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# Identification of Teacher Interpersonal Relationship Behaviors Related to High School Hispanic Student Success

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IDENTIFICATION OF TEACHER INTERPERSONAL RELATIONSHIP BEHAVIORS  
RELATED TO HIGH SCHOOL HISPANIC STUDENT SUCCESS

by

IRIS TORRES CREWS

(Under the Direction of Barbara J. Mallory)

ABSTRACT

This study investigated high school Hispanic students' perceptions of their mathematics or science teacher's interpersonal relationship behaviors. The Questionnaire on Teacher Interaction (QTI) was completed by 572 high school Hispanic students in Georgia. Of these, 259 high school Hispanic students identified the teacher interpersonal relationships behaviors of their mathematics teacher and 313 students identified the behaviors of their science teacher. Ratings obtained from high school Hispanic students in a district with a large percentage of high school Hispanic students whose scores on the Georgia High School Graduation Tests (GHS GT) exceeded the reported state pass/pass plus percentage, and ratings from high school Hispanic students in a district with a low percentage of high school Hispanic students whose scores on the GHS GT were below the reported pass/pass plus percentage for Hispanic students were compared. Differences between ratings obtained in science and mathematics classes were also compared for discussion using descriptive statistics and statistical analysis. Further statistical analysis of the relationship among demographic factors, parental/community factors, and self-reported final grade in mathematics or science, and the reported teacher interpersonal relationship behaviors was reported.

On the QTI, high school Hispanic students ranked the teacher's Leadership, Understanding, and Helpful/Friendly Behaviors with the highest means and Admonishing, Dissatisfied, and Uncertain Behaviors with the lowest means. High school Hispanic students who reported a final grade of 90-100 in mathematics, reported high means on the Strict, Admonishing, Uncertain, and Dissatisfied Behaviors domains. High school Hispanic students who reported a final grade of 90-100 in science, reported higher means in the Admonishing, Strict, Uncertain, and Dissatisfied Behaviors domains than high school Hispanic students who reported a failing grade. The interaction between the percentage of Hispanic students in a district and the subject area (mathematics/science) was significant in the Understanding, Admonishing, and Helpful/Friendly Behaviors domains.

The majority of the students reported that their parents were involved in decisions regarding their high school program. Community members, outside of the immediate family, did not get involved in decisions regarding the students' high school program.

**INDEX WORDS:** Hispanics, High school dropouts, High school graduation, Hispanic student achievement, Secondary education, Teacher-student relationships, Questionnaire on Teacher Interaction

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Partial Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

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## DEDICATION

This dissertation is dedicated to my parents. Throughout my lifetime, they instilled in me the invaluable benefits of an education and insured that I had every opportunity to pursue my goals. There was never a doubt that I could achieve whatever I set out to. My hardworking parents taught me not only to appreciate the gifts and talents that are God given, but also encouraged me to set high goals and have a strong work ethic.

To my husband, you believed in me and supported my commitment to succeed. Thank you for always being there and carrying my load. You never questioned my endurance and were there all the way to the finish line. You are my one and only, and I love you.

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## CHAPTER I

### INTRODUCTION

Hispanics are the largest minority group in the United States, at 13.7% of the population in 2003 – and the Census Bureau projects 20% by 2030 (Mehring, 2004). The Hispanic student population is growing rapidly across the country, but more rapidly in secondary than elementary schools (Capps, et al., 2001). Hispanic youth make up one-fifth of public school enrollment in the United States (Crosnoe, 2005).

Demographic trends in the United States present major challenges for public education (Fusarelli & Boyd, 2004). In the year 2000, the Census Bureau reported that the Hispanic population had grown by nearly 60 percent since 1990. Hispanics are a diverse group including individuals of different origins and races (Llagas & Snyder, 2003). The Census Bureau defines Hispanic, or its pseudo-synonym, Latino, as individuals with a Mexican, Puerto Rican, Cuban, Central American, or South American heritage living in the United States (Sangillo, 2002). A common Spanish language and a heritage that contains aspects of Indian, African, and Spanish cultural and religious values unite U.S. Hispanics. However, geography, country of origin, race, class, traditional group differences, and the time and circumstances of their entry into the United States divides Hispanics (Valdivieso & Nicolau, 1992).

Hispanic educational attainment is the indicator that most dramatically illustrates the lack of parity between Hispanic and Anglo populations (Valdivieso & Nicolau, 1992). According to a study released by The Civil Rights Project at Harvard University and the Urban Institute in 2004, only approximately 68% of all students nationally who enter 9<sup>th</sup> grade will graduate on time with regular diplomas in 12<sup>th</sup> grade. This crisis is particularly

acute in Southern states, which have some of the lowest graduation rates in the country (Orfield, 2004). Several southern states are now in the epicenter of a huge Latino migration (Orfield, 2004). In Georgia, which has a substantial and growing Hispanic population, the graduation rate for Hispanics was 56.3% in 2002 (Orfield, Losen, Wald, & Swanson, 2004).

For U.S. born Hispanics, the dropout rate cannot be solely attributed to a language deficiency (Adam, 2003). Some individuals appear to readily cross language and cultural boundaries, adjust well in school, and succeed; others do not (Ogbu, 1992). Thousands of this nation's Hispanic students have left school without a diploma (Secada, et al., 1998). Some left because they felt that other life options were more viable; others left because they felt that they were being pushed out; and still others left because of family obligations (Secada, et al., 1998). Yet almost all these students left school because no one had established individual relationships with any of them, nor communicated high academic expectations to them, nor provided them with meaningful opportunities to achieve those expectations (Secada, et al., 1998).

Rumberger (2001) states that individual attitudes and behaviors are shaped by the institutional settings where people live. The success of Hispanic students can often be measured by "the extent to which kids feel connected to the schools" (Adam, 2003, p.25). Schools may engage in practices or create conditions that push some students out of school (Lee & Burkam, 2003). Rather than being an alienating environment, schools can be supportive by employing teachers that care and ensuring that students want to go to school (Adam, 2003). Counselors, school administrators, and faculty assess the school



climate to determine the factors leading to alienation and determine strategic interventions for those students at risk of dropping out (Stanard, 2003).

### Background

Congress has taken a step in recognizing the severity of the dropout problem by including graduation rate accountability provisions in the *No Child Left Behind* (NCLB) legislation enacted in 2002 (Orfield, et al., 2004). This federal education policy establishes a framework of standards, testing, and accountability absent in previous federal legislation (Fusarelli, 2004). NCLB judges school success or failure on student performance by subgroup – by race, family income, English proficiency and other factors (Fusarelli, 2004). With its emphasis on student performance by subgroups, NCLB encourages states to disaggregate data to the student level in an effort to demonstrate the achievement gap between and among racial/ethnic groups (Fusarelli, 2004). Schools that fail to graduate large pluralities of their minority students are held accountable (Orfield, et al., 2004). The U.S. Department of Education, in partnership with states, local communities, parents, teachers and others developed a strategic plan (2002-2007) to implement the law and to ensure that its principles guide all endeavors (Paige, 2002).

*No Child Left Behind* is an opportunity for Hispanics to secure those resources and options that will prepare them to close the achievement gap (President's Advisory Commission on Educational Excellence, 2003). The state monitors the progress of the districts to insure that students have achieved 100% proficiency in reading and math in twelve years (Orfield, et al., 2004). The districts monitor their schools to ensure that each school is making adequate yearly progress (AYP) toward reaching the 100% goal (Orfield, et al., 2004). Graduation rate accountability was inserted into NCLB's definition

of adequate yearly progress to create an incentive for school officials to hold onto, rather than push out struggling and disadvantaged students (Orfield, et al., 2004). The annual test results support the development and implementation of strategies/ interventions for all students (President's Advisory Commission on Educational Excellence, 2003).

In October 2002, President Bush named the White House Commission on Educational Excellence for Hispanic Americans, which aimed to reduce the Hispanic high school dropout rate – now to the point where one in three Hispanics has failed to complete high school (Stern, 2004). After an 18- month study, the President's Advisory Commission on Educational Excellence for Hispanic Americans submitted a final report which stated that low societal expectations for Hispanic youth, poor academic instruction (particularly in reading), and school personnel who are poorly prepared to teach Hispanic students were issues contributing to the dropout problem plaguing Hispanic students (President's Advisory Commission on Educational Excellence, 2003). Raising teacher expectations of Hispanic Americans and improving teacher training are cited as critical to improving the low high school dropout rate (Stern, 2004). As the Hispanic population increases throughout the nation, its impact will be apparent in most aspects of schooling including teaching strategies and techniques and school/community relations (Marshall, 2002).

Because of the enormous growth in the number of Hispanic youth as a result of immigration and high birth rates, the number of Hispanic 16 to 19 year old dropouts grew dramatically, from 347,000 to 529,000 between 1990 and 2000 (Fry, 2003). In 2000, twenty-one percent of Hispanic students were school dropouts, in comparison to eight percent of white youth and twelve percent of black youth (Fry, 2003). Hispanic youth face

obstacles in the American educational system that threaten to diminish their long-term prospects and impact the social mobility of the Hispanic population as a whole (Crosnoe, 2005).

Schools can influence a student's decision to drop out (Lee & Burkam, 2003). Understanding why students drop out of school is a complex problem influenced by a number of direct and indirect factors related to the individual, family, school and community that interact and influence the decision over a long period of time (Stanard, 2003). Romo and Falbo (1995) report that students navigate the culture of the home, the adult culture of the school system and the student culture of the school in order to graduate. For Hispanic youth, there are two general dimensions of schooling that foster basic adjustment and functioning (Crosnoe, 2005). These are the academic side of schooling, which focuses on achievement, and the social-psychological side of schooling, which includes school attachment, educational engagement, and extracurricular activities (Crosnoe, 2005). Schools can engage in specific actions oriented towards keeping Hispanic students in schools (Romo & Falbo, 1995). These include: focus on student learning; meet basic needs; make participation in school work more rewarding; value persistence and hard work; and mobilize resources to link school and work (Romo & Falbo, 1995).

According to the Hispanic Policy Development Project, Hispanic youth almost unanimously identify "someone caring" as the most important factor in academic success (Duany & Pittman, 1991, p.7). The need for caring teachers is a concern of high school students (Bernard, 1993). The academic success of many Hispanic students is affected by the nature of the teacher/student relationship (Marshall, 2002). Students want teachers to

recognize who they are, to listen to what they have to say, and to respect their efforts (Phelan, Davidson, & Hanh, 1992). There are differences in the way high-and low-achieving students define caring behavior (Phelan, et al., 1992). High achievers associate caring with assistance in academic matters and direct interaction is not always necessary; whereas, low-achievers equate caring with certain personality traits (i.e. patience, tolerance, listening) and prefer direct, personal interaction (Phelan, et al., 1992). According to a study done by Stanford University's Center for Research on the context of Secondary School Teaching: "the number of student references to wanting caring teachers is so great that we believe it speaks to the quiet desperation and loneliness of many adolescents in today's society" (Phelan, et al., 1992, p.696).

The level of caring and support within a school gives educators an indicator of positive outcomes for students (Bernard, 1993). Despite repeated failures and academic difficulties, some Hispanic students continue to fight through the adversity and become successful (Hassinger & Plourde, 2005). Students who leave high school before graduating report a lack of social support as one reason for their decision (Lee & Burkam, 2003). These students feel disconnected from teachers (Croninger & Lee, 2001). Dropouts are said to have fewer positive social interactions and less access to assistance from teachers than their more successful peers (Croninger & Lee, 2001).

An approach to helping at-risk students succeed is to examine the notion of resilience (McMillan & Reed, 1994). Resiliency inquiry did not emerge from academic grounding in theory, but rather through the phenomenological identification of characteristics of survivors, mostly young people living in high- risk situations (Richardson, 2002). The foundational study cited in most of the resiliency literature is a

longitudinal study by Emmy Werner and R. Smith (Richardson, 2002). Werner and Smith studied a multiracial population of children from 1955 through the mid 1980s and categorized the resilient qualities that helped the children remain competent in the face of high-risk environments (Richardson, 2002). Resiliency based research focuses on each student's potential for success (Bernard, 1993). The construct of "educational resilience" is not viewed as a fixed attribute; rather "alterable" factors that can impact an individual's success in school are the focus (Waxman, Gray, & Padron, 2003, p. 1).

When looking at a profile of a resilient student, educators look beyond personality traits and examine the environmental characteristics that have fostered resiliency (Bernard, 1993). Resilient students are those students who succeed in school despite the presence of adverse conditions (Waxman, et al., 2003). Bernard (1993) reports that there are four personal characteristics (alterable factors) that resilient children display: social competence, problem-solving skills, autonomy, and a sense of purpose. Social competence includes responsiveness, flexibility, empathy, caring, and communication skills (Bernard, 1993). Problem-solving skills include planning and resourcefulness in seeking help from others (Bernard, 1993). Autonomy denotes an ability to act independently and exert some control over one's environment (Bernard, 1993). McMillan & Reed (1994) describe four other factors related to resiliency: motivation and goal orientation, positive use of time, family life, and school and learning environment. Research on resilience provides a framework for examining why some students are successful in school, while others from the same social and economic background and communities are not (Waxman, et al., 2003). For students whose customs, values, and

home practices are significantly different from school values and customs, alienation and “discontinuity” often occurs (Wahome, 2003, p. 6).

Positive social relationships can create powerful incentives for students to come to school (Lee & Burkam, 2003). Schools are central to this developmental process and are an essential source of social capital for adolescents (Croninger & Lee, 2001). How schools are structured and organized in relation to their academic and social elements influences school engagement (Lee & Burkam, 2003). The development of a successful support network rests upon students developing social consciousness in response to their assessment of the opportunity structure (Conchas, 2001).

Croninger and Lee (2001) report that social capital is strongly related to dropping out, even after taking students’ social and academic risk factors into consideration. In their research, Croninger & Lee (2001) focus on whether teachers provide students with valuable forms of social capital. In addition, these researchers consider whether students’ access to social capital from high school teachers reduces the risk that students will drop out of school. Social capital is often measured by relationships between students and teachers (Croninger & Lee, 2001). Students prefer dynamic pedagogy, active rather than passive instruction and transaction rather than transmission (Phelan, et al., 1992). When students do not understand the material and find the teacher unapproachable, they exhibit frustration and discouragement (Phelan, et al., 1992). Some of these students may persist in asking questions, yet others may be fearful of revealing their inability to comprehend (Phelan, et al., 1982). Teacher-based forms of social capital reduce the probability of dropping out (Croninger & Lee, 2001).

Shared responsibility for the social well being of a school is rooted in a “culture of concern” (Valdivieso & Nicolau, 1992, p. 32). Such a culture fosters bonds among students and between students and the school, and it promotes a strong sense of belonging (Valdivieso & Nicolau, 1992). A nurturing school climate has the power to overcome risk factors in the lives of students (Bernard, 1993). Creating this climate for students necessitates creating this environment for all school personnel (Bernard, 1993). Challenging a student to excel is caring for that student (Valdivieso & Nicolau, 1992). To look beyond students’ risks and see their resiliency, educators acknowledge their own strengths and resiliency (Bernard, 1993). Teachers who are not well prepared to deal with culturally and linguistically different students make inaccurate assumptions about those students (President’s Advisory Commission on Educational Excellence, 2003). The teacher may not relate well to a student and may assume the student has limited intellectual capabilities (President’s Advisory Commission on Educational Excellence, 2003). There are stereotypes that have been used to blame Hispanic students for dropping out of school (Secada, et al., 1998). These include, but are not limited to: Hispanics do not care about school, they do not want to learn, they engage in violence and/or belong to gangs, Hispanics cannot achieve and they have cultural backgrounds that are incompatible with schools (Secada, et al., 1998).

Hispanic students thrive best in school and classroom environments in which teachers demonstrate commitment to their success (Marshall, 2002). It is not productive to confuse caring for fellow human beings with handouts or lowered expectations (Valdivieso & Nicolau, 1992). After a school establishes an orderly climate and the beginning of a culture of concern for all the students, the teachers can raise academic

standards and expect greater effort from the students (Valdivieso & Nicolau, 1992). Schools can shape social and academic success (Conchas, 2001).

Before dropping out of school, at-risk students demonstrate low self esteem, a sense of having lost control of their futures, and perceive that teachers do not show much interest in them (Wehlage, Rutter, & Turnbaugh, 1987). Schools can influence students' beliefs and attitudes and schools can change student perceptions about adults' caring and interest (Wehlage, et al., 1987). The Hispanic Dropout Project reported in its final report, *No More Excuses* (1998), the efforts of school personnel in programs that were effective in preventing students from dropping out (Secada, et al., 1998). There were two major findings and recommendations in this report involving Hispanic students (Secada, et al., 1998). First, school personnel must connect to Hispanic students and their families, provide students with a quality education based on high standards, and provide backup options to move beyond past obstacles (Secada, et al., 1998). Second, students and their families deserve respect (Secada, et al., 1998). There must be a shared belief that Hispanic students belong (Secada, et al., 1998).

An epidemiological model has often been used to explain success and failure in school (Aviles, Guerrero, Howarth, & Thomas, 1999). This model supports the belief that poor achievement is inherent in the student because of the demographic, socioeconomic, and/or behavioral characteristics that contribute to the student's success or failure (Aviles, et al., 1999). Thus, educators are limited in their efforts to help the students since "predisposing" factors cannot be readily changed and education is perceived as the remedy for the dropout problem (Aviles, et al., 1999). Shifting to a perspective of empowerment, or bicultural competence, may improve the educational opportunities of



minority students (Aviles, et al., 1999). In the empowerment model, majority-minority societal group relations, school-minority community relations, and educator-minority relations impact school performance (Aviles, et al., 1999).

The principal's involvement in framing, conveying, and sustaining school goals represents an important domain of influence on student outcomes (Cavazos, 1999). Educators face the critical issue of identifying and understanding protective practices that moderate risk and foster resilience (Jacobsen, 2005). Sergiovanni (1982) provides a quality leadership equation that encompasses leadership skills interacting with leadership antecedents, meanings and cultural expression. This leadership model is interdependent and requires an interaction of perspectives, norms, beliefs, and principles to which organizational members give allegiance (Sergiovanni, 1982). Principals can utilize instructional leadership to enhance the academic success of Hispanic students (Cavazos, 1999). Escoffery (2004) engaged in a study that is congruent with Sergiovanni's (1979) suggestion that the school principal can shape the school culture to support and ensure educational excellence for all students. Escoffery (2004) reported that principals, in successful Hispanic majority high schools, sustain a strong emphasis on teacher accountability for the academic performance of all students. Schools are better able to fulfill their potential when they are armed with information that enhances understanding of diverse populations (Valdivieso & Nicolau, 1992).

#### Statement of the Problem

There is evidence that a significant percentage of Hispanic students are dropping out of high school. Some students succeed in school while others choose to drop out. Reportedly, many Hispanic students perceive their teachers as engaged in inadequate

student – teacher interaction. These teacher behaviors may negatively impact the students' achievement. The teachers' lack of interest/concern in students can promote alienation. Subsequently, these students may lack self-esteem and/or motivation to succeed if they feel that the teachers do not expect them to succeed or care about their success.

Educational systems need to adjust to accommodate diverse populations. Some Hispanic students are achieving academically while others are not. Students may possess resiliency factors and succeed in spite of the difficult issues with which they may have had to deal. It is unclear whether socio-economic status, student/teacher personality traits, and/or parental involvement contribute to student success.

Teacher behavior is said to influence student behavior. An examination of the interaction of high school Hispanic students' learning environments with learning processes is of importance in addressing student success. The purpose of this study was to determine high school Hispanic students' perceptions of teachers' interpersonal relationship behaviors to understand how the behaviors relate to Hispanic student success.

### Research Questions

The proposed study was designed to answer the following major research question: What are the teacher interpersonal relationship behaviors related to Hispanic student success in high school? Several sub questions guided the study:

1. How do high school Hispanic students identify teacher interpersonal relationship behaviors within the eight domains of the Model for Interpersonal Behavior on the Questionnaire on Teacher Interaction?

2. Which teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, vary by setting and selected academic disciplines: mathematics and science?

3. Do the teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, differ by certain characteristics: student's stated chronological age, current grade placement, student self-reported final grade in mathematics/science, and parental/community support?

### Conceptual Framework

This research study was based on literature that hypothesizes that Hispanic student success in high school results from factors related to classroom environment and teacher behaviors (McMillan & Reed, 1994). Werner and Smith (1992) propose that the most important factor is a caring relationship with someone, regardless of whether that person is a parent, teacher, or community mentor. Richardson's resiliency model postulates that there are specific learning environment qualities (teachers' classrooms) that promote resiliency in children: i.e., caring and support, high expectations and participation/involvement (Richardson, 2002). The construct of educational resilience is not viewed as a fixed attribute but as something that can be promoted by focusing on alterable factors that can impact an individual's success in school (Waxman, et al., 2003).

Another feature of this study was the theoretical framework used to conceptualize teaching. Individuals in the classroom environment and what they learn are influenced by a variety of interpersonal, emotional and cultural factors in addition to the cognitive factors associated with classroom learning (denBrok, Brekelmans, & Wubbels, 2004). In

this context, the teacher is one of the elements contributing to the opportunities for pupils to learn. Teaching can be studied from an interpersonal perspective that describes teaching in terms of the relationship between teacher and pupils (Brekelmans, Sleegers, & Fraser, 2000).

### Professional Significance

Demographics provided by the Census Bureau direct attention to the current and projected significant increase of Hispanics in the United States. Educational preparation not only affects the individual but also impacts the nation's economic growth and social development. Closing the achievement gap extends beyond academic modifications and special programs. Accountability legislation charges schools with the responsibility of ensuring success for all students. The graduation rate for Hispanic students is considerably below the norm. This investigation added information to the scholarly research and literature in the field of high school Hispanic students' academic success. A focus on educational resiliency leads to improvement in the education of students at risk of academic failure.

The results of this investigation served as a basis for school leaders to take note of the school climate and culture and to encourage behaviors that support academic success for all students. Educators cannot control demographics and family conditions, but can change/enforce policies and practices to ensure that the needs of individuals at risk of academic failure are addressed. Schools can incorporate resiliency-building factors and create programs around predictors of academic success. Additionally, the data suggested that teachers, who give students the support necessary to attain the high expectations established, promote students' academic success.

## Procedures

Data were collected through the use of the Questionnaire on Teacher Interaction (Wubbels, Levy, & Fraser, 1993). This instrument was selected for use in this research because it was designed to gather data that describes students' perceptions of teacher behavior. Teacher behavior in the Questionnaire on Teacher Interaction (QTI) is represented in eight scales and is based on the circumplex model of communication proposed by Leary (1957). These scales are arrayed around two axes representing an Influence dimension and a Proximity dimension. Each dimension is divided into axes that describe specific aspects of teacher behavior in the classroom. The QTI contains eight scales based on the Model of Interpersonal Teacher Behavior. There are eight domains of the Model for Interpersonal Teacher Behavior: Strict Behavior, Leadership Behavior, Helping/Friendly Behavior, Understanding Behavior, Student Responsibility/Freedom Behavior, Uncertain Behavior, Dissatisfied Behavior, and Admonishing Behavior (Fisher, Fraser, & Rickards 1997). Table 1 provides a description of the scales and corresponding sample items. Each item is scored on a 5-point Likert scale (0-4).

Table 1

*Description of Scales and Sample Items for Each Scale of the QTI (Adapted from Wubbels, 1993)*

Scale Name	Description of Scale (The extent to which the teacher ...)	Sample Item
Leadership	... leads, organizes, gives orders, determines procedure and structures the classroom situation.	This teacher talks enthusiastically about his/her subject.
Helping/Friendly	... shows interest, behaves in a friendly or considerate manner and inspires confidence and trust.	This teacher helps us with our work.
Understanding	... listens with interest, empathizes, shows confidence and understanding and is open with students.	This teacher trusts us.
Student Responsibility/ Freedom	... gives opportunity for independent work, gives freedom and responsibility to students.	We can decide some things in this teacher's class.
Uncertain	... behaves in an uncertain manner and keeps a low profile.	This teacher seems uncertain.
Dissatisfied	... expresses dissatisfaction, looks unhappy, criticizes and waits for silence.	This teacher thinks that we cheat.
Admonishing	... gets angry, expresses irritation and anger, forbids and punishes.	This teacher gets angry unexpectedly.
Strict	... checks, maintains silence and strictly enforces the rules.	This teacher is strict.

Two public school districts in Georgia were selected for this study. In the first district, a Georgia public high school was selected based on multiple criteria: (1) enrollment of at least 1500 students, (2) had at least 50% Hispanic student population, (3) the majority of teachers had a minimum of 10 years teaching experience, and (4) more than 50% of Hispanic students taking the Georgia High School Graduation Tests had a score of pass/pass plus on the Mathematics and Science portions. Comparative data were collected from another sample of students in a second school district that had a smaller percentage of high school Hispanic students and lower high school Hispanic student achievement in mathematics and science, as measured by the Georgia High School Graduation Tests. After fulfilling the requirements to obtain school district and university internal review board approval, data collection began. Hispanic students currently enrolled in grades 9-12 in the selected Georgia public high school were asked to voluntarily complete the questionnaire. Parents and students, prior to participation, completed an informed consent form. The consent form was translated to Spanish, if warranted, to insure comprehension.

After administration of the QTI to students, mean differences between groups were calculated using analysis of variance procedures (ANOVA) for each variable. Analysis of variance was used to compare the means of two or more independent samples and to test whether the differences between the means were statistically different (Ravid, 1994). The variables included: student's stated chronological age, current grade placement, student's self-reported final grade in mathematics or science, and parental/community support. Mean and standard deviation were calculated for each

variable. All data were analyzed using the Statistical Analysis Package for the Social Sciences, version 13 (SPSS, 2004). The data were reported in table and narrative format.

#### Limitations

This study was limited geographically and demographically to only one state. Thus, generalizability may be compromised. Generalizability is problematic since the findings may not apply to other cases representing the phenomenon being studied. Lee Cronbach (1975) argues that any generalization should be regarded as a tentative hypothesis that must be tested against specific conditions operating in each situation.

Another limitation was the extent that Hispanic students had been assimilated into the community. The length of time enrolled in the school may have not only impacted their perceptions of teachers' behaviors, but also their awareness of community resources and support available to them. In addition to assimilation factors, English language fluency was another limitation. Although clarification was provided if a student asked, the instrument used was administered in English.

A fourth limitation was that the investigation depended on data as reported by the students. A disadvantage of this self-reported data is potential inaccuracy. In order to address this issue, this study used internationally validated scales of the revised Fraser Questionnaire of Classroom Environment (Wubbels et al., 1993). By using a validated scale, the changes in the calibration of the Fraser Questionnaire will not result in changes in questionnaire results. The purpose of this study was to obtain information regarding high school Hispanic students' perceptions and the participants were reminded that there was no right or wrong answer. In their research, Boman and Yates (2001) allude to the possibility that students' perceptions could also be affected by their expectancies with



regard to the high school experience. This effect could distort students' perceptions of teacher interactions and impact generalizability of research findings.

A fifth limitation was the specific data collected, teacher interpersonal relationship behaviors. Due to the nature of the research question, the researcher was limited to data provided by students during a specific school year. Focus groups with school personnel helped the researcher better understand the educational setting of the students. The researcher gained insight relative to the programs and policies pertaining to the high school Hispanic students.

#### Delimitations

The data used in the study to measure student achievement are available through the Georgia Department of Education's yearly Georgia Public education report cards (Georgia Department of Education, 2005).

#### Definition of Terms

Hispanic – a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race (State of Georgia K-12 Report Card).

Drop out – a student who withdraws and is no longer pursuing a high school diploma in a state approved education program; students who have completed all the required coursework and required units, but have not been able to pass the Georgia High School Graduation Tests are not considered dropouts (Education Coordinating Council, Office of Education, Atlanta, GA).

#### Summary

The researcher proposed an investigation that directed attention to Hispanics, a large minority group who is at-risk for dropping out of the educational system and

truncating or reducing their opportunities for educational and socioeconomic attainment. Demographic, socioeconomic, and/or behavioral characteristics that contribute to the student's success or failure may be perceived as an explanation of success and failure in school. Educators cannot control demographics and family conditions, but can engage in practices to ensure that the needs of individuals at risk of academic failure are addressed. Students may perceive teachers who incorporate resiliency factors as agents who give students the support necessary to achieve high rates of academic success.

Schools are receiving relentless scrutiny due to the emphasis on accountability and the increased expectations of national standards and assessments. Teachers are said to play an important role in the success of resilient students. Research data support the belief that student perception of the teachers' interpersonal qualities positively impacts school success.

## CHAPTER II

### REVIEW OF LITERATURE

The purpose of this chapter was to provide a review of the literature as it relates to high school Hispanic student achievement, interpersonal teacher relationship behaviors, resiliency, and school/family, community partnerships. An overview of the status of high school Hispanic students and their school success is presented in the first section. Section two reviews literature pertinent to teacher interpersonal relationship behaviors as related to student school performance. The interpersonal perspective of teaching is addressed. Factors related to resiliency, as presented in the literature, are discussed in section three and school, family, and community partnerships are addressed in section four. A summary of the literature is provided to support this investigation of teacher interpersonal relationship behaviors related to high school Hispanic student success.

#### High School Hispanic Student Achievement

Hispanic youth currently make up one-fifth of public school enrollment in the United States and the numbers are rising rapidly (U.S. Census Bureau, 2002). These individuals are struggling in school and the educational system is struggling to serve them (Crosnoe, 2005). Improved educational attainment is a key requirement for Hispanics' overall, long-term economic success (Fry, 2003). In the American educational system, Hispanic youth face obstacles that threaten to diminish their long-term prospects (Crosnoe, 2005). Effectively serving Hispanic youth is one of the most pressing problems facing the American educational system in the new century (Stanton- Salazar, 2001).

For Hispanic youth, two general dimensions of schooling are important (Crosnoe, 2005). The first is the academic side of schooling, tapped here by graded achievement.

The second dimension is the social-psychological side of schooling, tapped by various indicators of school orientation, including school attachment and educational engagement (Crosnoe, 2005). There is significant evidence that suggests that the degree to which students like school and participate in both academic and social activities has implications for their persistence in school (Crosnoe & Needham, 2004). Both the academic and the social-psychological sides of schooling underlie basic adjustment and transition to adulthood (Crosnoe, 2005). Students are more comfortable when they feel similar to others, encouraged to make use of social and academic opportunities in the school (Goldsmith, 2004). Hispanic students are likely to fit the higher achieving profiles when they attend school with a well-educated parent population and a large proportion of other Hispanics. They are also likely to exhibit stronger school orientation in such schools even if their achievement is low (Crosnoe, 2005).

The majority of literature on the failure of Hispanic students can be separated into two conceptual categories: studies that blame Hispanics for their own school failures and studies that articulate a deficiency model of minority education, a model of remediation, or one of compensation (Olivas, 1986). A definition of school failure usually found in such studies, is provided by Valencia (1991): school failure among Hispanic students refers to their persistently, pervasively, and disproportionately, low academic achievement. Valencia (1991) reports that the high dropout rates of Hispanics are one of the truly major tragedies of the Hispanic schooling experience. Nieto (2000) states, “some have failed to consider the significance of culture in learning; others have not taken into account the social, cultural, and political context of schooling; still others have placed all

the responsibility for academic success or failure on the students and their families” (p.244).

Romo and Falbo (1995) present insightful accounts of how high-risk Hispanic students either overcome their “at-riskness” or drop out. They used a parent survey form to select 100 Hispanic students, whom they tracked for four years, with a focus on grades, gang involvement, teen motherhood, immigrant families, and schools’ policies and administrative practices. They reported that “students had to navigate the boundaries of three cultures in order to graduate: the culture of the home, the adult culture of the school system, and the student culture of the school” (Romo & Falbo, 1995, p. 47).

Lee & Burkam’s research (2003) is grounded in the belief that high schools, through their organization, may either force out or hold in students whose personal characteristics might put them at risk of dropping out before they graduate. Few studies cast schools as sharing the responsibility for the bad decisions made by some students (Lee & Burkam, 2003). Personal characteristics of individual students are reported as the most common explanation for dropping out (Lee & Burkam, 2003). In their research, Lee & Burkam (2003) made use of data from the High School Effectiveness Supplement to the National Educational Longitudinal Study of 1988. This data provided the researchers an opportunity to explore a school organizational explanation for the dropout phenomenon. Multilevel research methods examined school effects on individual behaviors. The longitudinal data focused on mathematics and Lee & Burkam (2003) also focused on this area of the curriculum to capture students’ academic background and schools’ curriculum structure. An important finding in this study is the contingency of the influence of school social organization on dropout behavior.

In the American cultural orientation, educational behavior is explained in terms of what takes place within the school, classroom, or family (Ogbu, 1992). Attention on affective variables, particularly attitudes, in education research stems from the view that affective variables are as important as cognitive variables in influencing, and, possibly, predicting, learning and other outcomes (Koballa, 1988). Coleman (1988) (as cited in Lee & Burkam, 2003) pointed out the special significance of social capital for children. Variation in social background is a far more potent predictor of differences in achievement and attainment than is variation among the schools that students attend (Coleman, 1988) (as cited in Lee & Burkam, 2003). Social capital may be measured by the students' beliefs about how much their teacher supports the students' efforts to succeed in school, thus increasing the likelihood that students complete high school (Croninger & Lee, 2001).

Shrigley (1983) noted that attitude is not innate, but learned as a part of culture. The forces that affect the social adjustment and academic performances of minority children are not limited to the school and the classroom, they also include those from the minority communities (Ogbu, 1992). These community forces appear to be different for different minorities and they interact differently with the societal and school factors, producing different educational results. Ogbu (1992) defines community forces as a combination of cultural models of what it means to be a minority, the cultural and language frame of reference for judging appropriate behavior and affirmation of group membership and solidarity, the degree of trust or acquiescence in a relationship with White Americans and their institutions and the attitudes, plans, and actions minorities use or do not use in their pursuit of formal education. These distinguishing beliefs and

practices affect the cultural knowledge, attitudes, and behaviors that minority parents employ in preparing their children for school and minority children bring to school (Ogbu, 1992). The children's beliefs interact with school factors and together they influence the children's social adjustment and academic performance (Ogbu, 1992).

#### Interpersonal Teacher Behaviors

The contribution made by teachers to students has been studied mainly in terms of imparting knowledge within the instructional framework (Galbo, 1984). Teachers not only impart knowledge and skills to students, but also serve as confidants and role models (Wang, Haertel, & Walberg, 1998). When students develop strong and meaningful relationships with their teachers, they identify with the school and with their teachers (Nieto, 2000). Frequent opportunities for students to interact socially with teachers, enhance students' sense of belonging (Nieto, 2000). While instructional methodology is an important consideration, exceptional teaching can also be described in terms of teacher-student relationships (Wubbels, Levy, & Brekelmans, 1997). Teacher interpersonal behavior is a major component of classroom management (Doyle, 1986). Positive teacher-student relationships and a positive classroom environment promote improved student outcomes and are worthwhile process goals of education (Fraser & Walberg, 2005). Research on teacher-student interaction is not only of interest to educational researchers, but also to policy makers who wish to improve student outcomes through positive teacher-student interactions (Fraser & Walberg, 2005).

Barr and Emans (1930) identified six primary characteristics of the successful teacher as seen from the perspective of the administrator or teacher. The top qualities were identified as: instruction; classroom management; professional attitude; choice of

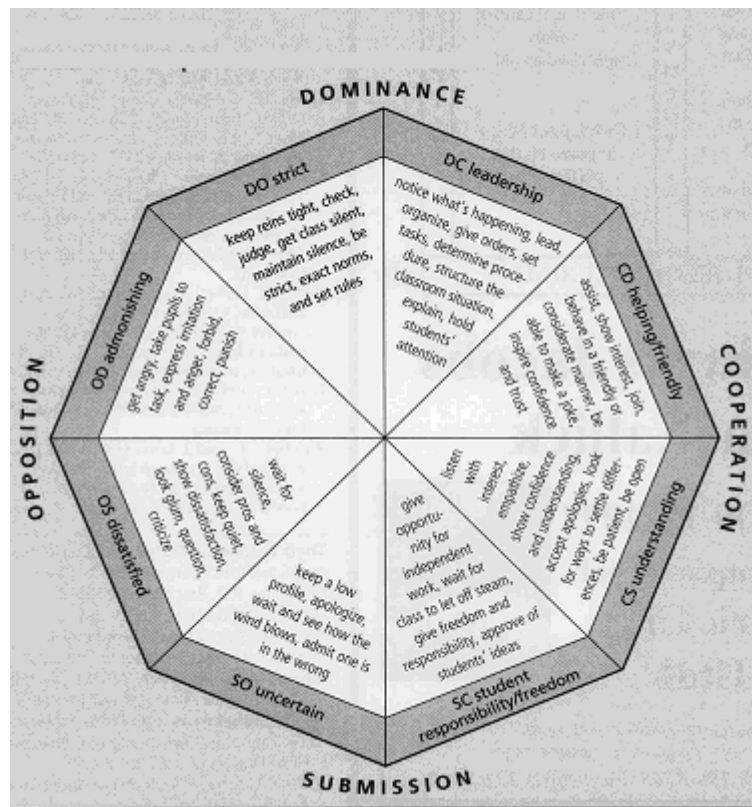
subject matter; personal habits; and discipline. Hart (1934) directed his research to identifying the characteristics of the effective teacher as seen from the perspective of the high school student. The four characteristics identified by the students in the Hart study are: 1.) More demanding of the student, 2.) More teaching ability, 3.) More knowledgeable of the subject matter, and 4.) Better discipline. In studies by Barr & Emans (1930), Charter & Waples (1929), and Kratz (1894) (as cited in Smith, 1997), the characteristics of being a demanding, knowledgeable, pedagogically sound teacher, while being supportive of the students' emotional and social need were repeated from the perspectives of the students, teacher, and administrator (Smith, 1997). This research was said to develop an understanding of personality traits and professional knowledge considered necessary for a person to be a successful teacher (Smith, 1997).

Wubbels and Brekelmans (2005) analyze teaching from an interpersonal perspective – in terms of the relationship between teacher and students. They report that two elements are central to this perspective: the communicative systems approach and a model to describe teacher-student relationships in terms of teacher behavior. The systems approach focuses on the pragmatic aspects of communication; that is, the effects on the other involved. According to the systems approach, every form of communication has content and a relation aspect (Watzlawick, Beavin, & Jackson, 1967). Content focuses on the message, whereas the relation aspect focuses on the behavior associated with the message (Marshall & Weinstein, 1986). Specifically, one cannot not communicate when in the presence of someone else, whatever a person's intentions are, others will infer meaning from this behavior. For example, if teachers ignore students' questions because



they do not hear them, students might make a variety of inferences, such as the teacher is busy or considers the question irrelevant (Wubbels & Brekelmans, 2005).

The second element described by Wubbels & Brekelmans (2005) in their discussion of the relationship between teachers and students, is the Model for Interpersonal Teacher Behavior (MITB). This model is based on Timothy Leary's (1957) research on the interpersonal diagnosis of personality and its application to teaching (Wubbels, Creton, & Hooymayers, 1985). There is evidence that the Leary model is cross-culturally generalizable (Lonner, 1980). In the MITB there are two dimensions, Influence and Proximity, which underlie eight types of teacher behavior: leading, helpful/friendly, understanding, student responsibility and freedom, uncertain, dissatisfied, admonishing and strict (Wubbels & Brekelmans, 2005). Figure 1 provides an overview of typical teacher behaviors that relate to each of the eight sectors of the MITB (Wubbels & Brekelmans, 2005).



<b>Dominance (D)</b>		<b>Submission (S)</b>
The teacher determines the students' activities.	5 - 4 - 3 - 2 - 1	The students can determine their own activities.
<b>Cooperation (C)</b>		<b>Opposition (O)</b>
The teacher shows approval of disapproval of the students and their behavior.	5 - 4 - 3 - 2 - 1	The teacher shows disapproval of the students and their behavior.

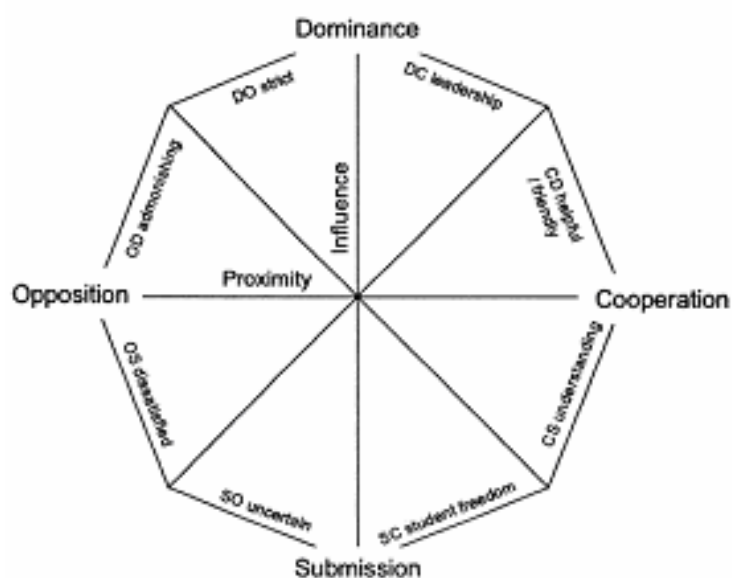
*Figure 1*  
*Typical Teacher Behaviors Relating to the Eight Sectors of the MITB*

The Model for Interpersonal Teacher Behavior describes profiles of teacher-student relationships (Wubbels & Levy, 1993). A profile is the particular

combination of eight scale scores resulting from the administration of the Questionnaire on Teacher Interaction. Eight different types of profiles could be distinguished in Dutch and American classes (Brekelmans, Levy, & Rodriguez, 1993). These profiles have been named: Directive; Authoritative; Tolerant/Authoritative; Tolerant; Uncertain/Tolerant; Uncertain/Aggressive; Drudging; and Repressive. The Authoritative, the Tolerant/Authoritative, and the Tolerant type are patterns wherein students perceive their teachers as relatively high on the Proximity dimension, with the Tolerant type lowest on the Influence dimension (Wubbels & Levy, 1993). Less cooperative than the three previous types are the Directive, the Uncertain/Tolerant, and the Drudging type, with the Uncertain/Tolerant type lowest on the Dominance dimension. The least cooperative patterns of interpersonal relationships have been indicated as Repressive and Uncertain/Aggressive. In Repressive type classes, teachers are the most dominant of all eight types (Wubbels & Levy, 1993).

Figure 2 is a graphic representation of the adopted model for education, the Model for Interpersonal Teacher Behavior (Wubbels et al, 1985). It is important to note that teachers can exhibit acceptable behavior in each sector and that most teachers show behaviors in every category (Levy, Wubbels, Brekelmans, & Morganfield, 1997). One of the fundamental ideas behind the Leary model is that communication behaviors continually change and communication styles emerge only after a great many behaviors have occurred and been observed (Levy, Wubbels, Brekelmans & Morganfield, 1997).

The sections are labeled DC, CD, and so on according to their position in the coordinate system. For example, the two sectors “leadership” and “helpful/friendly” are both characterized by Dominance and Cooperation (den Brok, Fisher, & Scott (2005). A teacher displaying DC behavior might be seen by students as enthusiastic and motivating. The adjacent CD sector includes behaviors of a more cooperative and less dominant type; the CD teacher might be seen as helpful, friendly, and considerate (den Brok, Fisher & Scott, 2005).



*Figure 2*

*The Model for Interpersonal Teacher Behavior*

In the Netherlands, Wubbels, Creton and Holvast (1988) investigated teacher behavior in classrooms from a systems perspective, adapting the theory on communication processes developed by Watzlawick, Beavin and Jackson (1967). Within the systems perspective on communication, it is assumed that the behaviors of participants influence each other mutually (Fisher, Fraser, & Rickards, 1997). Wubbels, Creton and Hooymayers (1985) applied Leary's general model for interpersonal relationships (Leary, 1957) to the context of education. The Leary model has been extensively investigated in clinical psychology and psychotherapeutic settings (Strack, 1996). It has proven adept at describing interpersonal relationships (Lonner, 1980). According to Leary, two dimensions are important – Dominance-Submission and Hostility-Affection (den Brok, Fisher, Scott, 2005). Adapting the Leary Model to the context of education, Wubbels et al. (1985) labeled the two dimensions as *Influence* (Dominance-Submission) and *Proximity* (Opposition-Cooperation). These researchers structured interpersonal teacher behavior into eight segments: leadership, helpful/friendly, understanding, giving students freedom and responsibility, uncertain, dissatisfied, admonishing, and strict (den Brok, Fisher, Scott, 2005).

Classroom environment studies that have included the interpersonal perspective on teaching indicate a strong and positive relationship between perceptions of Influence and Proximity or their related subscales and cognitive and affective student outcomes (Wubels & Brekelmans, 2005). The Brekelmans' (1989) study with physics teachers investigated the relationship between student outcomes and students' perceptions of teacher-student relationships. The results of the interpersonal profile suggested that Directive, Authoritative, and Tolerant teacher profiles had the highest achievement outcomes. In

comparison, teachers with Uncertain/Tolerant, Uncertain/Aggressive, and Drudging profiles reflected relatively low student achievement. The Authoritative and Directive teachers had the highest student attitude scores, whereas students of the Drudging, Uncertain/Aggressive, and Repressive teachers had the worst attitudes towards physics. In Table 2, descriptions of the classroom environment typical for each of the eight types are presented based on observation research (Wubbels & Levy, 1993).

Table 2

*Descriptions of Classroom Environments Typical for the Eight Typologies of Interpersonal Styles*

Interpersonal Profile Type	Classroom environment
Directive	The learning environment is well structured and task oriented. Teachers are organized efficiently and normally complete all lessons on time. Teachers have high standards and are seen as demanding. There is a businesslike setting with teachers who remind students that there are there to work. Teachers may redirect students who misbehave and are inattentive. Students respond accordingly.
Authoritative	The learning environment is well structured, pleasant, and task oriented. Rules and procedures are clear and students do not need to be reminded. Students are attentive, and generally produce better work than their peers in the Directive's teacher's class. The teacher is enthusiastic, takes a personal interest in the students, and is open to the student's needs.
Tolerant and Authoritative	While the class environment resembles the climate in the Authoritative class, the Tolerant/Authoritative teachers develop closer relationships with students. The teacher maintains a structure that supports student responsibility and freedom. Lessons are frequently organized around small group work.

Tolerant	Teachers are perceived as being disorganized and their academic expectations for students are not evident. The lessons are not challenging to the student. The teachers often begin a lesson with an explanation and send the students off to individually complete the assignment.
Uncertain/Tolerant	The teachers are cooperative but do not evidence much leadership in class. They are concerned about the students and are willing to explain things repeatedly to students who have not been listening. They tolerate disorder and the students are not task oriented. The lessons are poorly structured. The rules of behavior are arbitrary, and students do not know what to expect when infractions occur.
Uncertain/Aggressive	This class is characterized by an aggressive kind of disorder. Teachers and students regard each other as opponents and spend almost all their time in escalating conflicts. Rules of behavior are not communicated or explained properly. Teachers spend most of their time trying to manage the class and learning is the least important aspect of the class.
Repressive	The lessons are structured but not well organized. Few questions from students are allowed or encouraged. Students are apprehensive and the teacher seems to repress student initiative. Students are uninvolved and extremely docile. They follow the rules and are afraid of the teacher's angry outbursts. The teachers are perceived as unhappy and impatient.
Drudging	Students pay attention as long as the teachers actively try to motivate them. The atmosphere is oriented toward the subject matter and the teachers do not generate much warmth. The teachers generally follow a routine in which they do most of the talking and avoid experimenting with new methods. The teachers struggle to manage the class. They usually succeed after expending a lot of energy.

Phelan, et al., (1992) combined students' views on school contexts with those of teachers in an effort to understand the nature of high school environments that support and foster positive learning experiences and to gain a more holistic understanding of school environments. Their research is designed to identify students' perceptions of

circumstances that impinge on their involvement with the school community. The participants included 54 students, selected for diversity with respect to gender, achievement, and ethnicity, from four comprehensive high schools in two California school districts. Through interviews, observations, and analyses of student records, the researchers conclude that students from all achievement levels and sociocultural backgrounds want to succeed and want to be in an environment in which it is possible to do so (Phelan, et al., 1992). Specifically, students report that they appreciate a well-organized and orderly environment, yet not one in which the teacher is detached and treats the classroom as a whole rather than as a roomful of individuals. A recurring theme in students' comments is the tremendous value they place on having teachers who care (Phelan, et al., 1992).

Students report humor, openness, and consideration as important qualities in a teacher. High achieving students associate caring with assistance in academic matters, whereas low-achieving students equate caring with certain personality traits (Phelan, et al., 1992). Teachers interviewed in this study also reported that they want to be respected and want to work with students who care. However, when teachers do not perceive this congruence, the result is an emphasis on differences and problems. This miscommunication can lead to a perception of students as adversaries rather than individuals engaged in learning (Phelan, et al., 1992).

According to the systems approach, non-verbal behavior is particularly important for the perception of the relationship aspect of communication (Wubbels & Brekelmans, 2005). Differences between beginning and experienced teachers, in non-verbal behavior, in relation to the position in class, may explain problems of beginning teachers in creating



positive teacher-student relationships. van Tartwijk, Brekelmans, Wubbels, Fisher, & Fraser (1998) researched the contribution of non-verbal behaviors to the perception of the relationship at the message level using five channels of behavior: space - the teacher's use of classroom space, body - position and movement, face - various expressions, visual behavior - duration of the teacher looking at the students, and voice - the non-content aspects of speech. Behaviors such as looking at the students continuously and speaking loud and emphatically were often observed together. This combination of behaviors was rated as highly dominant. Behaviors such as not being heard, being close to the students, and bending toward the student yield a low influence score (van Tartwijk et al., 1998).

Secondary school students evaluate their teachers according to their capability to teach a subject matter, their sensitivity to students' individual needs (Cullingford, 1995), their ability to develop personal relationships with pupils, and their professional competence (Kutnick & Jules, 1993). Tatar (1998) examined gender differences in secondary pupils' perceptions. The study explored the views of secondary school girls and boys regarding positive and negative aspects of the significance of their teachers. Two hundred ninety-seven Israeli secondary school students (57% girls, 43% boys) in 10th grade classes participated in this study. The 18 item Hebrew questionnaire used in this study was obtained by translating items presented in the research by Hendry, Roberts, Glendinning, & Coleman (1992). Students were also asked to respond to two open ended questions: 1.) In which domains teachers might be significant for them, as compared to their parents; and 2.) In which domains teachers might be significant for them as compared to their friends (Tatar, 1998). The answers to these questions were classified into two categories: affective support and help in problem solving and education and

instruction. The findings suggest that many adolescents perceive teachers as potential significant individuals, even when compared with parents and friends (Tatar, 1998). Boys indicated, more than girls, negative aspects of significance. Girls perceive significant teachers as personal and affective supporters. Girls, more than boys, seek confirmation and support from their teachers (Tatar, 1998). Fisher, Rickards, Goh, & Wong (1997) also investigated gender differences in students' perceptions of interpersonal teacher behavior. In their study, statistically significant gender differences were detected in students' responses to seven of the eight scales of the QTI. In general, it was reported that females perceived their teachers in a more positive way than males.

A study by Levy, den Brok, Wubbels, and Brekelmans (2003) examined variables associated with differences in students' perceptions of interpersonal teacher behavior. The perceptions of 3023 students and 74 teachers in 168 classes in seven secondary schools were used in the analysis. The researchers reported several variables significantly related to students' perceptions: student and teacher gender; student and teacher ethnic background; student age and grade; class size; grade level; subject taught; and teacher experience. Multilevel variance analysis techniques were used. The outcomes of the study were said to have an implication relative to teachers' affirmations of the diversity in their classrooms. Because of the link between student perceptions and student outcomes, and because of the differences in perceptions as a result of background variables of students, teachers are encouraged to become aware of these differences and incorporate this aspect in their instructional repertoire (Levy, den brok, Wubbels & Brekelmans, 2003). This background knowledge could assist teachers in affirming their culturally responsive strategies in their classrooms.

There is evidence of an association between interpersonal teacher behavior and learning outcomes. In one study involving 720 students in Singapore and 705 students in Australia (Fisher, et al., 1997), the scales of the Questionnaire for Teacher Interaction were used as independent variables. Associations between the QTI scales and students' attitudinal outcomes were computed (Khine & Fisher, 2004). It was reported that the QTI scales, leadership, helping/friendly, understanding, and student responsibility/freedom were significantly and positively associated with the attitude towards science classes in both countries. In addition, the QTI scales, uncertain, dissatisfied, admonishing, and strict were significantly and negatively correlated with the attitude to class in both countries (Khine & Fisher, 2004). Associations also exist between student perceptions of teacher interpersonal behavior and student outcomes in mathematics classes (Rawnsley & Fisher, 1998).

The QTI was first constructed in The Netherlands between 1978 and 1984 and resulted in seventy- seven items being selected for the final version. The Australian version of the QTI (Wubbels, 1993; Fisher, Henderson and Fraser, 1995) has forty-eight items, six for every sector of the Model of Interpersonal Teacher Behavior. Each item is scored on a 5- point Likert scale, from "Never/Not At All" to "Always/Very" (Levy, Wubbels, Brekelmans, & Morganfield, 1997). The total score for each scale is the sum of the circled numbers for the six items that belong to that scale. Omitted or invalid responses are scored "3". For example, in order to calculate the total score for "Leadership Behavior", responses to questions 1,5,9,13,17, and 21 are added together.

The American version was created between 1985 and 1987 by translating the set of seventy-seven items from the Dutch version, adding several items (since several items

could be translated in more than one way), and adjusting this set of items based on various rounds of testing (Wubbels, Levy & Fraser, 1993). The original American version contained one hundred items from the original seventy-seven items in the Dutch version (Smith, 1997). Wubbels, Levy, & Fraser (1993) inspected the American version to ascertain if it was still in accordance with the original Leary (1957) model. Thirty- three items were removed from the original one hundred American items because they did not correspond to the parameters of the assumptions of the Leary model. According to the Leary model, “an item should correlate highest with the scale to which it belongs and lowest with the opposite sector” (Wubbels, Levy, & Fraser, 1993, p.4). Ultimately, the American version contained 64 items (denBrok, 2001). A series of item analysis were conducted to ascertain the American instrument’s reliability. Seven of the eight section’s reliabilities were above .90 and the other section’s reliability was calculated to be .86 (Smith, 1997). The American 64-item version of the QTI was initially also used in Australia (Wubbels, Levy, & Fraser, 1993), but ultimately Australian researchers ended up with a more economical 48-item selection (Fisher, Henderson, & Fraser, 1995). The Questionnaire on Teacher Interaction can be used to map students’ perceptions of teacher interpersonal behavior according to the Model for Interpersonal Teacher Behavior and was developed based on this model (Wubbels, Levy, & Fraser, 1993). It has eight scales formatted on two axes representing an Influence dimension and a Proximity dimension (Fisher, Fraser, & Rickards, 1997).

The validity and reliability of the Questionnaire on Teacher Interaction were determined by administration in Australia, The Netherlands, and the United States (Wubbels, Levy, & Fraser, 1993). Internal consistency reliability and scale inter

correlations have been reported in several studies conducted on the reliability and validity of the QTI. They have included Dutch (Brekelmans, Wubbels, & Creton, 1990, denBrok, 2001, Wubbels et al. 1985), American (Wubbels, Levy, & Fraser, 1993), and Australian (Fisher, Fraser, & Wubbels, 1993) samples. Both reliability and validity were satisfying. The QTI has been shown to be a valid and reliable instrument when used in The Netherlands (Wubbels, Levy, & Fraser, 1993). When the 64-item American version was used with 1,606 students and 66 teachers in the United States, the cross-cultural validity and usefulness were confirmed. Using the Cronbach alpha coefficient, Wubbels, Levy, & Fraser (1993) reported acceptable internal consistency reliabilities for the QTI scales ranging from .76 to .84 for student responses.

Levy, Wubbels, Brekelmans, & Morganfield (1997) provided evidence of student characteristics and class level covariates that were significant in their research. These included age, grade level, and cultural background. Without a working knowledge of students' home lives and cultural backgrounds, teachers risk misunderstandings that can damage the educational experiences for all involved (Levy, Wubbels, Brekelmans, & Morganfield, 1997).

Levy, Wubbels, Brekelmans, and Morganfield (1997) investigated a sample of 550 high school students comprised of Hispanics, Asians, and Americans. The primary focus of this investigation was the language and cultural factors in students' perceptions of teacher communication styles. The results suggested that the students' cultural background significantly related to the perceptions they had of their teachers' interaction behavior. In a study by Rickards and Fisher (2000), the reliability and validity of the QTI, when used in mathematics classes, was confirmed. The dimensions of the QTI were found

to be significantly associated with student attitude scores. Students' attitude scores were higher in classrooms in which students perceived greater leadership and helpful/friendly behaviors in their teachers (Rickards & Fisher, 2000). Vermeer, Boekaerts, & Seegers (1997) examined the gender differences in cognitive and affective variables with respect to performance in mathematics classes. The results demonstrated that both the cognitive and affective variables measured during mathematics tasks revealed gender differences. The QTI is capable of differentiating between perceptions of students in different classrooms (Pehkonen, 1997). The Australian version of the QTI was used in a pilot study involving upper secondary science classes in Western Australia and Tasmania (Fisher, Fraser, & Wubbels, 1993). This pilot study supported the validity and potential usefulness of the QTI. This instrument meets the standards of the American Evaluation Association (1999) for accuracy, reliability, and validity.

Since its development, the QTI has been the focus of well over 120 studies in many countries (den Brok, Brekelmans, van Tartwijk, & Admiraal, 1997) (as cited in denBrok, Brekelmans, & Wubbels, 2004). The original QTI, designed for secondary education, has also formed the basis for a number of other versions for primary education, higher education, principals, and supervisors (den Brok, 2001).

While research on the relationship between interpersonal teacher behavior and student attitudes displays fairly consistent results, most studies are subject to some limitations (den Brok, Fisher, & Scott, 2005). Research has shown that teacher behavior, and students' perceptions of them, are partially dependent on and may interact with characteristics of respondents and the context in which they occur (Levy, den Brok, Wubbels, & Brekelmans, 2003).

## Resiliency

Resiliency is defined as the process of coping with adversity, change, or opportunity in a manner that results in the identification, fortification, and enrichment of resilient qualities or protective factors (Richardson, 2002). Students who developed healthy personas and had developed coping skills that enable them to succeed are termed as resilient (McMillan & Reed, 1994). Resiliency studies have commonly identified children as “at-risk” based on the presence of many factors that have been proven as correlated with adverse circumstances - poverty, minority status, and drug addiction (Wayman, 2002). McMillan and Reed (1993) report the factors that seem to be related to resiliency as: individual attributes, positive use of time, family and school. In the context of education theory, resiliency focuses on students’ individual strengths and using those strengths to promote achievement of goals and standards (Brown, Caston, & Bernard, 2001). Resilient children have characteristics that enable them to develop into healthy adults (Wang, Haertel, & Walberg 1994). These include: verbal fluency; a sense of competence; good problem-solving skills; high self-esteem; self-control; and openness to new experiences (Wang, Haertel & Walberg, 1984). Resiliency includes teaching practices and procedures that emphasize student strengths so that students develop the capacity to cope effectively with both internal and external stressors in order to succeed (Wahome, 2004). Werner and Smith (1988) reported that apart from the family circle, teachers had a significant role as role models in the lives of resilient children. Resiliency theory identifies protective factors present in families, schools, and communities of successful youth that often are missing in the lives of troubled youth (Krovetz, 1999). Five key factors, which are major influences in developing resilience in children, are: the

family, schools, community, peers, and individual predispositions (Krovetz, 1999). Resilient children have the ability to manage and thrive in the face of adversity (Wang, Haertel & Walberg, 1998). Richardson's resiliency theory focuses on caring and support that fosters interactions leading to pupil resiliency (Richardson, 2002).

Rutter (1987) named "protective mechanisms" that are located both externally in the social/environmental life space of the individual and internally, as personal attributes and qualities of the individual. These protective factors are said to promote the development of resilient qualities (Bernard, 1991). Werner and Smith (1988) identified a range of important roles families play in providing protective assets. These included consistency in parenting role models, being supportive and available when needed, providing a harmonious living environment, having strong beliefs and standards of behavior, and celebrating and valuing important life stages (McCubbin & McCubbin, 1988). Family support seems to be an attribute of successful at-risk resilient students (McMillan & Reed, 1994). Parents of resilient students have higher expectations for their children's education and these expectations exert pressure on the students to remain engaged in school. Peng, Lee, Wang, & Walberg (1992) report that family composition seems to have no significant relationship to at-risk students' success or failure. They also found that the educational background of parents was related to student resiliency. Specifically, their research indicates that less than 11 percent of students whose parents had less than a high school education were classified as resilient as compared with 23 percent of students whose parents had a high school education or beyond.

In their research, Werner and Smith (1988) also recognized the significant contributions made by schools and teachers in offering external protective factors. Such



schools are characterized as being caring, attentive, and stable environments which are success oriented and acknowledge academic, sports, musical, and artistic achievements (Oswald, Johnson, & Howard, 2001). Bernard (1991) summarized external protective factors demonstrated by schools and teachers under three categories: caring and supportive relationships, positive and high expectations, and opportunities for meaningful participation. Communities were reported as another source of protective assets for individuals whose status may pose a risk factor (Pence, 1998). Wang (1997) advocated the strengthening of social, health, and other community services to provide a strong supportive social framework for fostering resilience.

Bernard (1995) suggests that “certain environmental characteristics” must exist for an individual to develop a range of personal skills and successful coping strategies to overcome risk and adversity. Bernard (1995) provides a summary of the critical roles schools and their teachers have in developing resilience in children at risk. Bernard’s research (1995) reports longitudinal studies that provide evidence that half to two-thirds of children “growing up in families with mentally ill, alcoholic, abusive or criminally involved parents or poverty stricken” overcame such disadvantages and successfully transformed their lives. This capacity for resilience is reportedly biologically based.

Werner and Smith (1988) and Bernard (1993) describe eight key qualities or predispositions, which are characteristic of children who are resilient:

- Having stable relationships with peers,
- Possessing well-developed problem-solving skills,
- Considering realistic future plans,

- Having a positive sense of being able to achieve and deal effectively with tasks,
- Experiencing success in one or more areas of their lives,
- Being able to communicate effectively,
- Possessing a strong attachment with at least one adult,
- Acceptance of responsibility for themselves and their behavior.

Resilient students see the world as a positive place in spite of the difficult issues with which they have to deal (McMillan & Reed, 1994). To cope with life prompts, humans cultivate, through previous disruptions, resilient qualities so that most events become routine and less likely to be disruptive (Richardson, 2002). Peng, Lee, Wang, & Walberg (1992), conducted a study with 17,000 tenth graders from low-income families and found that locus of control was a significant predictor of academic success. The results of their investigation suggested that students with higher academic achievement tended to have a more internal locus of control. McMillan and Reed (1993) provide evidence from a qualitative study of the perceptions of academically successful at-risk students. Their results state that many students spoke of a satisfaction gained from experiencing success in self-fulfilling activities. These students were motivated by a desire to succeed, to be self-starting, and to be personally responsible for their achievements.

Two central factors impact Hispanic students in high school: a caring environment and academic resiliency. A study conducted in high poverty high performing schools in Texas found “effective schools consistently exhibited an ethic of care in their culture” (Reyes, Scribner, & Scribner, 1999, p.27). The ethic of care applies to the entire school

community. The positive reinforcement flows from the administration to the staff, parents, students, and the community (Guillory, 2002) (as cited in Crosnoe, 2005).

Another aspect of the ethic of care is the belief that students who have been traditionally labeled disadvantaged are just as bright and capable as those who are more advantaged.

Mayeroff (1971) describes caring as having eight critical components (See Table 3). The components have varying degrees of importance depending on an individual's situation.

Table 3

*Mayeroff's Critical Components of Caring*

<p><b>Knowledge</b> - that promotes assessment and sincere deep understanding of another's needs: sensitive, empathetic regard, easy rapport</p>
<p><b>Alternating Rhythms</b> – allow movement between changes in focus- from isolated events to holistic perceptions</p>
<p><b>Patience</b> – does not wait passively, but participates, perhaps in the form of a quiet presence that listens and allows another time and space</p>
<p><b>Honesty</b> – generates openness, lack of pretension, acceptance of self and others</p>
<p><b>Trust</b> – allows risk taking and developmental growth</p>
<p><b>Humility</b> – involves overcoming pretentiousness; allows careful evaluation of one's strength and limitations</p>
<p><b>Hope</b> – provides a reason for commitment to the future</p>
<p><b>Courage</b> – inspires that continuing growth toward self-actualization; can be linked to high expectations</p>

The level of caring and support within a school provides an indicator of positive outcomes for students (Bernard, 1993). The power of a caring teacher is documented in Moskowitz's (1983) 40-year follow-up study of childhood survivors of the Nazi Holocaust. All 24 of the resilient survivors "considered one woman to be among the most potent influences in their lives – the nursery school teacher they were sent to after being in the concentration camps and orphanages. This teacher provided warmth and caring, and taught them to behave compassionately. According to a study done by Stanford University's Center for Research on the Context of Secondary School Teaching (Phelan, et al., 1992), the need for caring teachers was a major concern of high school students.

Resilient students take the opportunity to fulfill the basic human need for social support, caring, and love (Bernard, 1993). Goodenow and Grady (1993) defined "sense of belonging" as the extent to which students feel personally accepted, respected, included, and supported in the school social environment. Maslow (1962) stated that the need of belonging has to be satisfied before other needs can be fulfilled. Families that are involved in their children's school experiences and demonstrate caring and high academic, moral, and social expectations increase the likelihood that their children will be educationally resilient (Wang, Haertel, & Walberg, 1998). If this opportunity is unavailable to them in their immediate family environment, Bernard (1993) proposes that the school give these students a chance to develop caring relationships. A caring teacher can enhance student learning, create a feeling of belonging, and serve as a role model for career choice (Wang, Haertel, & Walberg, 1998). While student success and failure are dependent upon a number of influential determinants, instructional practices and the learning environment are contributing factors (Waxman & Huang, 1997).

### School/Family/Community Partnerships

Data from the High School and Beyond study indicate that at-risk students who drop out share a number of characteristics (Wehlage & Rutter, 1986). Hispanics and students from low socioeconomic backgrounds have the highest dropout rate. Other demographic factors that influence the dropout rate include family composition and school climate (Wehlage, Rutter & Turnbaugh, 1987). In an effort to engage students who are alienated, schools are encouraged to establish a positive social bond between teachers, students, and families (Wehlage, Rutter, & Turnbaugh, 1987).

The model of school, family, and community partnerships locates the student at the center (Epstein, 1995). School, family, and community partnerships cannot simply produce successful students. Rather, partnership activities may be designed to motivate, engage, guide, and energize students to produce their own successes (Epstein, 1995). The linking of parent, school, and community resources helps amplify a student's sense of nurturance and support (Wang, Haertel, & Walberg, 1998). There are two common approaches to involving families in schools and in their children's education (Epstein, 1995). One approach emphasizes conflict and views the school as a battleground, with relationships guaranteeing power struggles and disharmony. The other approach emphasizes partnership and views the school as a homeland, sharing power and mutual respect and directing focus toward activities that foster student learning (Epstein, 1995).

Parental involvement is defined as the parental participation in the educational processes and experiences of their children (Jeynes (2007). In a meta- analysis of 52 studies examining the influence of parental involvement on the educational outcomes of urban secondary school students, Jeynes (2007) addressed four issues pertinent to parents

and educators. First, to what degree is parental involvement associated with higher levels of school achievement among urban students? Second, do school programs of parental involvement positively influence urban students? Third, what aspects of parental involvement help those students the most? Fourth, does the relationship between parental involvement and academic achievement hold across racial groups? The analysis examined the effects of parental involvement across different kinds of academic measures, especially standardized versus non-standardized measures (Jeynes, 2007).

There are different types of parental involvement identified by educators (Epstein, 1995; Deslandees, Royer, Turcott, & Bertrand, 1997). These include: general parental involvement, specific parental involvement, parental expectations, attendance and participation, communication, homework, parental style. The results of Jeynes' study (2007) indicate that parental involvement has a positive impact on children's academic achievement. The overall result holds for all measures of academic achievement that were examined and for minority students as well as the overall student population.

Family involvement in children's education enhances children's school performance (Wang, Haertel, & Walberg, 1998). Educators have identified parental involvement as the primary vehicle by which to raise academic achievement (Hara, 1998). The active participation of family members in children's educational experiences improves their achievement, increases school attendance, and decreases dropout rates, delinquency, and teenage pregnancy rates (Wang, Haertel, & Walberg, 1998).

Epstein conducted research on teachers' practices of parental involvement and the effects of family-school connections on students, parents, and teachers (Brandt, 1989). The results of her research affirm that parents want to be more involved in their children's

learning, especially at home, and that they need clear direction from the schools. Epstein discusses five types of parent involvement (Brandt, 1989):

- Type 1: *The basic obligation of parents* refers to the responsibilities of families to ensure children's health and safety; to the parenting and child rearing skills needed to prepare children for school; to the continual need to supervise, discipline, and guide children at each age level; and to the need to build positive home conditions that support school learning and behavior appropriate for each grade level.
- Type 2: *The basic obligations of schools* refer to the communication from school to home about school programs and children's progress. Schools vary the form and frequency of communications such as memos, notices, report cards and conferences, and greatly affect whether all parents can understand the information about school programs and children's progress.
- Type 3: *Parent involvement at school* refers to parent volunteers who assist teachers, administrators, and children in classrooms or in other areas of the school. It also refers to parents who come to school to support student performances, sports, or other events, or to attend workshops or other programs, for their own education or training.
- Type 4: *Parent involvement in learning activities at home* refers to parent initiated activities or child initiated requests for help and ideas or instructions from teachers for parents to monitor or assist their own children at home in learning activities that are coordinated with the children's class work.

- Type 5: *Parent involvement in governance and advocacy* refers to parents taking decision-making roles in the parent- teacher organizations, advisory councils, or other committees or groups at the school, district, or state level. It also refers to parent and community activists in independent advocacy groups that monitor the schools and work for school improvement.

Students are often their parents' main source of information about the school (Epstein, 1995). Parents provide information, learning opportunities, behavioral models, and connections to other resources (Wang, Haertel, & Walberg, 1998). A theory of family-school connections identifies four "microsystems" that influence children: families, peer groups, schools, and neighborhoods (Wang, Haertel, & Walberg, 1998). The degree of overlap among these microsystems represents the extent to which they share constructive values, goals, and understanding of the social and cultural processes governing everyday life. The greater the overlap among these systems, the more common their cultures. When home, school, peer group, and larger community are similar, the impact of interventions on children and youth is greater (Epstein, 1995).

Some children succeed in school without much family involvement or despite family neglect or distress, particularly if the school has excellent academic and support programs (Epstein, 1995). Teachers, relatives outside of the immediate family, other families, and members of the community can provide guidance and encouragement to these students. As support from school, family, and community accumulates, more students feel secure and cared for, work to achieve to their full potential, build positive attitudes and school behaviors, and stay in school (Epstein, 1995).



Goals 2000 legislation sets partnerships as a voluntary national goal for all schools (Sheldon & Epstein, 2005). Title I specifies and mandates programs and practices of partnership in order for schools to qualify for or maintain funding. Partnership programs establish a base of respect and trust on which to build. Good partnerships withstand questions, conflicts, debates, and disagreements and provide structures and processes to solve problems (Epstein, 1995). Despite real progress in many states, districts, and schools, there are still many schools in which educators do not understand the families of their students (Epstein, 1995).

Family-involvement practices at home and at school have been found to influence middle and high school students' academic achievement (Ginsburg & Hanson, 1986). Romo and Falbo (1995) report in their findings that the parents of the students who graduated from high school set limits for their children, and the children knew that these were nonnegotiable. The decline in parental participation for secondary students reflects weaker family practices at the secondary school level. Dornbusch & Ritter (1988) reported that the majority of high school teachers (60%) reported contacting almost none or few parents. Purnell and Gott (1985) reported that secondary teachers felt they did not have sufficient time to implement effective practices of family involvement. Sanders and Epstein (1998) also report that educators and families feel that time is limited for their work on partnerships. The results of the Sanders and Epstein study (1998) also suggest that the attitudes of the educators and families can present obstacles to effective home-school-community partnerships.

The National Center for Education Statistics (1999) reports that students in the United States know less mathematics than their peers in Asian and European countries.

Using longitudinal data from elementary and secondary schools, Sheldon and Epstein (2005) examined the connections between specific family and community involvement activities and student achievement in mathematics. The results of this study support the expectation that subject-specific, family involvement activities will likely affect student outcomes in the targeted curricular subject.

### Summary

The late Ron Edmonds said, “We currently know enough to educate every child. The question is how badly we want to” (SREB, 2006). The practice that holds the most promise for making a more effective system is that we all operate as a learning community. We make time for collaboration, we enlist all teachers to make a better system for learners, and we assume a shared responsibility for making our schools better (Marzano, 2003). We need to concentrate on the educational achievement and attainment of our nation’s Hispanic youth (Fry, 2003). Individuals are influenced by interpersonal, emotional, and cultural factors in addition to the cognitive factors associated with classroom learning (den Brok, Brekelmans, & Wubbels, 2004). Focus on educational resiliency might lead to improvements in the education of students at risk of academic failure. Caring for students involves reaching out to involve their families and addressing their problems resulting from social barriers. Increasing numbers of elementary, middle, and high schools are working hard to build successful partnerships because they know that schools can most effectively educate students with the help and support of families and communities (Sanders & Epstein, 1998).

## CHAPTER III

### METHOD

The purpose of this chapter is to describe the research design and method used in this research study. This chapter is divided into five sections that discuss the research purpose and context; participants; instrumentation; data collection; and methods of data analysis. The researcher describes in the first section, the purpose of the study, the context of the study, and the research design. Section two addresses the demographics of the schools, participants, and criteria for selection of schools. Section three provides information on the instrumentation, and section four describes the data collection process. In section five, the researcher reports data analysis procedures used to answer the questions of the study.

#### Purpose and Context of the Study

Studies have indicated that interpersonal teacher behavior is an important aspect of the learning environment and that it is strongly related to student outcomes (Rickards & Fisher, 2000). Wubbels (1993) has reported that interpersonal teacher behavior is an important factor related to student outcomes. The purpose of this study was to determine which teacher interpersonal relationship behaviors are related to Hispanic student success in high school. What teacher behaviors in the high school classroom environment do Hispanic students identify as providing caring and support?

The study was designed to answer the following major research question: What are the teacher interpersonal relationship behaviors related to Hispanic student success in high school? Several sub questions guided the study:

- How do high school Hispanic students identify teacher interpersonal relationship behaviors within the eight domains of the Model for Interpersonal Behavior on the Questionnaire on Teacher Interaction?
- Which teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, vary by setting and selected academic disciplines: mathematics and science?
- Do the teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, differ by certain characteristics: student's stated chronological age, current grade placement, student self-reported final grade in mathematics or science, and parental/community support?

#### Research Design

The researcher conducted a descriptive study to identify the teacher interpersonal relationship behaviors related to high school Hispanic student success. The research design is quantitative, as data were collected using a valid, reliable instrument, the Questionnaire on Teacher Interaction (QTI). This investigation, guided by the aforementioned questions, objectively and systematically provided a quantitative description of the teacher interpersonal relationship behaviors perceived by high school Hispanic students. The possible influence of these behaviors on Hispanic student success was investigated. Hispanic students' performance on the Georgia High School Graduation Tests was a criterion for selection of participants. The students' self-reported final grade in mathematics and science was a measure of student success.

## Participants

Based on the 2000 U.S. Census Bureau, approximately 5.3% of the population in Georgia (8, 684, 715) is comprised of individuals of Hispanic or Latino origin. The researcher selected two public school districts in Georgia with a reported varying percentage of Hispanic students enrolled in the high school(s). In the first district, the urban community selected for this study had 27, 912 residents, of which 41% were Hispanic (U.S. Census Bureau 2000). The majority speaks a language other than English at home and are foreign born. In this district, a Georgia public high school was selected based on multiple criteria: (1) enrollment of at least 1500 students, (2) student population of at least 50% Hispanic, (3) the majority of teachers had a minimum of 10 years teaching experience, and (4) more the 50% of Hispanic students taking the Georgia High School Graduation Tests had a score of pass/pass plus on the Mathematics and Science portions. During the 2006-2007 school year, 52% (820) of the students in the selected high school were reported as Hispanic. This percentage exceeded the reported 8% state average for Hispanic students (GA Dept. of Education, 2004-2005). Approximately 820 Hispanic students enrolled in grades 9-12, in the selected Georgia public high school, were asked to voluntarily complete the Questionnaire on Teacher Interaction (QTI). The response rate was 58% (479 students). Specifically, two hundred twelve students identified the behaviors of their mathematics teacher and two hundred sixty seven identified the behaviors of their science teacher. Parents and students, prior to participation, completed an informed consent form. The consent form was translated to Spanish, if warranted, to insure comprehension.

A contrasting sample was selected from another Georgia public school district. In 2005, the selected urban district had a reported population estimate of 154, 918, of which 1.6% (2479) was of Hispanic origin. In the 2005-2006 school year, 82% of the 11<sup>th</sup> grade Hispanic students in this district, who took the GHSGT, passed the mathematics portion and 42% passed the science portion. The performance of the Hispanic students in this selected district on the GHSGT was below the reported pass/pass plus percentage for Hispanic students in the state. In the 2006-2007 school year, there were 5876 students enrolled in the six high schools in the district; 1.6% (94) of the students were Hispanic. Approximately 94 Hispanic students currently enrolled in grades 9-12, in the selected Georgia public school district, were asked to voluntarily complete the Questionnaire on Teacher Interaction (QTI). The response rate was 99% (93 students). Specifically, forty-six students identified the behaviors of their mathematics teacher and forty-six students identified the behavior of their science teacher. Parents and students, prior to participation, completed an informed consent form. The consent form was translated to Spanish, if warranted, to insure comprehension.

The Georgia High School Graduation Tests (GHSGT) is a standards-based assessment that measures how well students are mastering specific skills in English/language arts, math, science, and social studies. Students must pass all parts of the GHSGT in order to graduate from high school. In Georgia, the high school graduation rate in 2005-06 was 70.8%. In the 2005-2006 school year, 64% of 11<sup>th</sup> grade Hispanic students in the selected high school, who took the GHSGT, passed the science portion and 94% passed the mathematics portion (GA Dept. of Education, 2005-2006). The performance of Hispanic students in the selected high school exceeded the reported state

pass/pass plus percentage of 89% in mathematics and 59% in Science for Hispanic students.

### Instrumentation

Research study participants (n=572) completed the Questionnaire on Teacher Interaction (QTI) during the spring semester of the 2006-2007 school year. Participants were asked to select their most current or most recent science or mathematics teacher and identify to what extent they observed their science or mathematics teacher evidence the stated behavior. The Questionnaire on Teacher Interaction (Wubbels & Levy, 1993) was selected for use in this research because it is designed to gather data that describe students' perceptions of teacher behavior. The conceptualization of teacher-student interpersonal behavior partially evolved from a systems approach to communication (Watzlawick, Beavin, & Jackson, 1967). The Questionnaire on Teacher Interaction (Wubbels & Levy, 1993) contained 48 items aligned to eight domains: leadership, understanding, helpful/friendly, dissatisfied, admonishing, strict, uncertain, and student/responsibility/freedom. Each domain contained six items that were responded to on a five-point scale (0-4) with the extreme alternatives of Never-Always. The researcher calculated Cronbach's alpha, based on the six standardized items for each domain. This measure of the internal consistency of the QTI was based on the extent to which the participants in this study who answered a test item one way responded to other items the same way. Table 4 identifies the eight domains of the Model for Interpersonal Teacher Behavior on the Questionnaire on Teacher Interaction (Wubbels, Levy, & Fraser, 1993) and the reliability statistic (Cronbach's Alpha).

Table 4

*The Eight Domains of the Model for Interpersonal Behavior*

ABBREV	DOMAIN	DESCRIPTION	Cronbach's Alpha
STR	Strict Behavior (DO)	Keep reins tight, check, judge, get class silent, maintain silence, be strict, exact norms, and set rules.	0.68
LEA	Leadership Behavior (DC)	Notice what's happening, lead, organize, give orders, set tasks, determine procedure, structure the classroom situation, explain, hold attention	0.85
HFR	Helping/Friendly Behavior (CD)	Assist, show interest, join, behave in a friendly or considerate manner, be able to make a joke, inspire confidence and trust	0.87
UND	Understanding Behavior (CS)	Listen with interest, empathize, show confidence and understanding, accept apologies, look for ways to settle differences, be patient, be open to students	0.83
SRE	Student Responsibility/Freedom Behavior (SC)	Give opportunity for independent work, wait for class to let off steam, give freedom and responsibility to students	0.68
UNC	Uncertain Behavior (SO)	Keep a low profile, apologize, wait and see how the wind blows, admit one is in the wrong	0.80
DIS	Dissatisfied Behavior (OS)	Wait for silence, consider pros and cons, keep quiet, show dissatisfaction, look glum, question, criticize	0.83
ADM	Admonishing Behavior (OD)	Get angry, take pupils to task, express irritation and anger, forbid, correct, punish	0.76

Before completing the QTI, each participant provided demographic data: 1.)

*Ethnicity*: Asian, Black, Hispanic, Native American, White, or Multiracial; (only students identified as Hispanic will complete the questionnaire); 2.) *Current Grade Placement*: 9, 10, 11, 12; 3.) *Chronological Age*: 13-15, 16-18, 19-21, 22+; 4.) *Parental/Community Support*: a.) To what degree do your parent(s) provide academic assistance and/or participate in school related activities? None, Very Little, Sometimes, Frequently; b.) Are your parents involved in decisions regarding your high school program? Yes or No; c.) Do any community members or relatives, outside of your immediate family, get involved in decisions regarding your high school program? Yes or No; d.) In a typical week, how many hours do your parent(s) spend with you in school related activities? None, 1-5 hours, More than 5 hours. No other data that could violate anonymity were procured.



A field trial was conducted with 2-3 high school Hispanic students not included in the sample. This field trial provided an opportunity to critically evaluate the questionnaire, parental/community support questions, and assess the administration time. Factors relative to demographic data were examined to assess appropriateness. Revisions to specific directions for completion and questions relative to parental/community support were made after the field trial to insure clarity and understanding.

#### Data Collection

The data collection strategy selected to conduct this descriptive study was the administration of a questionnaire. After fulfilling the requirements to obtain university internal review board and school district approval, data collection began. All student data collection was conducted during connections classes. The impact of the research on instructional time was minimal. After access was confirmed, Hispanic students in grades 9 through 12 were asked to voluntarily complete the Questionnaire on Teacher Interaction (QTI). Since participation was voluntary, not all Hispanic students chose to participate. Absenteeism also accounted for some Hispanic students not having the opportunity to respond. Completion time was approximately twenty minutes per questionnaire. Participants were directed to respond in a manner to collect data regarding the interpersonal relationship behaviors of their mathematics or science teacher. The students selected their science or mathematics teacher based on recent or current participation in either class. Two separate instruments provided an opportunity for two separate sets of responses, one for each academic discipline. In addition, the participants were strongly encouraged to complete every item, since data could not be generated from incomplete

questionnaires. Clarification was provided, if warranted, to insure understanding of questions on the questionnaire.

### Data Analysis

The researcher sought to investigate the relationship between Hispanic student success in high school and teacher interpersonal relationship behaviors. All data were analyzed using the Statistical Analysis Package for the Social Scientist, version 13 (SPSS, 2004). Seven variables were manipulated: age, grade placement, final grade received in core class, and 3 variables pertaining to parental/community involvement. The data were reported in table and narrative format. One-way analysis of variance, multivariate analysis of variance, and multiple regression were used to investigate associations. In analyzing the data, the researcher was mindful of overestimation of the influence of interpersonal teacher behavior on student motivation (den Brok, Fisher, & Scott, 2005). The strength of the relationships derived from analyzing the data will be identified as weak, moderate, and strong. Those relationships identified as weak are less than .4. Those identified as moderate have relationships of .4 to .59. Strong relationships were .6 or higher. The level of significance was set at the .05 level of probability. In an effort to determine if there were significant differences between the means of the groups, an analysis of variance was used (Ravid, 1994).

Descriptive statistics were used to answer the first research question, "How do high school Hispanic students identify teacher interpersonal relationship behaviors within the eight domains of the Model for Interpersonal Behavior on the Questionnaire on Teacher Interaction?" Mean and standard deviation for the high school Hispanic students were reported by domain using sector scores (the average of the six items that pertain to

one sector or scale). Further analysis was conducted to ascertain if any differences existed in the data reported by the students in the district with a large percentage of high school Hispanic students and the high school Hispanic students in the district with a small percentage of high school Hispanic students.

To answer the second research question, “Which teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, vary by setting and selected academic disciplines: mathematics and science?” the t test for independent means and a two-way analysis of variance were used to compare the mean scores of the group in science class and the group in mathematics class, and the group in the district with a large percentage of high school Hispanic students and the district with a small percentage of high school Hispanic students.

The third research question is “Do the teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, differ by certain characteristics: student’s stated chronological age, current grade placement, student self- reported final grade in mathematics or science, and parental/community support?” A correlational technique, multiple regression, determined whether the predictor variables, students’ stated chronological age, current grade placement, self-reported final grade in mathematics/science, and parental community support, could be combined to predict the criterion, teacher interpersonal relationship behaviors, better than any one predictor variable does alone.

### Summary

This chapter addressed the methods and procedures that were used in this study by the researcher to ascertain the teacher interpersonal relationship behaviors related to

Hispanic student success in high school. Information relative to study sample, research design, instrumentation, data collection, and data analysis was also included. Data obtained from the Questionnaire on Teacher Interaction were analyzed using descriptive statistics, t tests, multiple regression, and two-way analysis of variance.

CHAPTER IV  
REPORT OF DATA AND DATA ANALYSIS

Introduction

The purpose of this study was to determine what teacher interpersonal relationship behaviors are related to Hispanic student success in high school. The researcher reported answers to the research questions that guided this study. High school Hispanic students completed the Questionnaire on Teacher Interaction (QTI), which was designed to gather data that identified students' perceptions of teacher behavior. The QTI contains 48 items, aligned to eight domains of teacher interpersonal relationship behaviors. The domains were: leadership, understanding, uncertain, admonishing, helpful/friendly, strict, dissatisfied, and student responsibility/freedom.

Participants of the study, a total of 572 high school Hispanic students, were asked to complete this questionnaire about their mathematics or science teacher in the spring of 2007. There were 212 high school Hispanic students from a district with a large percentage of high school Hispanic students and 47 high school Hispanic students from a district with a small percentage of high school Hispanic students who identified the teacher interpersonal relationship behaviors of their mathematics teacher. This resulted in a total of 259 high school Hispanic students who identified the teacher interpersonal relationship behaviors of their mathematics teacher. There were 267 high school Hispanic students from a district with a large percentage of high school Hispanic students and 46 high school Hispanic students from a district with a small percentage of high school Hispanic students who identified the teacher interpersonal relationship behaviors of their science teacher. This resulted in a total of 313 high school Hispanic students who

identified the teacher interpersonal relationship behaviors of their science teacher. The data collected from the questionnaire were used to answer the research questions of this study.

Before reporting the findings, the researcher described the research questions, and the setting of the study. The chapter ended with a summary of the major findings.

### Research Questions

The study was designed to answer the following major research question: What are the teacher interpersonal relationship behaviors related to Hispanic student success in high school? The following sub questions were addressed in this research study:

1. How do high school Hispanic students identify teacher interpersonal relationship behaviors, within the eight domains of the Model for Interpersonal Behavior, on the Questionnaire on Teacher Interaction?
2. Which teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, vary by setting and selected academic disciplines: mathematics and science?
3. Do the teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, differ by certain characteristics: student's stated chronological age, current grade placement, student self-reported final grade in mathematics or science, and parental/community support?

### Setting

Data for this study were collected during the 2006-2007 school year from high school Hispanic students in two public school districts in Georgia. One district, located in

northern Georgia, had a student population of approximately 6500 students. There were approximately 1600 students enrolled in the one high school in this district. Fifty-one percent (816 students) of this population was reported as Hispanic. The performance of the high school Hispanic students in this district exceeded the 2005 reported state pass/pass plus percentage of 89% in mathematics and 59% in science for Hispanic students on the Georgia High School Graduation Tests (GHSGT). Specifically, in 2005-2006, 64% of 11<sup>th</sup> grade Hispanic students in this district who took the GHSGT, passed the science portion and 94% passed the mathematics portion (GA Dept. of Education, 2005-2006).

The second district, located in central Georgia, had a student population of approximately 25,000 students. In the six high schools in the district, there were approximately 5900 students. One and six-tenths percent (94) of this population was reported as Hispanic. In this district with a small percentage of high school Hispanic students, 42% of the Hispanic students who took the GHSGT passed the science portion and 82% passed the mathematics portion in 2005-2006. The performance of the Hispanic students in the district with a smaller percentage of high school Hispanic students was below the 2005-2006 reported state pass/pass plus percentage of 89% in mathematics and 59% in science for Hispanic students on the GHSGT.

Focus groups, with school personnel, helped the researcher better understand the educational setting of the students. The researcher gained insight relative to the programs and policies pertaining to the high school Hispanic students. Administrators, teachers, support personnel, program specialists, and graduation coaches shared experiences and beliefs relative to Hispanic students in their school. School personnel in both districts

discussed issues relative to staff development, language proficiency, cultural awareness, and educational opportunities available to Hispanic students. The researcher was familiarized with program components, instructional practices, parent/community involvement, and school/classroom organization and climate, as they pertained to Hispanic students. This information helped the researcher better understand the setting in which the students identified the teacher interpersonal relationship behaviors.

In the district with a large percentage of high school Hispanic students, the focus group consisted of administrators, teachers, support personnel, alternative program specialists, and a graduation coach. These individuals willingly shared experiences and beliefs relative to the Hispanic students and discussed educational opportunities offered to the Hispanic students. The International Baccalaureate Program provided highly motivated students an academic experience that emphasized critical thinking, intercultural understanding, and exposure to a variety of points of view. One of the teachers reported that there have been more Hispanic students participating in this program within recent years. It was noted that “generational issues” might have contributed to the increased participation in this program. Specifically, one family member may report to the other that this program “really opened doors for me” and encouraged a sibling or relative to pursue this goal. The teachers spoke of the students being a “millennium generation,” that is, they embraced group activities, were more accepting of cultural differences, and appeared to “assimilate easier.” A teacher reported that, although curricular modifications may be provided, “rigor would not be compromised.” Although a Hispanic student may not have responded initially to the required rigor, needed to be trained to the expectations and requirements, and may have performed poorly because he did not have the



preparation/perseverance to succeed, that same student made significant progress, once structured instruction was provided. Although the student was of high school age, study skills and work habits were taught because the school experience/culture may have been different. Controversy about grading among the teachers was reported. Some teachers relied on traditional grading methods, whereas other teachers confirmed, via less traditional methods, that the student had acquired the course content.

The district with the smaller percentage of high school Hispanic students did not report the availability of language programs designed to help students transition into school. The focus group, consisting of administrators, teachers, and translators related that the ESOL program was available to students. The Migrant Education Agency provided minimal financial assistance to families with medical, legal, and crisis situations. This agency indirectly benefited from the educational programs. The interpreters were hired on a contractual basis and served as liaisons for school personnel. They met with families on an as-needed basis and clarified school issues, when needed. Opportunities for higher education were sent to teachers rather than a non-existing career office. Subsequently, insuring that students were aware of opportunities after high school was inconsistent. Another issue was that of documented students. It was stated that undocumented students often drop out and do not seek a high school diploma. Due to their status, the high school diploma would not afford them an opportunity to pursue a college education or a job of their choice. The policy that both districts clearly stated was that the high school diploma was “powerful” and “can take you anywhere.”

In both districts there were individuals available to serve as interpreters. School personnel reported the need for small group activities for the parents. Teachers reported

that parents are often not comfortable in large group settings. Educational programs for parents were noted as an area of need. Specifically, parents may not know how to encourage their son/daughter to stay in school and pursue career goals due to their own limited experiences. The parents of most of the Hispanic students did not attend college. They are not familiar with available career options that may or may not require two or four years of college training.

In the district with the high percentage of high school Hispanic students, three language programs were described: the International Academy, the Language Academy, and the English for Speakers of other Languages classes (ESOL). In addition there were language labs with computer-assisted instruction. The International Academy was designed to serve limited English proficient students who are newcomers to the United States and teach English while remediating academic delays and providing first-language support to enable students to close the achievement gap. Students in the Language Academy classes were newcomers, had limited English proficiency, and demonstrated age/grade level academic and Spanish language skills when tested in Spanish. First language support was provided to assure that achievement gaps did not develop while students were learning English. School personnel reported lots of parent involvement in the academy. All Language Academy teachers were bilingual and the students remained in this program for one year. The ESOL classes were sheltered for content instruction and were designed to give students support to achieve higher academic levels. The ACCESS test is used for entry to and exit from the ESOL program. It was reported that in 2006 only 4% of students exited the program, whereas 26% exited the program in 2007. Exit criteria also include the student's grade point average. In 2006, only 13% of the students enrolled

in ESOL had a 3.5 or better grade average, as compared to 42% in 2007. Teachers voiced the belief that the Hispanic students “deserved the same as everybody else.” It was also reported that students were “taught to get involved” in school activities, yet the “door may be closed.” Specifically, there were school organizations that presented roadblocks due to the student’s limited language proficiency, transportation issues, and/or fees/uniforms. It was noted that many educators talk about “being open to differences” yet “attitudes still prevail.” It was also reported that some parents believe that if their child gets involved in school activities, the child may “disconnect” from academic expectations.

The administrators in the high school with a high percentage of Hispanic students reported using student performance data to guide their actions. The school culture appeared to be data driven and focused on accountability for the academic performance of all students. Teachers in this district appeared to be empowered to share in the leadership of the school and there was evidence of effective communication with all stakeholders.

In the district with the larger percentage of Hispanic students, there was a reported larger percentage of Hispanic leaders in the community. However, it was reported that these leaders were more involved in the school activities because their children attended the school. School personnel reported the need for male role models to encourage students to stay in school.

## Findings

*Research Question 1: How do high school Hispanic students identify teacher interpersonal relationship behaviors within the eight domains of the Model for Interpersonal Behavior on the Questionnaire on Teacher Interaction?*

Table 5 provides the means and standard deviations for the eight domains of the Questionnaire on Teacher Interaction (scores ranged from 0-24).

Table 5

*Mean and Standard Deviation for the Eight Domains of the QTI*

Domain	N	Mean	Std. Deviation
Understanding (UND)	572	17.06	5.18
Helpful/Friendly (HFR)	572	16.83	5.80
Leadership (LEA)	572	16.58	5.35
Student Responsibility/Freedom (SRE)	572	11.18	4.38
Strict (STR)	572	11.04	4.73
Admonishing (ADM)	572	8.61	5.37
Dissatisfied (DIS)	572	7.66	5.73
Uncertain (UNC)	572	7.43	5.55

In this study, the high school Hispanic students identified the Understanding Behaviors domain with a mean of 17.06. This would suggest that the high school Hispanic students perceive their teachers as empathetic, patient, understanding, open, and attentive. The students reported a mean of 16.83 in the Helpful/Friendly Behaviors domain and a mean of 16.58 in the Leadership Behaviors domain. These ratings suggest that teachers inspire confidence and trust, structure the classroom situation, lead, organize, assist, and show interest in the students. The Student Responsibility/Freedom behaviors

domain had a mean of 11.18 and the Strict Behaviors domain had a mean of 11.04. These ratings suggested that teachers, at times, gave opportunity for independent work and gave freedom and responsibility to students. In addition, high school Hispanic students perceived their teachers as being strict, setting rules, and maintaining silence at times. The Admonishing Behaviors domain had a mean of 8.61, the Dissatisfied Behaviors domain had a mean of 7.66, and the Uncertain Behaviors domain had a mean of 7.43. These mean scores would suggest that the high school Hispanic students in this study did not frequently perceive their teachers as angry, punishing, critical, and apologetic.

Table 6 provides the mean and standard deviation and the t-test outcomes for the comparison of the large and small groups.

Table 6

*Outcomes for Comparison of Large and Small Group*

Domain	Large Group			Small Group			95% Confidence Interval Mean Difference	<i>t</i>	df
	N	M	SD	N	M	SD			
Leadership (LEA)	479	16.73	5.28	93	15.84	5.63	-0.30, 2.08	1.47	570
Understanding (UND)	479	17.11	5.09	93	16.77	5.63	-0.81, 1.49	0.58	570
Uncertain (UNC)	479	7.27	5.57	93	8.27	5.39	-2.23, 0.24	-1.59	570
Admonishing (ADM)	479	8.59	5.35	93	8.68	5.50	-1.28, 1.11	-0.14	570
Helpful/Friendly (HFR)	479	16.88	5.83	93	16.57	5.69	-0.98, 1.60	0.47	570
Student Responsibility (SRE)	479	11.13	4.45	93	11.44	4.00	-1.29, 0.66	-0.63	570
Dissatisfied (DIS)	479	7.70	5.78	93	7.45	5.46	-1.03, 1.52	0.38	570
Strict (STR)	479	11.02	4.72	93	11.13	4.78	-1.16, 0.95	-0.20	570

$P < .05$

The Hispanic students from the district with a large percentage of high school Hispanic students reported a mean of 17.11 in the Understanding Behaviors domain, whereas the Hispanic students in the district with the smaller percentage of high school Hispanic students reported a mean of 16.77 in this domain. In the Helpful/Friendly Behaviors domain, the high school Hispanic students in the district with the large percentage of Hispanic students reported a mean of 16.88, and the Hispanic students in the district with the small percentage reported a mean of 16.57. The Leadership Behaviors domain was ranked third by both groups of students. In the district with the large percentage of Hispanic students, the mean was 16.73 and in the district with a small percentage of Hispanic students, the mean was 15.84. In the domain, Student Responsibility/Freedom, the high school Hispanic students in the district with a large percentage of Hispanic students reported a mean of 11.13 and the high school Hispanic students in the district with a small percentage of Hispanic students reported a mean of 11.44. Both groups ranked Strict Behaviors as fifth. The high school Hispanic students in the district with a large percentage of Hispanic students reported a mean of 11.02 and the high school Hispanic students in the district with a small percentage of Hispanic students reported a mean of 11.13. In the Admonishing Behaviors domain, the high school Hispanic students in the district with a large percentage of Hispanic students reported a mean of 8.59 and the high school Hispanic students in the district with a small percentage of Hispanic students reported a mean of 8.68. The Dissatisfied Behaviors domain and the Uncertain Behaviors domain were the two lowest reported by both groups of students. The mean scores reported by the high school Hispanic students in the district with the large percentage of Hispanic students was 7.70 for Dissatisfied Behaviors and 7.27 for

Uncertain Behaviors. The high school Hispanic students in the district with a small percentage of Hispanic students reported a mean of 7.45 for Dissatisfied Behaviors and a mean of 8.27 for Uncertain Behaviors.

There was no significant difference in the behaviors identified by the group of students from the school system with a large percentage of high school Hispanic students than by the students in the system with a small percentage of high school Hispanic students. In this study, high school Hispanic students ranked the teacher's Leadership Behaviors, Understanding Behaviors, and Helpful/Friendly Behaviors with the highest means and Admonishing, Dissatisfied, and Uncertain Behaviors with the lowest means. Leadership behaviors included leading, organizing, giving orders, determining procedure, and structuring the classroom situation. The behaviors measured in the Understanding Behaviors domain included empathy, listening with interest, showing confidence and understanding, and being open with students. Helpful/Friendly Behaviors suggested that the teacher behaved in a friendly or considerate manner, showed interest, and inspired confidence and trust. Uncertain Behaviors were evidenced in teachers who kept a low profile, apologized, and admitted being in the wrong. Within the Admonishing Behaviors domain, the teacher expressed irritation and anger, and forbade and punished. Teachers who looked unhappy, questioned, and waited for silence, evidenced behaviors within the Dissatisfaction domain. Behaviors in the Student Responsibility/Freedom and Strict Behaviors domain were two standard deviations below the mean. These behaviors reflected the extent to which the teacher gave opportunity for independent work, gave freedom and responsibility to the students, and set rules and maintained silence in the classroom.

A t-test for independent means was used to ascertain whether the difference between the means of the two groups was significant. A difference did not exist between the two groups on any of the variables. Teacher interpersonal relationship behaviors were perceived similarly by high school Hispanic students in a school district with a large percentage of Hispanic students and those in a school district with a much lower percentage of high school Hispanic students.

In summary, the findings to research question 1 were:

- High school Hispanic students identified the Understanding, Helpful/Friendly, and Leadership Behaviors domains of the QTI with the highest means.
- High school Hispanic students identified the Admonishing, Dissatisfied, and Uncertain Behaviors domains of the QTI with the lowest means.
- There was no significant difference in the behaviors identified by the group of students from the school system with a large percentage of high school Hispanic students than those identified by the students in the system with a small percentage of high school Hispanic students.

*Research Question 2: Which teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, vary by setting and selected academic disciplines: mathematics and science?*

A two-way analysis of variance was used to examine mean responses to the QTI by school setting and subject area. Table 7 provides the Mathematics and Science data for both groups of students.



Table 7

*Comparison of districts with large and small percentage of Hispanic students*

	<u>Large % of Hispanics</u>						<u>Small % of Hispanics</u>						F-ratios		
	<u>Science</u>			<u>Math</u>			<u>Science</u>			<u>Math</u>					
	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>Size</u>	<u>Subject</u>	<u>S x S</u>
LEA	15.89	5.58	267	17.78	4.69	212	15.85	6.42	46	15.83	4.79	47	2.77	2.43	2.53
UND	15.79	5.48	267	18.78	3.96	212	17.04	6.09	46	16.51	5.20	47	0.80	4.66	9.60*
UNC	7.78	5.34	267	6.75	6.35	212	8.26	5.64	46	8.28	5.19	47	2.38	0.61	0.65
ADM	9.82	5.25	267	7.06	5.07	212	8.37	5.12	46	8.98	5.90	47	0.16	3.28	8.06*
HFR	15.44	6.06	267	18.69	4.98	212	16.96	5.84	46	16.19	5.57	47	0.59	3.79	9.89*
SRE	10.81	4.14	267	11.54	4.80	212	11.67	3.76	46	11.21	4.25	47	0.30	0.08	1.44
DIS	8.66	5.60	267	6.48	5.79	212	7.48	5.61	46	7.43	5.38	47	0.03	3.05	2.77
STR	11.34	4.74	267	10.62	4.68	212	10.80	4.64	46	11.45	4.95	47	0.07	0.01	1.62

\*p&lt;.05

High school Hispanic students in the district with a large percentage of Hispanic students reported a mean score of 18.78 for their mathematics teacher in the Understanding Behaviors domain and a mean of 18.69 in the Helpful/Friendly Behaviors domain, whereas the high school Hispanic students in the district with a small percentage of Hispanic students reported a mean of 16.51 and a mean of 16.19, respectively. In mathematics, the Leadership Behaviors domain was ranked third for both groups of high school Hispanic students, with means of 17.78 and 15.83, respectively. Thus, high school Hispanic students in the district with a larger percentage of Hispanic students reported comparatively higher means in mathematics in the Understanding, Leadership, and Helpful/Friendly Behaviors domains. In mathematics, the high school Hispanic students in the district with a large percentage of Hispanic students ranked the Student Responsibility/Freedom Behaviors domain as fourth. They reported a mean of 11.54 for

the mathematics teacher. The high school Hispanic students in the district with a small percentage of Hispanic students ranked the Strict Behaviors domain as fourth with a mean score of 11.45. These students reported a mean of 11.21 on the Student Responsibility/Freedom Behaviors domain. Admonishing, Uncertain, and Dissatisfied Behaviors were reported with the lowest means for the mathematics teacher by both groups of students.

In science, both groups of high school Hispanic students reported the Leadership, Understanding, and Helpful/Friendly Behaviors domains as having the highest means. The high school Hispanic students in the district with the large percentage of Hispanic students reported means of 15.89, 15.79, and 15.44, respectively. The high school Hispanic students in the district with a small percentage of Hispanic students reported means of 15.85, 17.04, and 16.96, respectively. In the district with a large percentage of Hispanic students, the high school Hispanic students reported a mean in science of 11.34 on the Strict Behaviors domain and a mean of 10.81 on the Student Responsibility/Freedom Behaviors domains. The high school Hispanic students in the district with a small percentage of Hispanic students reported a mean in science of 11.67 on the Student Responsibility/Freedom Behaviors domain and a mean of 10.80 on the Strict Behaviors domain. Admonishing, Uncertain, and Dissatisfied Behaviors were reported with the lowest means for the science teacher by both groups of students.

Subgroups differ on the subject (mathematics and science) and the percentage of high school Hispanic students in each district. In the Leadership Behaviors domain, the interaction between the percentage of high school Hispanic students in the district and the subject was not significant. In the Understanding Behaviors domain, the interaction

between the percentage of high school Hispanic students and the subject was significant. In this domain, high school Hispanic students from the district with a smaller percentage of Hispanic students rated their science teacher as exhibiting Understanding behaviors more frequently. In the district with a larger percentage of Hispanic students, mathematics teachers were noted to evidence more Understanding behaviors.

In the Admonishing Behaviors domain, there was a significant interaction between the percentage of high school Hispanic students in the district and the subject. The F value in this interaction was 8.06 and the significance value was .005 ( $p > .05$ ). High school Hispanic students in the district with the higher percentage of Hispanic students reported more evidence of Admonishing behaviors in their science teacher. Students in the district with a smaller percentage of high school Hispanic students reported more evidence of Admonishing behaviors in their mathematic teacher.

In the Helpful/Friendly Behaviors domain, there was a significant interaction between the percentage of high school Hispanic students in the district and the subject. The F value in this interaction was 9.89 and the significance value was .002 ( $p < .05$ ). High school Hispanic students in the district with the higher percentage of Hispanic students reported more evidence of Helpful/Friendly behaviors in their mathematics teacher. Students in the district with a smaller percentage of high school Hispanic students reported more evidence of Helpful/Friendly behaviors in their science teacher.

In the Student Responsibility/Freedom Behaviors domain, the interaction between the percentage of high school Hispanic students in the district and the subject was not significant. The interaction between the percentage of high school Hispanic students in the district and the subject was not significant in the Dissatisfied Behaviors domain. The

interaction between the percentage of high school Hispanic students in the district and the subject was not significant in the Strict Behaviors domain.

In summary, the findings to research question 2 were:

- In the district with a high percentage of Hispanic students, high school Hispanic students reported a higher mean in mathematics in the Leadership, Understanding, and Helpful/Friendly Behaviors domains, compared with students in the district with a small percentage of Hispanic students.
- In the district with a small percentage of Hispanic students, the high school Hispanic students reported a higher mean in science in the Understanding Behaviors domain.
- The interaction between the percentage of Hispanic students in a district and the subject area, was significant in the Understanding, Admonishing, and Helpful/Friendly Behaviors domains.

*Research Question #3: Do the teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, differ by certain characteristics: student's stated chronological age, current grade placement, student self-reported final grade in mathematics or science, and parental/community support?*

A total of 572 high school Hispanic students completed the Questionnaire on Teacher Interaction. When completing the questionnaire, the students were instructed to identify the behavior of their current or most recent science or mathematics teacher. Forty-five percent (259) of high school Hispanic students described the classroom

behavior of their mathematics teacher and fifty-five percent (313) of high school Hispanic students described the behavior of their science teacher.

The students provided demographics relative to chronological age and current grade placement. Seventy percent (400) of the students who responded were between 16 and 18 years of age. Twenty-seven percent (153) of the students were 13-15 years of age and three percent (18) were 19-21 years of age. Thirty-five percent (201) of the students were enrolled in the 9<sup>th</sup> grade and thirty percent (173) were enrolled in the 10<sup>th</sup> grade. Twenty percent (112) of the Hispanic students who completed the questionnaire were enrolled in the 11<sup>th</sup> grade and fifteen percent (86) were enrolled in the 12<sup>th</sup> grade. The characteristic, stated chronological age, would not appear to influence the teacher interpersonal relationship behaviors identified since the majority of students were between 16 and 18 years of age. The majority of the students were enrolled in the 9<sup>th</sup> or 10<sup>th</sup> grade. Therefore, it is unclear whether grade placement would influence the teacher interpersonal relationship behaviors identified.

Students reported the final grade received in either the mathematics or the science class. These grades were similar for both academic areas. Table 8 provides the summary information.

Table 8

*Self-Reported Final Grades*

Grade	Math (n=259)	Science (n=313)
90-100	48 (18%)	52 (17%)
80-89	88 (34%)	97 ((31%)
70-79	100 (39%)	118 (38%)
<70	23 (9%)	36 (14%)

The mean scores reported by the students who self reported a grade below 70 in mathematics were similar to the scores reported by the high school Hispanic students who reported a grade of 90-100 in mathematics. Mean scores of 17.50 on the Leadership Behaviors domain, 17.23 on the Understanding Behaviors domain, and 16.69 on the Helpful/Friendly Behaviors domain were reported by the high school Hispanic students with self- reported grades of 90-100 in mathematics. The high school Hispanic students, who reported a final grade of less than 70 in mathematics, reported a mean of 19.30 on the Leadership Behaviors domain, a mean of 19.84 on the Understanding Behaviors domain, and a mean of 20.74 on the Helpful/Friendly Behaviors domain. Therefore, high school Hispanic students perceive teacher interpersonal relationship behaviors similarly, regardless of self-reported grades of passing (90-100) or failing (<70). Table 9 provides a summary of the eight domains and the mean scores reported by students who self reported final grades of 90-100 (1), 80-89 (2), 79-70 (3), and grades less than 70 (4).

Table 9

*Influence of Self-Reported Grades on Domains*

Grade		LEA M	UND M	UNC M	ADM M	HFR M	SRE M	DIS M	STR M
1 (90-100)	Math	17.50	17.23	10.56	10.85	16.69	12.81	10.00	12.31
	Science	14.40	14.49	8.97	10.78	14.03	10.76	9.74	12.09
2 (80-89)	Math	16.99	18.29	6.44	7.61	18.25	11.28	6.13	11.00
	Science	17.56	17.10	6.51	9.22	16.87	10.86	7.55	10.49
3 (70-79)	Math	16.27	17.96	6.77	6.55	17.17	10.18	6.44	10.96
	Science	16.91	17.37	6.71	8.03	17.65	10.74	7.06	11.00
4 (<70)	Math	19.30	19.84	5.27	5.56	20.74	12.29	4.92	9.06
	Science	17.79	18.75	8.00	6.04	18.13	12.58	6.54	9.62

Although the high school Hispanic students who reported a grade of less than 70 were not academically successful in the mathematics class, they perceived the mathematics teacher as one who set tasks, determined procedures, lead, organized the class, listened with interest, and behaved in a friendly manner. High school Hispanic students who self reported a grade of less than 70 in mathematics, reported mean scores of 9.06, 5.56, 5.27, and 4.92 on the Strict, Admonishing, Uncertain, and Dissatisfied Behaviors domains respectively. These mean scores suggest that the mathematics teacher did not frequently exhibit apologetic, angry, judgmental, and critical behaviors. Comparatively, high school Hispanic students who reported a grade of 90-100 in mathematics, reported mean scores of 12.31, 10.85, 10.56, and 10.00 on the Strict, Admonishing, Uncertain, and Dissatisfied Behaviors domains respectively. The students with the self-reported final grades in mathematics of 90-100 perceive the teacher's strict, punishing, apologetic, and critical behaviors as contributing to their academic success.

In science, high school Hispanic students who reported a grade less than 70 reported a mean of 18.75 on the Understanding Behaviors domain, a mean of 18.13 on the Helpful/Friendly Behaviors domain, and a mean of 17.79 on the Leadership Behaviors domain. Comparatively, high school Hispanic students who reported a final grade of 90-100 in the science class reported mean scores of 17.50, 17.23, and 16.69 on the Leadership, Understanding, and Helpful/Friendly Behaviors domains, respectively. Although these two groups of students were at opposite extremes in self-reported grades, their reported mean scores in the Leadership, Understanding, and Helpful/Friendly Behaviors domains correlated positively. However, there was a significant difference in the reported mean scores in the Admonishing, Uncertain, Dissatisfied, and Strict Behaviors domains. The students, who reported a grade less than 70 in science, reported the following mean scores for these domains, respectively: 6.04, 8.00, 6.54, and 9.62. The high school Hispanic students who reported a grade of 90-100 in science, reported the following mean scores for the Admonishing, Uncertain, Dissatisfied, and Strict Behaviors domains, respectively: 10.78, 8.97, 9.74, and 12.09. The high school Hispanic students who reported a grade of 90-100 in science perceived moderate evidence of the science teacher's strictness and punishing behaviors.

The students answered four questions pertaining to parental/community support:

A.) To what extent do your parent(s) provide help with homework, meet with teachers, and /or participate in school activities? None, Very Little, Sometimes, Frequently; B.) Are your parent(s) involved in decisions regarding your high school program? (For example: staying in school, dropping out, going to college) Yes, No; C.) Do any community members or relatives, outside of your immediate family, get involved in decisions



regarding your high school program? Yes, No; D.) In a typical week, how many hours do your parent(s) spend with you in school related activities? None, 1-5 Hours, More Than 5 Hours. Table 10 provides a summary of the responses attained relative to parental/community support.

Table 10

*Parental / Community Support*

N= 572				
A. Parental Assistance	None 31% (177)	Very Little 28% (162)	Sometimes 37% (212)	Frequently 4% (21)
B. Involvement in Decisions	Yes 82% (469)		No 18% (103)	
C. Community Involvement	Yes 38% (220)		No 62% (352)	
D. Parental Involvement (Hours)	None 57% (325)	1-5 Hours 40% (229)	>5 Hours 3% (18)	

Only four percent (21) of the total participants reported that their parent(s) frequently provided help with homework, met with teachers, and/or participated in school activities. Thirty-one percent (177) of the students reported no parental assistance with

homework, meeting with teachers and/or participation in school activities. Twenty-eight percent (162) of the students reported “very little” parental assistance and thirty-seven percent (212) of the students reported parental assistance “sometimes.” The majority of the students, eighty-two percent (469), reported that their parents were involved in decisions regarding their high school program. Eighteen percent (103) of the students reported that their parent(s) were not involved in decisions regarding their high school program. Comparatively, sixty-two percent (352) of the students reported that community members, outside of their immediate family, did not get involved in decisions regarding their high school program. Thirty-five percent (220) of the students did report evidence of community involvement in decisions regarding their high school program. The students were asked to report how many hours in a typical week their parent(s) spent in school related activities. Fifty-seven percent (325) of the students reported that their parent(s) spent no time involved in school related activities; whereas, forty percent (229) reported 1-5 hours weekly, and three percent (18) reported more than five hours weekly.

The variables pertaining to parental/community support were entered into a multiple regression analysis with a separate analysis performed on each of the eight domains of the Model of Interpersonal Behavior of the Questionnaire on Teacher Interaction. One composite variable, labeled support was created for parental/community support. The total score of these could be as low as 0 or as high as 6. Each student had one score to represent support, and this variable was reported in the regression analysis performed. Scoring for these parental/community variables was as follows:

- Parental Assistance: none = 0, very little = .33, sometimes = .66, frequently = 1
- Involvement: yes=1, no = 0
- Community Involvement: yes = 1, no = 0
- Parental involvement: none = 0, 1-5 hours = 1, 5+ hours = 2

This analysis allowed for the incorporation of predictor variables to ascertain the variability of outcomes in relation to the criterion variables in order to determine the degree to which each predictor variable contributed to valid explanations of teacher interpersonal relationship behaviors. Table 11 provides an overview of the model summaries for parental/community support in the regression.

Table 11

*Overview of Correlation Matrix With Each Domain*

	Support	LEA	UND	UNC	ADM	HFR	SRE	DIS	STR
Support	1	0.19	0.18	-0.02	-0.01	0.12	0.06	-0.01	0.04
LEA	0.19*	1	0.79	-0.37	-0.24	0.76	0.15	-0.32	-0.07
UND	0.18*	0.79	1	-0.35	-0.35	0.79	0.21	-0.38	-0.14
UNC	-0.02	-0.37	-0.35	1	0.62	-0.35	0.32	0.68	0.38
ADM	-0.01	-0.24	-0.35	0.62	1	-0.35	0.20	0.69	0.53
HFR	0.12*	0.76	0.79	-0.35	-0.35	1	0.30	-0.41	-0.19
SRE	0.06	0.15	0.21	0.32	0.20	0.30	1	0.30	0.09
DIS	-0.01	0.32	-0.38	0.68	0.69	-0.41	0.30	1	0.59
STR	0.04	-0.07	-0.14	0.38	0.53	-0.19	0.09	0.59	1

P < .05

The researcher was able to build a regression model using the support variable to make a prediction about each domain. The factors that contributed to the dependent variable were held constant to attain the relationship between teacher interpersonal relationship behaviors and parental/community support. With regression, the F ratio was used as an overall level of significance of the model that was created and the F was evaluated using the  $< .05$  level of significance. Therefore, the researcher was 95% certain that the significance did not occur by chance.

Using the support variable, only 10% of the variance in the Leadership Behaviors domain was accounted for by four variables: current grade placement, student self-reported final grade, parent involvement in school decisions, and the number of hours the parent(s) spent with the student in school related activities. The four support variables were combined into a set of predictors that were statistically significant and did have a small to moderate influence on the Leadership domain rating. In the domain Understanding Behaviors, 14% of the variance was accounted for by four predictor variables: current grade placement, student self-reported final grade, parent involvement in school decisions, and the number of hours the parent(s) spent with the student in school related activities. The combination of the four variables was statistically significant. Three predictors, current grade placement, student self-reported final grade, and parent involvement in school decisions, accounted for only 6% of the variance in the Uncertain Behaviors domain. Despite the small amount of variance accounted for, the three variables were statistically significant. In the Admonishing Behaviors domain, 16% of the variance was accounted for by three variables: current grade placement, student self-reported final grade, and parental involvement in school decisions. The three variables

were statistically significant. Two variables, current grade placement, and self reported final grade, accounted for 11% of the variance in the Helpful/Friendly Behaviors domain. The variables did have an impact on the domain and were statistically significant.

In the domain Student Responsibility/Freedom Behaviors (SRE), the SPSS program was unable to build a model that would significantly predict SRE scores. All correlations were exceptionally low. Therefore, the Student Responsibility/Freedom Behaviors domain does not appear to relate to the variables used to predict it. For the domain, Dissatisfied Behaviors, the model summary indicates that 10% of the variance is accounted for by three variables: current grade placement, student self-reported final grade, and parental involvement in school decisions. The variables are statistically significant. In the Strict Behaviors domain, three predictors account for 6% of the variance: current grade placement, student self-reported final grade, and parental assistance with homework, meeting with teachers, and/or participation in school activities. The variables are statistically significant.

Significant correlations were reported between the variable, support, and the Leadership Behaviors domain (0.19), between the variable, support, and the Understanding Behaviors domain (0.18), and between the variable, support, and the Helpful/Friendly domain (0.12). However, these correlations were very small. High correlations were reported between the following domains: Understanding Behaviors and Leadership Behaviors (0.79), Admonishing Behaviors and Uncertain Behaviors (0.62), Helpful/Friendly Behaviors and Leadership Behaviors ((0.76), Helpful/Friendly Behaviors and Understanding Behaviors (0.79), Dissatisfied Behaviors and Uncertain Behaviors (0.68), and Dissatisfied Behaviors and Admonishing Behaviors (0.69).

In summary, the findings to research question 3 were:

- The researcher could not ascertain if the student's stated chronological age had an influence on the ratings pertaining to the teacher's interpersonal relationship behavior. Seventy percent (400) of the high school Hispanic students who completed the Questionnaire on Teacher Interaction were reportedly between 16 and 18 years of age.
- The researcher could not ascertain if the student's current grade placement had an influence on the ratings pertaining to the teacher's interpersonal relationship behaviors. Sixty five percent (394) of the high school Hispanic students who completed the Questionnaire on Teacher Interaction were enrolled in either the 9<sup>th</sup> or 10<sup>th</sup> grade.
- High school Hispanic students perceived teacher interpersonal relationship behaviors similarly, regardless of self-reported grades of passing (90-1000 or failing (<70) in mathematics.
- High school Hispanic students who reported a grade of 90-100 in mathematics, reported high means on the Strict, Admonishing, Uncertain, and Dissatisfied Behaviors domains.
- High school Hispanic students who reported a grade less the 70 in science reported higher means in the Leadership, Understanding, Helpful/Friendly Behaviors domains than high school Hispanic students who reported a grade of 90-100 in science.
- High school Hispanic students who reported a final grade of 90-100 in science, reported higher means in the Admonishing, Strict, Uncertain, and Dissatisfied Behaviors

domains than high school Hispanic students who reported a grade of less than 70 in science.

- Eighty-two percent (469) of the high school Hispanic students, who completed the Questionnaire on Teacher interaction, reported that their parents were involved in decisions regarding their high school program.
- Sixty-two percent (352) of the high school Hispanic students, who completed the Questionnaire on Teacher Interaction, reported that community members, outside of their immediate family, did not get involved in decisions regarding their high school program.
- The students' current grade placement, self reported final grade, and parental support accounted for 14% of the variance in the Understanding Behaviors domain and 16 % of the variance in the Admonishing behaviors domain.

### Summary

The purpose of this study was to determine what teacher interpersonal relationship behaviors are related to Hispanic student success in high school. Quantitative research methods were used in this investigation. Five hundred seventy-two high school Hispanic students completed the Questionnaire on Teacher Interaction. Specifically, 259 high school Hispanic students identified the mathematic teachers' interpersonal relationship behaviors and 313 high school Hispanic students identified the science teachers' interpersonal relationship behaviors.

The data were analyzed using descriptive statistics, analysis of variance, and stepwise multiple regression analysis to determine patterns and trends. Significant findings of the study were:

- High school Hispanic students ranked the teacher's Leadership Behaviors, Understanding Behaviors, and Helpful/Friendly Behaviors with the highest means and Admonishing, Dissatisfied, and Uncertain Behaviors with the lowest means.
- High school Hispanic students in a district with a large percentage of Hispanic students reported a high mean in mathematics in the Leadership, Understanding, and Helpful/Friendly Behaviors domains.
- High school Hispanic students in the district with a small percentage of Hispanic students reported a higher mean in science in the Understanding Behaviors domain.
- Admonishing, Uncertain, and Dissatisfied Behavior domains were reported with the lowest means in both science and mathematics by both groups of high school Hispanic students.
- The student's stated chronological age was not a relevant factor in the responses obtained. The majority of the responses were obtained from students 16-18 years of age.
- High school Hispanic students perceived teacher interpersonal relationship behaviors similarly, regardless of a self-reported final grade of passing (90-100) or failing (<70) in mathematics.
- High school Hispanic students who reported a final grade of 90-100 in mathematics, reported high means on the Strict, Admonishing, Uncertain, and Dissatisfied Behaviors domains.



- High school Hispanic students who reported a final grade less than 70 in science reported higher means in the Leadership, Understanding, Helpful/Friendly Behaviors domains than high school Hispanic students who reported a grade of 90-100 in science.
- High school Hispanic students who reported a final grade of 90-100 in science, reported higher means in the Admonishing, Strict, Uncertain, and Dissatisfied Behaviors domains than high school Hispanic students who reported a final grade of less than 70 in science.
- The majority of the students reported that their parent(s) were involved in decisions regarding their high school program.
- More than half of the students reported that their parent(s) did not spend any time with them in school related activities. However, 40% of the students reported that their parent(s) did spend 1-5 hours per week involved in school related activities.
- More than half of the students reported that community members, outside of their immediate family, did not get involved in decisions regarding their high school program.

This chapter reviewed the purpose of the study, research questions, setting, and findings. Conclusions, implications, and recommendations drawn from the data are presented in the next chapter.

## CHAPTER V

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

#### Introduction

A significant percentage of Hispanic students are dropping out of high school. Understanding why students drop out of school is a complex problem influenced by a number of direct and indirect factors related to the individual, family, school, and community that interact and influence the decision over a long period of time (Stanard, 2003). The academic success of many Hispanic students is affected by the nature of the teacher-student relationship (Marshall, 2002). Hispanic students almost unanimously identify “someone caring” as the most important factor in academic success (Duany & Pittman, 1991, p.7).

Hispanic students may perceive their teachers as engaged in inadequate student–teacher interaction. Many Hispanic students who have left school without a diploma, have left because no one had established individual relationships with them, nor communicated high academic expectations to them, nor provided them with meaningful opportunities to achieve those expectations (Secada, et al., 1998). The teachers’ lack of interest/concern in students can promote alienation. Subsequently, high school Hispanic students may lack the motivation to succeed if they feel that the teachers do not expect them to succeed or care about their success. Thus, teacher behaviors may negatively impact the student’s achievement and success in high school. The focus of this study was to identify which teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher interaction, are related to Hispanic student success in high school.

High school Hispanic students in two public school districts in Georgia completed the Questionnaire on Teacher Interaction. A total of 572 students participated in the study. The majority of the participants were reportedly 16-18 years of age. Focus groups were also conducted with school personnel in both districts to address issues relevant to high school Hispanic student success. One district, located in Northern Georgia, had a large Hispanic student enrollment in the high school, whereas the other, located in Central Georgia, had a comparatively smaller high school Hispanic student enrollment. This study was designed to answer the following major research question: What are the teacher interpersonal relationship behaviors related to Hispanic student success in high school? Several sub questions guided the study:

- How do high school Hispanic students identify teacher interpersonal relationship behaviors within the eight domains of the Model for Interpersonal Behavior on the Questionnaire on Teacher Interaction?
- Which teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, vary by setting and selected academic disciplines: mathematics and science?
- Do the teacher interpersonal relationship behaviors, as identified by high school Hispanic students on the Questionnaire on Teacher Interaction, differ by certain characteristics: student's stated chronological age, current grade placement, student self-reported final grade in mathematics/science, and parental/community support?

On the Questionnaire on Teacher Interaction, high school Hispanic students identified Leadership Behaviors, Understanding Behaviors, and Helpful/Friendly

Behaviors as most prevalent in the mathematics/science teachers who contributed to their success. Students' self-reported grades in math and science were higher in classrooms in which students perceived greater leadership, helping/friendly, and understanding behaviors in their teachers. The most prevalent behaviors were indicative of the teacher's organizational procedures within the classroom setting, the teacher's demonstration of empathy, interest, confidence, and openness, and the teacher's considerate and friendly manner that inspired confidence and trust on the students' behalf. High school Hispanic students identified Uncertainty Behaviors, Admonishing Behaviors, and Dissatisfaction Behaviors as being least prevalent among teachers who contributed to their school success. These behaviors were indicative of the teacher's tendency to show dissatisfaction, question, criticize, get angry, correct, and punish students, and the teacher's apologetic demeanor and tendency to keep a low profile.

The relationship among teacher interpersonal relationship behaviors and the percentage of high school Hispanic students in a district was examined in relation to the subject area (mathematics/science) reported. The interaction between the percentage of high school Hispanic students in a district and the subject area (mathematics/science) was significant in the Understanding, Admonishing, and Helpful/Friendly Behaviors domains. The high school Hispanic students in the district with a small percentage of Hispanic students rated their science teachers as exhibiting understanding and helpful/friendly behaviors more frequently. These students also reported that their mathematics teachers exhibited admonishing behaviors more frequently. The high school Hispanic students in the district with a large percentage of Hispanic students reported that mathematics teachers exhibited understanding and helpful/friendly behaviors more frequently. These

students also reported that science teachers exhibited admonishing behaviors more frequently.

The majority of the participants reported that their parent(s) were involved in decisions regarding their high school program and spent none/very little time with the student in school related activities. Their parent(s) provided none or very little help with homework. Community members, outside of the immediate family, did not get involved in decisions regarding the students' high school program.

### Discussion

The graduation rate for Hispanic students is considerably below the norm. This investigation of high school Hispanic students' perceptions of their teachers' interpersonal relationship behaviors added information to the scholarly research and literature in the field of high school Hispanic students' academic success. The academic success of many Hispanic students is affected by the nature of the teacher/student relationship (Marshall, 2002). Students learn to think of themselves as learners when they identify with school and with their teachers. This means the development of strong and meaningful relationships with their teachers (Nieto, 2000). Secondary school students evaluate their teachers according to the teacher's ability to develop personal relationships with pupils (Kutnick & Jules, 1983). While instructional methodology is an important consideration, exceptional teaching can be described in terms of teacher-student relationships (Wubbels, Levy, & Brekelmans, 1997).

As schools become increasingly diverse in their scope, an examination of the interaction of culturally sensitive factors of students' learning environments with learning processes is of critical importance (Fisher, Fraser, & Rickards, 1997). Many students

come from communities with widely differing cultural practices. The teaching and learning strategies adopted in science and mathematics classrooms can be perceived as being in conflict with the natural learning strategies of the learner. Some teachers can use practices that may inadvertently conflict with students' previous learning patterns, home environments, and morals and values. The purpose of the study by Fisher, Fraser, & Rickards (1997) was to determine associations between science and mathematics students' perceptions of their classroom learning environments. The subjects in the study were 3,994 students from 182 secondary school science and mathematics classes in 35 coeducational schools in Western Australia and Tasmania. The students completed the Questionnaire on Teacher Interaction, an attitude to class scale, and questions relating to cultural background (Fisher, Fraser, & Rickards 1997). Furthermore, students from Asian backgrounds had statistically high mean scores on the Questionnaire on Teacher Interaction scales of Leadership, Helping/Friendly, Understanding, and Student Responsibility/Freedom. The results of the investigation by Fisher, Fraser, & Rickards (1997) correlated, in part, with this current study. The high school Hispanic students (n=572) reported that teachers who contributed to their success exhibited more Leadership, Helping/Friendly, and Understanding behaviors, and less Admonishing, Dissatisfied, Uncertain, and Strict behaviors.

In the study by Fisher, Rickards, Goh, & Wong (1997), 720 students in Singapore, and 705 students in Australia responded to the Questionnaire on Teacher Interaction (QTI). It was reported that the QTI scales, Leadership, Helpful/Friendly, Understanding, and Student Responsibility/Freedom were significantly and positively associated with the attitude towards science classes in both countries. In this current investigation, there were

313 high school Hispanic students that described the behavior of their current or most recent science teacher. Of these, 267 students were from a district with a large percentage of Hispanic students and 46 were from a district with a much smaller percentage of high school Hispanic students. The academic performance of the Hispanic students in the district with a higher percentage of high school Hispanic students exceeds the reported state of Georgia pass/pass plus percentage of 59% in science on the Georgia High School Graduation Tests (GHSGT). Specifically, in 2005, 64% of 11<sup>th</sup> grade Hispanic students who took the GHSGT, passed the science portion (GA Dept. of Education, 2005-2006). In the district with the lower percentage of high school Hispanic students, 42% of the Hispanic students who took the GHSGT passed the science portion. The performance of the Hispanic students in the district with a lower percentage of high school Hispanic students was below the reported 2005 pass/pass plus percentage (59%) for Hispanic students in the State of Georgia.

The data suggested that the students' responses on the Questionnaire on Teacher Interaction (QTI) did not differ significantly in relation to the number of high school Hispanic students in a district. On the QTI, high school Hispanic students reported evidence of teacher interpersonal relationship behaviors in the scales measuring Leadership Behaviors, Understanding Behaviors, and Helpful/Friendly Behaviors. Thus, the behaviors identified as positively associated with student success were similar in both studies. The findings in this current investigation are supportive of the research of Fisher, Rickards, Goh, & Wong (1997).

In his research, Crosnoe (2005) examined four high school Hispanic student profiles: 1.) low-achieving and weakly oriented, 2.) low-achieving and strongly oriented,

3.) high-achieving and moderately oriented, and 4.) high-achieving and strongly oriented.

The two dimensions of schooling, academic and social-psychological, were taken into consideration in these profiles. Crosnoe (2005) reports that investigation of the two dimensions, achievement and school orientation, provides the foundation needed to improve the educational services available to Hispanic students. In conjunction with understanding these dimensions, an understanding of the interpersonal behavioral characteristics Hispanic students seek in their teachers was offered by this researcher's investigation. Positive teacher-student relationships are worthwhile process goals of education.

A focus on educational resiliency leads to improvement in the education of students at risk of academic failure. The use of the risk and resilience framework guided this research in the social domain of academic success. High school Hispanic students' perceptions of caring and support foster interactions leading to and sustaining pupil resiliency. Through their responses on the Questionnaire on Teacher Interaction, the high school Hispanic students in this study provided evidence that caring and supportive teachers demonstrated understanding, concern, and encouragement. The students' responses also suggested that caring and supportive teachers expected them to achieve and succeed through participation in class and completion of assignments. High achievers associate caring with assistance in academic matters and direct attention is not always necessary; whereas, low achievers equate caring with certain personality traits (i.e. patience, tolerance, listening) and prefer direct, personnel interaction (Phelan, Davidson, & Hanh, 1992). In this investigation of high school Hispanic students' perceptions, the self-reported final grade in either mathematics or science accounted for statistically



significant variability in seven of the eight domains of the Model for Interpersonal Teacher Behavior.

The forces that affect the social adjustment and academic performances of minority students are not limited to the school and the classroom, they also include those from the minority community (Ogbu, 1992). These community forces appear to be somewhat different for different minorities and they interact differently with the societal and school factors, producing different educational results. Some of the community forces that Ogbu (1992) defines are the cultural and language frame of reference for judging appropriate behavior and affirmation of group membership and solidarity. In addition, a combination of cultural models of what it means to be a minority, and the actions minorities use or do not use in their pursuit of formal education are significant community forces. School, family, and community partnerships are designed to motivate, engage, guide, and energize students to produce their own successes (Epstein, 1995). A majority (62%) of the high school Hispanic students in this researcher's investigation reported that community members did not get involved in decisions regarding their high school program. This variable did not contribute to the explanations of teacher interpersonal relationship behaviors. Epstein (1995) reported that some students succeed in school without much family/community support if the school has excellent academic and support programs. However, parental involvement was reported by a majority of the high school Hispanic students as evidenced in school decisions. Parent(s) were said to provide little assistance with homework/school activities. Ginsburg's & Hanson's (1986) research supports that family-involvement practices at home influence high school students' academic achievement.

Schools are better able to fulfill their potential when they are armed with information that enhances the understanding of diverse populations. School personnel must connect to Hispanic students and their families and there must be a shared belief that Hispanic students belong (Secada, et al., 1998). In this investigation, school personnel conveyed their commitment to support the academic achievement of all students in the focus group discussions. The principal's involvement in framing, conveying, and sustaining school goals represents an important domain of influence on student outcomes (Cavazos, 1999). The experiences related were suggestive of instruction that went beyond the classroom. Parental and community involvement was evidenced in language programs and post-secondary options. Communities with a larger percentage of high school Hispanic students appeared to promote a broader awareness of the contribution made by Hispanics.

### Conclusions

High school environments that support and foster positive learning experiences have been investigated in educational research. Students have reported that they appreciate a well-organized and orderly environment with a teacher who cares (Phelan, et al., 1992). Research on learning environments, particularly teacher-student relationships, suggests that these relationships promote improved student outcomes (Fraser & Walberg, 2005). Based on the findings in this study and the findings reported in previous literature, the researcher concludes:

1. Teachers are perceived by high school Hispanic students as evidencing Leadership Behaviors, Understanding Behaviors, and Helpful/Friendly Behaviors, as measured on the Questionnaire on Teacher Interaction. These

reported behaviors provide evidence of the teachers' ability to hold students' attention, listen to students' concerns, and assist students as needed. However, high school Hispanic students recognize Admonishing and Strict Behaviors favorably in relation to their success in school.

2. The interaction between the percentage of Hispanic students in a district and the subject area (mathematics/science) was significant in the Understanding Behaviors domain, the Admonishing Behaviors domain, and the Helpful/Friendly Behaviors domain, as measured on the Questionnaire on Teacher Interaction.

3. The majority of the high school Hispanic students reported that their parent(s) were involved in decisions regarding their high school program and that community members, outside of their immediate family, did not get involved in decisions regarding their high school program.

#### Implications

*The choices and decisions we make about Hispanic education in the U.S. today are choices we make about the future of the United States itself. We know that the achievement levels can be raised. The question is whether we have the will to do what we know works. If we're going to set high expectations of students, we must have high expectations of ourselves to do what it takes to make sure all of our students can make the grade. – President William J. Clinton, June 15, 2000.*

Demographics provided by the Census Bureau direct attention to the current and projected significant increase of Hispanics in the United States. The U.S. Census Bureau estimates that by the year 2050, racial and ethnic minorities will account for forty-seven

percent of the nation's population. The President's Advisory Commission on Educational Excellence for Hispanic Americans stated in their report (2003) that low societal expectations for Hispanic youth, poor academic instruction in reading, and school personnel who are poorly prepared to teach Hispanic students were issues contributing to the dropout problem plaguing Hispanic students (President's Advisory Commission on Educational Excellence, 2003). Placing the blame for student failure primarily on students and their families has freed schools of education from considering how their own practices in teacher education have colluded to perpetuate academic failure for those students who differ from the majority (Nieto, 2000). As the Hispanic population increases throughout the nation, its impact will be apparent on most aspects of schooling including teaching strategies/techniques and school/community relations (Marshall, 2002).

The findings of this study have an implication in teacher training. Improving teacher training is cited as critical to improving the high school dropout rate (Stern, 2004). Although it has been a stated goal in the United States that all individuals, regardless of family background, should benefit from their education, many students have not (Nieto, 2000). Educators have divergent ideas and attitudes about minority students. Teacher education must be multi/intercultural. Hispanics need to know that a pluralistic society welcomes cultural differences, and they, as Hispanics, do not have to distance themselves from their families and traditions and homogenize to be considered successful students. Individuals who find themselves and their culture underrepresented in the school curriculum cannot help but feel lost and resentful. Without a multicultural emphasis, minority students feel like outsiders.

Culturally, Hispanic students come to school with a set of experiences, customs, and values, which differ from those of others. Previous life experiences, family issues, behavioral adjustment, academic performance and the second language acquisition process are all important for educators to consider in evaluating the current status of Hispanic students. Some Hispanic students may have been exposed to stressful or traumatic life experiences at a very young age. They may have endured separation from parents and siblings, frequent moves, poverty, hunger, dangerous exoduses from their countries, and general uprooting. Others who are in the United States illegally live in fear of the authorities. Some of these students may be in need of medical services, which may not have been affordable or available in their country. Educationally, some of these students may have a history of inconsistent schooling. Education may not be mandatory or even available to them in their country. Students may have attended overcrowded school with limited resources. The studies by Barr & Emans (1930), Charter & Waples (1929), and Kratz (1894) (as cited in Smith, 1997) were said to develop an understanding of personality traits and professional knowledge considered necessary for a person to be a successful teacher. The characteristics of being a demanding, knowledgeable, pedagogically sound teacher, while being supportive of the students' emotional and social need were repeated from the perspectives of the students, teacher, and administrator (Smith, 1997).

Many educators may not be knowledgeable about the differences in diverse populations. What American teachers may perceive as overindulgence and lack of responsibility may be appropriate behavior for some Hispanic students. Behaviorally, an educator may witness behaviors ranging from passivity to acting out. Hispanic students

may experience temporary adjustment problems because of the stresses and changes they face in adapting to a new country, language, culture, school, and life situation. The results of this study can be used as a basis for self-reflection by teachers on their teaching performance. Teachers may decide to change the way they behave in an attempt to create a more desirable classroom environment.

Administrators need specific skills and practices and staffs to create learning environments that readily welcome Hispanic students. School leaders facilitate successful practices, function as primary change agents, and may use their instructional leadership to enhance the academic success of Hispanic students through teacher accountability for the academic performance of all students. Accountability legislation charges schools with the responsibility of ensuring success for all students. The school culture can support and ensure educational excellence for all students. A nurturing school climate has the power to overcome risk factors in the lives of students (Bernard, 1993). Through effective instructional leadership, teachers can be empowered to develop and implement student academic goals. The results of this investigation served as a basis for school leaders to take note of the school climate and culture and encourage behaviors that support academic success for all students. Educators cannot control demographics and family conditions, but can change/enforce policies and practices to ensure that the needs of individuals at risk of academic failure are addressed.

A school culture of oneness supports growth of all students. Schools can incorporate resiliency- building factors and create programs around predictors of academic success. Cultural competence is the necessary but not sufficient condition for students and teachers to acknowledge and appreciate the values, experiences, and

contributions of all groups. A culturally responsive education and recognition of racism, involve an acknowledgement of beliefs and attitudes. Once educators acknowledge the nature of racism, they can explore the relationship between racism and issues of diversity and equity in personnel policies and school administration.

The results of this investigation suggested that teachers who give students the support necessary to attain the high expectations established promote students' academic success. The results of the questionnaire would appear to stimulate teachers to reflect on their own teaching practices. School leaders who embrace diversity and respond to the needs of every student contribute to the success of every student. For local school systems, a more proactive approach to meet the needs of the growing Hispanic population should be undertaken. Neither the size of the system nor the percentage of Hispanic students enrolled should limit the opportunities offered. School systems with a smaller percentage of Hispanic students would benefit from consulting with those systems with a large percentage of successful Hispanic students to gain insight relative to the programs contributing to school success.

Research on teacher- student interaction is not only of interest to educational researchers, but also to policy makers who wish to improve student outcomes through positive teacher-student interactions (Fraser & Walberg, 2005). For policymakers, the results of this study provided an opportunity to insure that all school districts have programs designed to meet the needs of Hispanic students. In addition, policymakers can assess progress and tailor solutions oriented towards decreasing the Hispanic dropout rate. However, forecasting future trends in Hispanic students' education may be difficult due to the continuing flow of immigrants, including many of low economic means and minimal

parental education. Professional development opportunities would enhance educators' cultural competence and provoke thinking relative to diversity issues. The information found in this study could be disseminated as a presentation at a conference/workshop or as a submitted journal article.

### Recommendations

The purpose of this study was to investigate the teacher interpersonal relationship behaviors contributing to Hispanic student success in high school. The administration of the questionnaire took little time and the instructions to the student participants were clear. However, some students reported difficulties with understanding words such as "lenient" or "sarcastic," though no problems were encountered when these were explained to participants.

With this purpose in mind and the results obtained from this study, the following considerations for future research are offered:

1. Because data for this study were limited to high schools, an investigation of elementary and/or middle school students should be undertaken. Performance on the Criterion Referenced Competency Tests (CRCT) may be used as a barometer of student achievement. Additional investigation may be undertaken in higher education to explore if teacher interpersonal relationship behaviors contribute to successful completion of post secondary education.
2. Because this study focused on self identified Hispanic individuals without regard to their birthplace, time spent in the United States, and/or primary language spoken, further investigation may be warranted to account for acculturation issues. Specifically, to investigate whether the amount of time a Hispanic student has



lived in the United States, their birthplace, and/or primary language has an impact on their perceptions of teacher interpersonal relationship behaviors.

3. Because this study did not account for teachers' perceptions relative to their interpersonal relationship behaviors, further investigation, comparing students' perceptions of teachers and teachers' self-perceptions, may provide evidence of the culture within the classroom and provide additional information to the current literature. In addition, the communal nature of the school can be considered. That is, the proportion of Hispanic teachers and students in the school.

4. Because this study did not account for gender differences in students, further research may address differences based on gender in Hispanic students' perceptions of teacher interpersonal relationship behaviors. The gender of the teacher being rated may also be taken into consideration.

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APPENDICES

APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

Georgia Southern University Office of Research Services & Sponsored Programs <b>Institutional Review Board (IRB)</b>		
Phone: 912-681-5465		Administrative Annex P.O. Box 8005 Statesboro, GA 30460
Fax: 912-681-0719	Ovsight@GeorgiaSouthern.edu	

**To:** Iris Torres Crews  
136 Hampton Way  
Macon, GA-31220

**CC:** Barbara Mallory  
P.O. Box-8131

**From:** Office of Research Services and Sponsored Programs  
Administrative Support Office for Research Oversight Committees  
(IACUC/IBC/IRB)

**Date:** April 23, 2007

**Subject:** Status of Application for Approval to Utilize Human Subjects in Research

After a review of your proposed research project numbered: **H07206**, and titled "**Identification of Teacher Interpersonal Relationship Behaviors Related to High School Hispanic Student Success**", it appears that (1) the research subjects are at minimal risk, (2) appropriate safeguards are planned, and (3) the research activities involve only procedures which are allowable.

*Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that the Institutional Review Board has approved your proposed research.*

**This IRB approval is in effect for one year from the date of this letter.** If at the end of that time, there have been no changes to the research protocol; you may request an extension of the approval period for an additional year. In the interim, please provide the IRB with any information concerning any significant adverse event, **whether or not it is believed to be related to the study**, within five working days of the event. In addition, if a change or modification of the approved methodology becomes necessary, you must notify the IRB Coordinator **prior** to initiating any such changes or modifications. At that time, an amended application for IRB approval may be submitted. Upon completion of your data collection, you are required to complete a *Research Study Termination* form to notify the IRB Coordinator, so your file may be closed.

Sincerely,

N. Scott Pierce  
Director of Research Services and Sponsored Programs

APPENDIX B

QUESTIONNAIRE ON TEACHER INTERACTION

## QUESTIONNAIRE ON TEACHER INTERACTION (QTI)

### STUDENT QUESTIONNAIRE

This questionnaire asks you to describe the classroom behavior of your current or most recent **Science** teacher. This is not a test. Your opinion is what is wanted. **DO NOT WRITE YOUR NAME.** Your responses are confidential. Your teacher will NOT read your answers. Your responses will not affect your grade.

This questionnaire has 48 sentences about the teacher. For each sentence, circle the number corresponding to your response. For example:

	Never					Always
This teacher expresses himself / herself clearly.	0	1	2	3	4	

If you think your teacher always expresses himself / herself clearly, circle the 4. If you think your teacher never expresses himself / herself clearly, circle the 0. You can also choose the numbers 1, 2, and 3, which are in between. If you want to change your answer, cross it out, and circle a new number. Thank you for your participation.

**Ethnicity:**

- Asian (1)
- Black (2)
- Hispanic (3)
- Native American (4)
- White (5)
- Multiracial (6)

- Grade:**
- 9 (1)
  - 10 (2)
  - 11 (3)
  - 12 (4)

- Age:**
- 13-15 (1)
  - 16-18 (2)
  - 19-21 (3)
  - 22+ (4)

**Parental/Community Support:**

- A. To what extent do your parent(s) provide help with homework, meet with teachers, and/or participate in school activities?  
 NONE (1)  VERY LITTLE (2)  SOMETIMES (3)  FREQUENTLY (4)
- B. Are your parents involved in decisions regarding your high school program? (for example: staying in school, dropping out, going to college)  
 YES (1)  NO (2)
- C. Do any community members or relatives, outside of your immediate family, get involved in decisions regarding your high school program ?  
 YES (1)  NO (2)
- D. In a typical week, how many hours do your parent(s) spend with you in school related activities?  
 NONE (1)  1-5 HOURS (2)  MORE THAN 5 HOURS (3)

	Never			Always
1. This teacher talks enthusiastically about her/his subject.	0	1	2	3 4
2. This teacher trusts us.	0	1	2	3 4
3. This teacher seems uncertain.	0	1	2	3 4
4. This teacher gets angry unexpectedly.	0	1	2	3 4
5. This teacher explains things clearly.	0	1	2	3 4
6. If we don't agree with this teacher, we can talk about it.	0	1	2	3 4
7. This teacher is hesitant.	0	1	2	3 4
8. This teacher gets angry quickly.	0	1	2	3 4
9. This teacher holds our attention.	0	1	2	3 4
10. This teacher is willing to explain things again.	0	1	2	3 4
11. This teacher acts as if she/he does not know what to do.	0	1	2	3 4
12. This teacher is too quick to correct us when we break a rule.	0	1	2	3 4
13. This teacher knows everything that goes on in the classroom	0	1	2	3 4
14. If we have something to say, this teacher will listen.	0	1	2	3 4
15. This teacher lets us boss her/him around.	0	1	2	3 4
16. This teacher is impatient.	0	1	2	3 4
17. This teacher is a good leader.	0	1	2	3 4
18. This teacher realizes when we don't understand.	0	1	2	3 4
19. This teacher is not sure what to do, when we fool around.	0	1	2	3 4
20. It is easy to pick a fight with this teacher.	0	1	2	3 4
21. This teacher acts confidently.	0	1	2	3 4
22. This teacher is patient.	0	1	2	3 4
23. It's easy to make a fool out of this teacher.	0	1	2	3 4
24. This teacher is sarcastic.	0	1	2	3 4
25. This teacher helps us with our work.	0	1	2	3 4
26. We can decide some things in this teacher's class.	0	1	2	3 4
27. This teacher thinks that we cheat.	0	1	2	3 4
28. This teacher is strict.	0	1	2	3 4
29. This teacher is friendly.	0	1	2	3 4
30. We can influence this teacher.	0	1	2	3 4
31. This teacher thinks that we don't know anything.	0	1	2	3 4
32. We have to be silent in this teacher's class.	0	1	2	3 4
33. This teacher is someone we can depend on.	0	1	2	3 4
34. This teacher lets us fool around in class.	0	1	2	3 4
35. This teacher puts us down.	0	1	2	3 4
36. This teacher's tests are hard.	0	1	2	3 4
37. This teacher has a sense of humour.	0	1	2	3 4
38. This teacher lets us get away with a lot in class.	0	1	2	3 4
39. This teacher thinks that we can't do things well.	0	1	2	3 4
40. This teacher's standards are very high.	0	1	2	3 4
41. This teacher can take a joke.	0	1	2	3 4
42. This teacher gives us a lot of free time in class.	0	1	2	3 4
43. This teacher seems dissatisfied.	0	1	2	3 4
44. This teacher is severe when marking papers.	0	1	2	3 4
45. This teacher's class is pleasant.	0	1	2	3 4
46. This teacher is lenient	0	1	2	3 4
47. This teacher is suspicious.	0	1	2	3 4
48. We are afraid of this teacher.	0	1	2	3 4

\*\*\*FINAL GRADE YOU RECEIVED IN THIS SCIENCE CLASS:\_ 90-100 \_ 80-89 \_70-79 \_ Less than 70

## QUESTIONNAIRE ON TEACHER INTERACTION (QTI)

### STUDENT QUESTIONNAIRE

This questionnaire asks you to describe the classroom behavior of your current or most recent **Mathematics** teacher. This is not a test. Your opinion is what is wanted. **DO NOT WRITE YOUR NAME.** Your responses are confidential. Your teacher will NOT read your answers. Your responses will not affect your grade.

This questionnaire has 48 sentences about the teacher. For each sentence, circle the number corresponding to your response. For example:

	Never				Always
This teacher expresses himself / herself clearly.	0	1	2	3	4

If you think your teacher always expresses himself / herself clearly, circle the 4. If you think your teacher never expresses himself / herself clearly, circle the 0. You can also choose the numbers 1, 2, and 3, which are in between. If you want to change your answer, cross it out, and circle a new number. Thank you for your participation.

**Ethnicity:**

- Asian (1)
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- Hispanic (3)
- Native American (4)
- White (5)
- Multiracial (6)

- Grade:**  9 (1)  
 10 (2)  
 11 (3)  
 12 (4)

- Age:**  13-15 (1)  
 16-18 (2)  
 19-21 (3)  
 22+ (4)

**Parental/Community Support:**

- A. To what extent do your parent(s) provide help with homework, meet with teachers, and/or participate in school activities?  
 NONE (1)  VERY LITTLE (2)  SOMETIMES (3)  FREQUENTLY (4)
- B. Are your parents involved in decisions regarding your high school program? (for example: staying in school, dropping out, going to college)  
 YES (1)  NO (2)
- C. Do any community members or relatives, outside of your immediate family, get involved in decisions regarding your high school program?  
 YES (1)  NO (2)
- D. In a typical week, how many hours do your parent(s) spend with you in school related activities?  
 NONE (1)  1-5 HOURS (2)  MORE THAN 5 HOURS (3)

	Never			Always
1. This teacher talks enthusiastically about her/his subject.	0	1	2	3 4
2. This teacher trusts us.	0	1	2	3 4
3. This teacher seems uncertain.	0	1	2	3 4
4. This teacher gets angry unexpectedly.	0	1	2	3 4
5. This teacher explains things clearly.	0	1	2	3 4
6. If we don't agree with this teacher, we can talk about it.	0	1	2	3 4
7. This teacher is hesitant.	0	1	2	3 4
8. This teacher gets angry quickly.	0	1	2	3 4
9. This teacher holds our attention.	0	1	2	3 4
10. This teacher is willing to explain things again.	0	1	2	3 4
11. This teacher acts as if she/he does not know what to do.	0	1	2	3 4
12. This teacher is too quick to correct us when we break a rule.	0	1	2	3 4
13. This teacher knows everything that goes on in the classroom	0	1	2	3 4
14. If we have something to say, this teacher will listen.	0	1	2	3 4
15. This teacher lets us boss her/him around.	0	1	2	3 4
16. This teacher is impatient.	0	1	2	3 4
17. This teacher is a good leader.	0	1	2	3 4
18. This teacher realizes when we don't understand.	0	1	2	3 4
19. This teacher is not sure what to do, when we fool around.	0	1	2	3 4
20. It is easy to pick a fight with this teacher.	0	1	2	3 4
21. This teacher acts confidently.	0	1	2	3 4
22. This teacher is patient.	0	1	2	3 4
23. It's easy to make a fool out of this teacher.	0	1	2	3 4
24. This teacher is sarcastic.	0	1	2	3 4
25. This teacher helps us with our work.	0	1	2	3 4
26. We can decide some things in this teacher's class.	0	1	2	3 4
27. This teacher thinks that we cheat.	0	1	2	3 4
28. This teacher is strict.	0	1	2	3 4
29. This teacher is friendly.	0	1	2	3 4
30. We can influence this teacher.	0	1	2	3 4
31. This teacher thinks that we don't know anything.	0	1	2	3 4
32. We have to be silent in this teacher's class.	0	1	2	3 4
33. This teacher is someone we can depend on.	0	1	2	3 4
34. This teacher lets us fool around in class.	0	1	2	3 4
35. This teacher puts us down.	0	1	2	3 4
36. This teacher's tests are hard.	0	1	2	3 4
37. This teacher has a sense of humour.	0	1	2	3 4
38. This teacher lets us get away with a lot in class.	0	1	2	3 4
39. This teacher thinks that we can't do things well.	0	1	2	3 4
40. This teacher's standards are very high.	0	1	2	3 4
41. This teacher can take a joke.	0	1	2	3 4
42. This teacher gives us a lot of free time in class.	0	1	2	3 4
43. This teacher seems dissatisfied.	0	1	2	3 4
44. This teacher is severe when marking papers.	0	1	2	3 4
45. This teacher's class is pleasant.	0	1	2	3 4
46. This teacher is lenient	0	1	2	3 4
47. This teacher is suspicious.	0	1	2	3 4
48. We are afraid of this teacher.	0	1	2	3 4

\*\*\*FINAL GRADE YOU RECEIVED IN THIS MATH CLASS: \_90-100 \_80-89 \_70-79 \_Less than 70



APPENDIX C  
SCORING PROCEDURE FOR THE QUESTIONNAIRE ON TEACHER  
INTERACTION

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**SCORING PROCEDURE FOR THE QUESTIONNAIRE ON TEACHER  
INTERACTION**

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SCALE	ITEMS
Leadership	1, 5, 9, 13, 17, 21
Helpful/Friendly	25, 29, 33, 37, 41, 45
Understanding	2, 6, 10, 14, 18, 22
Student Responsibility/Freedom	26, 30, 34, 38, 42, 46
Uncertain	3, 7, 11, 15, 19, 23
Dissatisfied	27, 31, 35, 39, 43, 47
Strict	28, 32, 36, 40, 44, 48

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Items are scored:	0	for never
	1	for almost never
	2	for sometimes
	3	for almost always
	4	for always