools (Tyack & Cuban, 1995). Two main implications for the use of student perception information to improve teaching and learning surfaced from this study. The first implication is to build a knowledge base about student perceptions among school leaders, teachers and policy makers. The second implication of the research is to implement organizational structures in schools that contribute to the development of positive student perceptions of teachers.

For both those in school leadership positions and those in the classroom, a comprehensive understanding of student and teacher relationships and the perceptions that evolve from those relationships needs to be included in undergraduate, graduate, and in-service development. An understanding of adult development needs to be a foundation for building a knowledge base about student perceptions. This understanding needs to be built through carefully crafted courses built on the research available on student and teacher relationships. Courses should model the building of positive relationships and the use of course participant perceptions.

Statewide policies that support schools in creating environments where teacher and student relationships are nurtured and fostered are needed. Implications for the organizational structures of schools including use of personnel, number of students in classrooms, and length of the teacher work year can be enhanced through the utilization of student perceptions. Policies that support development of a knowledge base and organizational structures need to be developmental and implemented by our policy makers.

This study has potential for providing teachers, educational leaders, and policy makers with a resource that will assist them in their efforts to improve teaching and learning in our public schools. As we look to educate more and more children who may be at risk for school success, placing student perceptions on the educational agenda of this nation creates an opportunity to capitalize on an underutilized, yet valuable, source of information based on the perceptions of the children in our American public schools.

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# APPENDICES

## APPENDIX A

Reliability Analysis-Individual Descriptives

Table A1. Sixth Grade Students' Perceptions of Teachers Questionnaire

| | | Mean | Std Dev | Cases |
|---|---|---|---|---|
| 1. | V28 | 2.4547 | 1.0444 | 6358.0 |
| 2. | V24 | 2.6913 | 1.2158 | 6358.0 |
| 3. | V20 | 2.3015 | 1.1028 | 6358.0 |
| 4. | V21 | 2.2427 | 1.1834 | 6358.0 |
| 5. | V35 | 3.7318 | 1.1717 | 6358.0 |
| 6. | V39 | 1.8281 | .9192 | 6358.0 |
| 7. | V41 | 2.0819 | 1.0836 | 6358.0 |
| 8. | V43 | 1.9034 | .9595 | 6358.0 |
| 9. | V45 | 2.4517 | 1.1590 | 6358.0 |
| 10. | V48 | 2.2235 | 1.2044 | 6358.0 |
| 11. | V55 | 2.3721 | 1.1272 | 6358.0 |
| 12. | V58 | 2.0077 | .9383 | 6358.0 |
| 13. | V60 | 1.9220 | 1.0746 | 6358.0 |
| 14. | V63 | 1.9288 | .9930 | 6358.0 |
| 15. | V65 | 2.2616 | 1.0579 | 6358.0 |
| 16. | V67 | 4.0920 | 1.1949 | 6358.0 |

N of Cases = 6358.0

| | Mean | Variance | Std Dev | N of Variables |
|---|---|---|---|---|
| Statistics for Scale | 38.4948 | 89.9172 | 9.4825 | 16 |

| | Mean | Minimum | Maximum | Range | Max/Min | Variance |
|---|---|---|---|---|---|---|
| Item Menus | 2.4059 | 1.8281 | 4.0920 | 2.2639 | 2.2384 | .4061 |

## APPENDIX B

Reliability Analysis-Item-Total Statistics

B1. Sixteen Questions

| | | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item - Total Correlation | Squared Multiple Correlation | Alpha if Item Deleted |
|---|---|---|---|---|---|---|
| 1. | V28 | 36.0401 | 76.4758 | .6761 | .5434 | .8187 |
| 2. | V24 | 35.8036 | 75.5667 | .6090 | .4154 | .8211 |
| 3. | V20 | 36.1933 | 76.4215 | .6369 | .5217 | .8203 |
| 4. | V21 | 36.2521 | 78.2886 | .4884 | .2977 | .8288 |
| 5. | V35 | 34.7630 | 97.1430 | -.3723 | .2076 | .8756 |
| 6. | V39 | 36.6667 | 82.5809 | .3886 | .2345 | .8342 |
| 7. | V41 | 36.4129 | 75.7866 | .6867 | .5703 | .8176 |
| 8. | V43 | 36.5914 | 77.3230 | .6918 | .5259 | .8191 |
| 9. | V45 | 36.0431 | 76.2602 | .6083 | .4071 | .8215 |
| 10 | V48 | 36.2713 | 76.6300 | .5613 | .3555 | .8242 |
| 11. | V55 | 36.1227 | 74.8344 | .7082 | .5561 | .8157 |
| 12. | V58 | 36.4871 | 81.1604 | .4659 | .2892 | .8305 |
| 13. | V60 | 36.5728 | 76.9407 | .6271 | .4486 | .8211 |
| 14. | V63 | 36.5661 | 76.9734 | .6863 | .5354 | .8189 |
| 15. | V65 | 36.2332 | 75.9904 | .6944 | .5343 | .8175 |
| 16. | V67 | 34.4028 | 99.5956 | -.4657 | .2987 | .8810 |

| Reliability Coefficients | 16 items |
|---|---|
| Alpha = .8397 | Standardized item alpha = .8491 |

## APPENDIX C

Students' Perception Data by School

Table C1. Lower students' perception score, the more positive perception of teachers

| School Code | Student perceptions of teachers |
|---|---|
| 201.00 | 28.97 |
| 303.00 | 31.00 |
| 502.00 | 34.20 |
| 1402.00 | 32.17 |
| 1804.00 | 34.60 |
| 2012.00 | 32.63 |
| 2013.00 | 34.65 |
| 2102.00 | 41.59 |
| 2104.00 | 33.07 |
| 2201.00 | 29.33 |
| 2404.00 | 30.91 |
| 2801.00 | 36.22 |
| 3103.00 | 29.00 |
| 3307.00 | 38.45 |
| 3702.00 | 33.88 |
| 3801.00 | 33.12 |
| 4101.00 | 36.85 |
| 5307.00 | 33.54 |
| 5308.00 | 59.00 |
| 5402.00 | 23.89 |
| 6001.00 | 29.33 |
| 6306.00 | 36.47 |
| 6806.00 | 35.75 |
| 7202.00 | 33.63 |
| 7301.00 | 37.94 |
| 7706.00 | 35.13 |
| 7803.00 | 31.68 |

| | |
|---|---|
| 8203.00 | 27.45 |
| 8301.00 | 30.33 |
| 8503.00 | 32.50 |
| 8901.00 | 27.60 |
| 9601.00 | 42.19 |
| 10304.00 | 35.41 |
| 10402.00 | 29.86 |
| 10501.00 | 35.08 |
| 11402.00 | 41.43 |
| 11801.00 | 28.21 |
| 12407.00 | 36.71 |
| 12504.00 | 29.76 |
| 12705.00 | 31.69 |
| 13303.00 | 38.80 |
| 13504.00 | 30.88 |
| 13704.00 | 32.57 |
| 13804.00 | 32.81 |
| 14001.00 | 37.73 |
| 14404.00 | 35.36 |
| 14501.00 | 50.33 |
| 14802.00 | 39.09 |
| 15310.00 | 33.77 |
| 15506.00 | 31.50 |
| 15601.00 | 31.14 |
| 16102.00 | 30.00 |
| 16408.00 | 36.91 |
| 16701.00 | 26.44 |
| 17701.00 | 34.79 |
| 17801.00 | 28.52 |
| 18608.00 | 30.53 |
| 19702.00 | 32.63 |

| | |
|---|---|
| 20004.00 | 24.00 |
| 20005.00 | 43.91 |
| 20202.00 | 35.86 |
| 20402.00 | 40.36 |
| 20509.00 | 34.29 |
| 20604.00 | 38.08 |
| 21407.00 | 39.76 |
| 21704.00 | 40.89 |
| 21907.00 | 33.37 |
| 22104.00 | 41.69 |
| 22304.00 | 36.04 |
| 22801.00 | 38.94 |
| 22901.00 | 35.05 |
| 23002.00 | 33.70 |
| 23101.00 | 28.70 |
| 23312.00 | 32.16 |
| 23607.00 | 38.83 |
| 23805.00 | 38.10 |
| 24001.00 | 45.64 |
| 24203.00 | 35.62 |
| 24401.00 | 37.90 |
| 25301.00 | 31.48 |
| 25604.00 | 34.36 |
| 26001.00 | 27.65 |
| 26403.00 | 73.00 |
| 27102.00 | 36.09 |
| 27405.00 | 39.13 |
| 27501.00 | 31.00 |
| 27601.00 | 38.93 |
| 27704.00 | 33.10 |
| 27806.00 | 34.93 |

| | |
|---|---|
| 28402.00 | 36.13 |
| 29103.00 | 38.95 |
| 29201.00 | 32.11 |
| 30402.00 | 32.68 |
| 30502.00 | 33.00 |
| 30801.00 | 45.81 |
| 30903.00 | 36.23 |
| 31103.00 | 42.00 |
| 31902.00 | 33.49 |
| 32106.00 | 33.89 |
| 32301.00 | 39.46 |
| 32405.00 | 43.73 |
| 32701.00 | 27.50 |
| 33201.00 | 29.91 |
| 33301.00 | 33.43 |
| 33603.00 | 37.14 |
| 33901.00 | 23.50 |
| 34001.00 | 35.11 |
| 34301.00 | 37.85 |
| 34403.00 | 36.61 |
| 34501.00 | 30.19 |
| 34606.00 | 34.34 |
| 35605.00 | 31.74 |
| 35606.00 | 33.50 |
| 36301.00 | 31.23 |
| 36701.00 | 38.20 |
| 37602.00 | 29.41 |
| 37705.00 | 46.67 |
| 37801.00 | 39.57 |
| 38101.00 | 37.44 |
| 38108.00 | 31.65 |

| | |
|---|---|
| 38501.00 | 37.00 |
| 39301.00 | 32.84 |
| 39408.00 | 34.70 |
| 39702.00 | 36.20 |
| 40003.00 | 34.49 |
| 40101.00 | 52.43 |
| 40502.00 | 31.67 |
| 40702.00 | 38.44 |
| 40703.00 | 72.00 |
| 41501.00 | 35.39 |
| 41701.00 | 32.94 |
| 42901.00 | 34.26 |
| 43000.00 | 31.76 |
| 43308.00 | 31.25 |
| 44002.00 | 30.48 |
| 44801.00 | 33.56 |
| 44903.00 | 36.54 |
| 45405.00 | 34.01 |
| 45501.00 | 32.71 |
| 46001.00 | 20.80 |
| 46204.00 | 36.94 |
| 46401.00 | 31.07 |
| 47301.00 | 39.18 |
| 47708.00 | 31.29 |
| 47901.00 | 33.96 |
| 48105.00 | 38.08 |
| 48504.00 | 39.80 |
| 48701.00 | 35.48 |
| 49106.00 | 33.16 |
| 60301.00 | 37.50 |
| 79101.00 | 45.40 |

## APPENDIX D

Descriptives for Students' Perceptions Data and MEA Reading & Math Scores

Table D1. Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std Dev |
|---|---|---|---|---|---|
| Student perceptions of teachers | 6358 | 16.00 | 80.00 | 34.8471 | 11.5511 |
| MEAReading | 7191 | 175.00 | 400.00 | 291.5031 | 42.9415 |
| MEAMath | 7191 | 190.00 | 400.00 | 319.9910 | 37.8217 |
| Valid N (listwise) | 6346 | | | | |

## APPENDIX E

Descriptives and Correlations for Socioeconomic Status

Table E1. Descriptives

| | Mean | Std Deviation | N |
|---|---|---|---|
| Percentage of Students Receiving Free or Reduced Lunch, 1998-1999 | 33.25 | 15.48 | 7204 |
| Student perceptions of teachers | 34.8471 | 11.5511 | 6358 |

Correlations

| | Percentage of Students Receiving Free or Reduced Lunch, 1998-1999 | Student Perceptions of Teachers | |
|---|---|---|---|
| Percentage of Students Receiving Free or Reduced Lunch, 1998-1999 | Pearson Correlation | 1.000 | .045** |
| | Sig (2-tailed) | | .000 |
| | N | 7204 | 6358 |
| Student Perceptions of Teachers | Pearson Correlation | .045** | 1.000 |
| | Sig (2-tailed) | .000 | |
| | N | 6358 | 6358 |

** Correlation if significant at the 0.01 level (2-tailed).

## APPENDIX F

T-test Group Statistics

Table F1.Gender

| dependent | | | N | Mean | Std Dev | Std Error Mean |
|---|---|---|---|---|---|---|
| Student perceptions of teachers | Sex | Male | 3223 | 36.0580 | 12.1918 | .2148 |
| Student perceptions of teachers | Sex | Female | 3126 | 33.5956 | 10.6946 | .1913 |

F2. Independent Samples Test

| | **Levene's Test for Equality of Variances** | **t-test for Equality of Mean** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | F | Sig | t | df | Sig (2-tailed) | Mean Difference | Std Error Difference | 95% Confidence Interval of the Difference | | |
| | | | | | | | | Lower | Upper | |
| Student perceptions of teachers | Equal variances assumed | 42.81 | .00 | 8.54 | 6347 | .000 | 2.4624 | .2882 | 1.8975 | 3.0273 |
| | Equal variances not assumed | | | 8.56 | 6284.20 | .000 | 2.4624 | .2876 | 1.8986 | 3.0261 |

## APPENDIX G

One way ANOVA Grade Configuration

Table G1. Descriptives

| | N | Mean | Std Deviation | Std Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|---|
| | | | | | Lower Bound | Upper Bound | | |
| K-6 oldest children in school | 2000 | 33.2130 | 10.6758 | .2387 | 32.7448 | 33.6812 | 16.00 | 80.00 |
| K-8 middle children in school | 1628 | 35.8188 | 12.1118 | .3002 | 35.2300 | 36.4076 | 16.00 | 80.00 |
| 6-12 youngest children in school | 2589 | 35.4399 | 11.5778 | .2275 | 34.9938 | 35.8861 | 16.00 | 80.00 |
| Total | 6217 | 34.8227 | 11.4939 | .1458 | 34.5370 | 35.1085 | 16.00 | 80.00 |

G2. ANOVA

| | Sums of Squares | df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| Between Groups | 7783.947 | 2 | 3891.973 | 29.732 | .000 |
| Within Groups | 813416.717 | 6214 | 130.901 | | |
| Total | 821200.664 | 6216 | | | |

## G3. Multiple Comparisons

| | | | | | Mean Difference (I-J) | Std Error | Sig | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Lower Bound | Upper Bound |
| Special & tests Tukey HSD | (I) Status of sixth graders in school | Oldest children in school | (J) Status of sixth graders in school | Middle children in school | -2.6058* | .3819 | .000 | -3.5099 | -1.7107 |
| | | | | Youngest children in school | -2.2269* | .3406 | .000 | -3.0252 | -1.4287 |
| | | Middle children in school | (J) Status of sixth graders in school | Oldest children in school | 2.6058* | .3819 | .000 | 1.7107 | 3.5009 |
| | | | | Youngest children in school | .3789 | .3619 | .547 | .4693 | 1.2270 |
| | | Youngest children in school | (J) Status of sixth graders in school | Oldest children in school | 2.2269* | .3406 | .000 | 1.4287 | 3.0252 |
| | | | | Middle children in school | -.3789 | .3619 | .547 | -1.2270 | .4693 |
| Scheffe | (I) Status of sixth graders in school | Oldest children in school | (J) Status of sixth graders in school | Middle children in school | -2.6058* | .3819 | .000 | -3.5408 | -1.6707 |
| | | | | Youngest children in school | -2.2269* | .3406 | .000 | -3.0608 | -1.3930 |
| | | Middle children in school | (J) Status of sixth graders in school | Oldest children in school | 2.6058* | .3819 | .000 | 1.6707 | 3.5408 |

## G3. Continued

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Youngest children in school | .3789 | .3619 | .578 | -.5072 | 1.2649 |
| | | Youngest children in school | (J) Status of sixth graders in school | Oldest children in school | 2.2269* | .3406 | .000 | 1.3930 | 3.0608 |
| | | | | Middle children in school | -.3789 | .3619 | .578 | -1.2649 | .5072 |

* The mean difference is significant at the .05 level.

# Appendix H

## Regression

Table H1.

**Variables Entered/Removed[b]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | MEAR, Male Gender, Oldest Child, Percentage of Students Receiving Free or Reduced Lunch, 1998-99[a] | . | Enter |

a. All requested variables entered.

b. Dependent Variable: Student perceptions of teachers

Table H2.

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .157[a] | .025 | .024 | 11.40231 |

a. Predictors: (Constant), MEAR, Male Gender, Oldest Child, Percentage of Students Receiving Free or Reduced Lunch, 1998-99

b. Dependent Variable: Student perceptions of teachers

Table H3.

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 20862.207 | 4 | 5215.552 | 40.116 | .000[a] |
| | Residual | 823370.887 | 6333 | 130.013 | | |
| | Total | 844233.094 | 6337 | | | |

a. Predictors: (Constant), MEAR, Male Gender, Oldest Child, Percentage of Students Receiving Free or Reduced Lunch, 1998-99

b. Dependent Variable: Student perceptions of teachers

Table H4.

**Coefficients[a]**

| | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| Model | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 36.050 | 1.137 | | 31.694 | .000 |
| | Male Gender | 2.509 | .287 | .109 | 8.756 | .000 |
| | Oldest Child | -2.519 | .310 | -.101 | -8.136 | .000 |
| | Percentage of Students Receiving Free or Reduced Lunch, 1998-99 | .033 | .010 | .044 | 3.461 | .001 |
| | MEAR | -.009 | .003 | -.035 | -2.776 | .006 |

a. Dependent Variable: Student perceptions of teachers

## BIOGRAPHY OF THE AUTHOR

Susan Smith LaPlante was born in New Bedford, Massachusetts on March 15, 1953. She was raised on Cape Cod and graduated from Sandwich High School in 1970. She attended Boston College and graduated Magna Cum Laude in 1974 with a Bachelor of Arts in Elementary Education with certification in Special Education.

After receiving her degree, Susan taught second grade at the Sandwich Elementary School for three years. During that time, she was enrolled at Northeastern University, receiving a Master of Science in Recreation and Leisure Studies in 1978. Susan continued studies at the University of Maine following completion of her Master's Degree.

From 1978 to 1985, Susan worked at the McLain Elementary School, which is part of Maine School Administrative District 5, Rockland. Her positions included teaching grade 3, a self-contained classroom for developmentally delayed children, and as a teaching principal. In the fall of 1985, she became principal of two elementary schools in Maine School Administrative District 50, Thomaston. In 1988, Susan assumed the role of Assistant Superintendent in charge of curriculum and staff development. She served as the Superintendent of Schools in M.S.A.D. 50 from 1991 to 1993.

From 1993 to 2002, Susan worked as the Superintendent of Schools for Maine School Union 69, which serves the communities of Hope, Appleton, and Lincolnville. She also worked as an educational consultant, facilitator for the Kieve Leadership

Institute, serving students, teachers and businesses. Susan is a registered Maine Guide and has co-facilitated educator's outdoor expeditions in Maine.

For the past year, Susan has worked with her husband running their sporting camp and guide business in Grand Lake Stream, Maine. Susan is a candidate for the Doctor of Education degree in Educational Leadership from The University of Maine in May, 2003.