

# The Development of a Scale to Explore the Multidimensional Components of Good Student-Teacher Relationships

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The Student-Teacher Relationship Survey: Student Version was developed and assessed for factor structure using principal components analysis. No instruments measuring students' perceptions of student-teacher relationships have been developed for high school students, and scales that measure related constructs tend to view good student-teacher relationships as a unidimensional construct. Participants were 274 students in grades 9 through 12 attending large urban high schools in the northeastern United States. The principal components analysis identified a seven factor structure: (a) Providing Academic and Personal Support for Students, (b) Showing Concern For and Interest in Students, (c) Motivating Students and Attending to Their Personal Interests, (d) Treating Students with Respect, (e) Being Compassionate to Students' Opinions and Feelings. The factors had internal reliabilities ranging from .74 to .94. The findings of this study indicate good student-teacher relationships have many components and should therefore be viewed as a multidimensional construct.

### Introduction

A review of existing research indicates the many benefits of good student-teacher relationships on students' emotional and academic outcomes. Positive relationships with teachers have been associated with students' increased academic motivation, attachment to school, and likelihood of staying in school (Ensminger & Slusarcick, 1992; Noblit, Rogers, & McCadden, 1995; Pianta, Steinberg, & Rollins,

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1995; Phelan, Davison, & Cao, 1992; Poplin & Weeres, 1992; Roesler, Eccles, & Sameroff, 1998). Poor relationships with teachers have been associated with students' dislike for school, disengagement, and decisions to drop out (Birch & Ladd, 1997; Comfort, Giorgi, & Moody, 1997; Croninger & Lee, 2001; Jordan & McPartland, 1994; National Center for Education Statistics, 1993; Rumberger, 1995; Williamson & Cullingford, 1998). In other words, there are numerous studies that provide evidence supporting the importance of good teacher-student relationships for students' school attachment, motivation, achievement, and school completion. But what exactly are good student-teacher relationships?

The purpose of this study was to construct and validate a scale designed to determine the components of good student-teacher relationships from the perspectives of high school students. Although there are various measures of student-teacher relationships for elementary- and middle-school aged children, there are no validated scales that measure high school students' perceptions of their relationships with teachers. The current study aimed to examine the factor structure of the Student-Teacher Relationship Survey: Student Version, which was developed to assess the components of good relationships with teachers from the perspectives of high school students. A multidimensional measure of good student-teacher relationships can advance our understanding of the nature of teacher relationships experienced by students.

## **Importance of Good Student-Teacher Relationships**

Teachers interact with students on a daily basis, and the types of relationships they have with them directly impact students' social, emotional, and academic experiences at school. Good studentteacher relationships have also been found to promote students' cognitive, social, and emotional development (Brazelton & Greenspan, 2000; Lynch & Cicchetti, 1992; Pianta, 1999; Weare, 2000). Teacher behaviors that students desire have been characterized in many ways, including support, care, respect, understanding, interest, and sensitivity. It has been shown that teachers who demonstrate genuine care for their students and intentionally develop meaningful relationships them can have a positive influence on students' social, emotional, and educational development (Calabrese, Goodvin, & Niles 2005; Hawk & Lyons 2008). For Noddings (1992), a caring relationship involves teachers working together with students, sharing dialogue with them, engaging them, and providing a model for them to follow. Poplin and Weeres (1992) found from their study of four schools in California that when students discussed things they liked about school, they described individuals who "understand, respect others, and are honest, open and sensitive" (p. 12). Similar findings emerged from Phelan, Davidson, and Cao's (1992) interviews with high school students (N = 54), in which students expressed a desire for teachers who cared about them, treated them with respect, and were sensitive to their needs. Many researchers have identified students' need for teachers who showed an interest in them, listened to them, and responded with sensitivity (Turley, 1994; Bibby, & Posterski, 1992; Phelan, Davison, & Cao, 1992; Weeres, 1992).

The positive student outcomes that have been associated with these characteristics include better behavior, increased attachment to school, higher academic achievement, improved attendance, and increased likelihood of completing school. Pianta, Steinberg, and Rollins (1995) found an association between student-teacher relationships defined as, "warm, close, [and] communicative" and students' school adjustment, while Birch and Ladd (1997) found an association between conflict-ridden student-teacher relationships and students' negative attitudes toward school. Lack of connection to caring adults at school has been cited as a major cause of students' alienation from school and their decisions to drop out (Croninger & Lee, 2001; Le Compte & Dworkin, 1991; Rumberger, 1995).

From case studies involving field notes and interviews with two elementary teachers, Noblit, Rogers, and McCadden (1995) found that caring relationships between teachers and students played a significant role in promoting students' academic and social development. They concluded that meeting the emotional needs of students was a prerequisite for learning:

The focal point around which teaching should be organized is not the instrumental but the relational. Without this connection, a

teacher may have the subject-matter knowledge and the technical ability to teach, but the opportunities for real learning will be scarce, because what the teacher does not have is the student. (p.68)

It has been noted that despite evidence that students benefit from having caring teachers, teachers are often forced to prioritize academics over their relationships with students due to the demands of government policy involving standardized testing and teacher accountability. Several writers in the field of school reform have indicated the importance of examining relationships between students and teachers in classrooms (Corbett & Wilson, 1995; Fullan, 1993; Muncey & McQuillan, 1993; Nieto, 1994; Sizer, 1992). Corbett and Wilson (1995) point out how students' feelings have been neglected from reform efforts despite the fact that a common theme in the literature of school improvement is that the quality of human relationships engaged in by students influences the value they attach to their education.

Comer (1988) argues that although student-teacher relationships constitute essential foundations of the learning process, they are sorely overlooked in educational policy discussions:

Despite...the importance of feelings and relationships in fostering student growth and development, this mechanical view of the learning process has prevailed...school reform reports over the past few years have re-emphasized the same issues addressed in the 1920s and '30s--educational standards, school organization and functioning, and teacher training. More than half a century later, educational reform is still paying little attention to relationships, to the role of affect in learning. (pp. 34-35)

Comer contends that it is a result of this neglect that so many students drop out of school. There are many theorists who agree with his view that teaching involves more than the delivery of content and typically requires meeting the emotional needs of students before instruction can be effectively delivered. The need for caring teachers has been identified as the moral virtue needed for reducing students' alienation from school and guiding their moral action (Noddings, 1984; Martin, 1985). Caring for the content area as well as the

student combine to optimize students' learning experiences and as such, are critical components of good student-teacher relationships.

## **Teacher Behaviors Desired By Students**

Poplin and Weeres (1992) found from their study of students in four schools in California that relationships caused most of the problems experienced by students. Relationship problems, particularly relationships between teachers and students, pervaded all of the other difficulties mentioned by students. A theme of care was consistent throughout students' discussions. Students reported that what they liked best about school were occasions when they experienced being cared for by adults. From surveying 4,000 high school students across Canada, Bibby and Posterski (1992) found that students valued relationships more than any other aspect of school. They reported that 85 percent of students believed friendships to be very important, 80 percent placed a high value on "being loved," and 75 percent placed a high value on being respected. Less than one half of the students surveyed said they enjoyed their school experiences, although they felt that teachers could make a difference. Based on their findings, Bibby and Posterski recommended that teachers personalize classrooms and let students know that they care about them on an individual basis.

Care can manifest itself in many ways. Noddings (1992), in a descriptive report of how education might be organized around domains of caring, explained that a teenager who needed to be cared for might just require, "formal respect, informal interaction, expert advice, just a flicker of recognition, or sustained affection" (p. 173). She proposed that all student-teacher relationships involved caring. For example, when a teacher hears a student's response in class, she does not just hear the answer--she hears the student. Noddings (1992) further proposed that although teachers and students have an "unequal relation" in that teachers' purpose is to facilitate students' learning, the caring teacher needs to be cognizant of the student's perspective.

Sergiovanni and Starratt (1983), in defining school climate, explained that how a person feels about a place mediates how he or

she performs in that place and reacts to others within it. If students feel they are involved in caring relationships with teachers, they are more likely to take an interest in their learning and school in general. This viewpoint is supported by research from the field of organizational behavior which has shown that an individual's behavior is largely motivated by his or her perceptions of the way he or she is treated within an organization (Moorman, 1991; Niehoff & Moorman, 1993; Organ, 1988; Organ & Moorman, 1993).

Researchers at the National Center for Education Statistics (1993) found that two of the three conditions students identified as being reasons they dropped out of school were not getting along with teachers and feeling as if they did not belong. Good student-teacher relationships can serve protective functions for students at risk of dropping out. Christman and Macpherson (1996) conducted a study of five restructured high schools in Philadelphia in which data were collected through personal interviews with teachers, students, and administrators, as well as through observations and focus-group discussions with teachers and students. Students reported that much of what was wrong with their schools was directly connected to poor interpersonal relationships within the school. Students could sense when their teachers were not engaged and this caused a parallel response in them. Students felt that they were more motivated when they had teachers who cared about them and they preferred teachers who asked for their input, encouraged them to be active learners, and were responsive to their needs and interests.

Similarly, in an exploration of how teachers promoted effective learning, Turley (1994) found that students wanted to feel that teachers had an interest in them as individuals. Turley gathered data from surveys and interviewed 8 of the 87 students from the survey group. Findings revealed that the teacher's personality was a key component of the classroom:

Openness, authenticity, humor, fairness, patience, a real interest in students as people and a willingness to listen to them are characteristics students appreciate in teachers that they identify as contributing to effective teaching and learning. (p.14)

It is apparent there is a fair-sized body of literature on the importance for students of having good relationships with teachers, but what is missing from the extant literature is an exploration of the actual constructs that comprise good student-teacher relationships. Those that have been identified have rarely been described in behavioral terms (e.g., what behaviors constitute "care" or "fairness"?). Such overarching concepts as respect, care, and interest can mean many different things, so knowing the behaviors that constitute these constructs will be helpful to both teachers and researchers. The Student-Teacher Relationship Survey will also help to identify constructs that have been neglected from previous studies on the relational aspects of schools.

## Development of the Student-Teacher Relationship Survey: Student Version

There is no large-scale, validated, published instrument designed specifically to measure student-teacher relationships in the high school setting. Research indicates that structural factors in elementary and middle schools lend themselves to the formation of closer student-teacher relationships than is possible in high schools. In addition, many high school teachers do not consider it within their purview to focus on the social-emotional needs of students. Because of the unique nature of high school settings and the types of studentteacher relationships that form within them, extant scales designed for elementary and middle schools cannot capture the range of possible behaviors that students consider important for good relationships with teachers. Items for the Student-Teacher Relationship Survey: Student Version were therefore generated from several measures, including items from: NELS:88 Drop-Out Survey (National Center for Education Statistics, 1995), The Barrett-Lennard Relationship Inventory (Barrett-Lennard, 1962), The People in My Life (Cook, Greenberg, & Kusche, 1995), Student Social Support Scale (Nolten, 1994), Hong Kong Classroom Environment Scale (John, Frances, & Hin-wah, 2003), the Questionnaire on Teacher Interaction (QTI; Wubbels & Levy), and the BASC-2 (Behavior Assessment System for Children, Second Edition; Kamphaus & Reynolds). Items that related to interpersonal relationships between students and teachers were selected from these measures, which resulted in an initial pool of 79 items.

### Pilot Test for Validity and Reliability

An online survey with the initial 79 items was created using Surveymonkey software. As a test of validity, ten high school students were administered the survey and asked to discuss their understandings of each item. Lacity and Jansen (1994) define validity as making common sense and seeming right to the reader. In content validity, evidence is obtained by looking for agreement in judgments. While face validity can be established by one person, content validity should be checked by a panel. Content validity was established through students' consensus in their understanding of the items. Students were also asked to offer suggestions of other teacher behaviors that could be added to the survey items. None of the items suggested were significantly different from those addressed in the pilot survey, so no additional items were added. Construct validity was ensured by using items from previously published scales for assessing students' relationships with teachers. All of the scales selected reported good construct validity.

Items were scored on a 6-point Likert-type scale type format (6 = very strongly agree to 1 = very strongly disagree). In order to reduce the number of items in the survey, student scores were collapsed to form dichotomous agree-disagree categories. Items that received only disagree endorsements were deleted. Cronbach's alpha was calculated as a test of reliability. Items that were highly correlated ( $\pm$  .8) were deleted. These procedures resulted in the number of items in the survey being reduced from 79 to 55.

### **Recruitment Procedures**

Eight large schools--those with over 750 students--were selected as sites from which to recruit participants. Schools were located in one public school district in the northeastern United States. A letter describing the study was placed in teachers' mailboxes at each of the schools. Teachers who agreed to share information about the study with their students were given a letter to read in one or more of their classes informing students of the study and asking for their

participation. Teachers were also given parental/guardian permission letters to distribute to and collect from students. On returning the signed permission letters, students were given the Web site address of the online survey. Most teachers made computer time available for students during class time. Some students took the survey during their study hall periods or at home.

### **Participants**

A sample of 274 students (54.4% female and 45.6% male) in 8 different high schools took the survey. Of these students, 28% (n = 76) were in Grade 9, 19% (n = 51) were in Grade 10, 19% (n = 52) were in Grade 11, and 34% (n = 92) were in Grade 12. Self-reported race/ethnicity of the students indicated that: 42% were African American, 31% were White, 16% were more than one race, 10% were Hispanic or Latino, 0.7% were American Indian or Alaska Natives, and 0.4% were Native Hawaiian or Other Pacific Islander. The highest degree obtained by the primary parent, defined in the survey as, "the parent, guardian, or stepparent with whom you live most of the time," was as follows: 45% had a high school education or less, 27% had obtained some college, 18% had graduated from college, and 10% had obtained a graduate or professional degree.

### Results

### **Exploratory Factor Analysis**

The student sample size of 274 was sufficient to meet the minimum sample sizes of 100 to 200 observations recommended for factor analysis (Guadagnoli & Velicer, 1988). An exploratory factor analysis was conducted on the 55-item scale using the principal components analysis extraction method with a direct oblimin rotation. Direct oblimin rotation is an oblique rotation method which assumes the factors are correlated. Tabachnick and Fiddell (2007, p. 646) propose that "If correlations exceed .32, then there is 10% (or more) overlap in variance among factors, enough variance to warrant oblique rotation unless there are compelling reasons for orthogonal rotation." Factor correlations of < .3 were obtained from the direct oblimin rotation. Varimax rotations were then performed to obtain a

cleaner factor solution. Varimax rotation is a type of orthogonal rotation used for uncorrelated factors that "produces factors that have high correlations with one smaller set of variables and little or no correlation with another set of variables" (Stevens, 1996). The number of factors selected for rotation was determined by (a) using the Kaiser criterion--factors with eigenvalues greater than one, (b) using the number of factors obtained from the pilot survey, where factors had more than three items and good reliability (> .70), and (c) scree plots.

The principal components extraction indicated an eight factor solution. The eighth factor was dropped as it had only two items, and factors with fewer than three items are generally weak and unstable (Costello & Osborne, 2005). This factor also had low reliability ( $\alpha = .48$ ). Scree plot results also indicated a seven factor solution. Dropping these two items resulted in 53 items being retained for the subsequent analyses. The items that comprised the seven factors from the principal components analysis are presented in Table 1.

Internal consistency estimates were computed using Cronbach's coefficient alpha. Nunnally (1978) indicated 0.7 to be an acceptable reliability coefficient. The seven factors obtained reliabilities ranging from .74 to .94, so all were considered to have good reliability. Labels for the seven factors were assigned by referring to the related literature and by conferring with colleagues.

Factor 1 consisted of 17 items,  $\alpha = .94$ , and was labeled Providing Academic and Personal Support for Students. This factor reflected students' desires for teachers who were patient, understanding, and supportive in their teaching. Factor 2 consisted of 15 items,  $\alpha = .92$ , that reflected the importance students placed on teachers' interest in them as individuals, as well as their being warm and caring, and being available to listen to their problems. This factor was labeled: Showing Concern For and Interest in Students.

Courses Itom	Component							
Survey Item	1	2	3	4	5	6	7	8
try to answer my questions	.79	.17	.20	.15		05	.01	.02
explain things when I'm confused	.78		.04		.01	.08	.03	.10
make it okay to ask questions	.77	.12	.18	.15	.16	.02	.07	.13
help me when I want to learn to do something better	.77	.19	.22	.11	.11	04	.00	.02
be patient in teaching students	.67	.03	.21	.12	.06	.31		.04
always be willing to answer my questions	.64	.20	.27	.13	.01	.08	.16	.00
show me how to do things	.63	.52	.05	.04	.07	.02	15	05
encourage me to do my best work	.59	.17	.35	01	06	.06	.14	.15
help me catch up on work I miss	.58	.29	.04	.14	06	.25	.32	07
be willing to explain things again	.57	07	.05	02	.18	.30	.09	.34
help me with work	.57	.14	.13	.03	.48	.07	.02	.05
give me positive feedback	.57	.28	.17	.18	03	.05	.27	.09
give good answers to questions that I ask	.50	.18	.15	.34	.20	.06	.29	.10
give me a chance to explain myself	.49		.12		.14	.17		02
respect my feelings	.46	.33	.28	.45	.16	01	.05	.20
be patient with me	.45	.16	.22	.36	.28	.24	.18	.08
be proud of me	.38	.35	.36	.36	.10	.11	.11	01
make the effort to get to know me	.22	.72	.14	.10	.03	06	.16	.14
be truly interested in me	.15	.70	.29	.29	.01	.07	01	.05
be someone I can count on when I have a problem	.25	.68	.23	.16	.23	.00	07	.21
care about me	.11	.65	.34	.38	.06	.02	12	05
talk to me outside of the classroom	.06	.65	.16	15	.22	.01	.04	.30
help me when I get in trouble	.24	.64	.15	06	.06	.26	.31	18
be willing to help me with my problems	.42	.63	.04	.09	.20	.17	.05	.09
take a personal interest in me	11	.61	.23	.38	01	.06	.00	03
listen if I'm upset or have a problem		.59	.47	02	.16	.25	02	.06
trust me	.22	.59	.12	.34	.18	.04	.03	21
know when I am bored	.06	.57	.04	.10	10	.22	.46	11
take notice of what I say	.35	.54	.21	.15	.12	.30	.21	13
be considerate and thoughtful of me	.19				.06	.02		
help me study before tests	.35	.45	.25	05	02	.23	04	39
be fond of everyone		.32	.29	.19	13	.18	.27	.08
praise me when I've tried hard or done well	.22	.28	.68	.16	.13	.15	.11	01
reward me for progress in academic achievements	.27	.20	.66	.19	.16	05	.15	17
encourage me to participate in activities	.31			10		.10	01	.24
make me feel important	.22	.37	.63	.26	.01	.15	.20	04
spend time talking with me about my goals and interests	.20	.41	.63	.15	.09	03	.03	.18
be sociable	.27	.40	.44	.14	07	.18	.11	.20
treat me with respect	.37	.11	.04	.68	.00	.18	.06	09
really listen to what I have to say	.33	.20	.18	.55	.28	.26	.03	.13
be someone I can depend on	.11	.28	.30	.50	.29	05	.03	.18
be honest with me	.47	.23	.05	.48	.02	.23	.05	.23

Table 1. Principal Components Analysis

Survey Item	Component									
	1	2	3	4	5	6	7	8		
listen if I have something to say	.28	.00	.23	.22	.67	.30	.01	05		
sympathize with me	.02	.38	07	.11	.61	.10	.24	07		
understand me	.40	.15	.29	.42	.43	.10	.01	.04		
be able to take a joke	.06	.40	.13	.30	.13	.60	.03	12		
have a sense of humor	.14	.11	.49	.23	.24	.55	.09	.08		
help me with my work	.41	.07	04	.04	.36	.53	.01	.17		
be friendly to me	.25	.24	.37	.28	.10	.44	.12	.16		
let me decide some things in class	02	.18	.29	.28	.24	.13	.53	.08		
be willing to cooperate if I want something	.11	.16	.20	.09	.44	.05	.52	15		
let me talk about things if I don't agree with them	.38	.11	.19	.19	.20	.10	.52	.16		
be concerned if I have not understood them	.42	.03	.15	.09	.10	.00	.44	.23		
be strict if necessary	.21	.01	.08	01	19	.16	14	.70		
enforce rules fairly	.34	.17	.17	.18	.13	12	.01	.64		

Table 1. (Continued) Principal Components Analysis

Factor 3 consisted of 6 items,  $\alpha = .87$ , and contained items that reflected students' desires for teachers who validated their self-worth by giving them individualized attention and encouragement, and was labeled Motivating Students and Attending to Their Personal Interests. Factor 4 consisted of 4 items,  $\alpha = .85$ , and reflected students' desires for teachers who were upstanding in their dealings with them, and who treated them with honesty and respect. This factor was labeled Treating Students with Respect. Factor 5 consisted of 3 items,  $\alpha = .74$ , and reflected students' desires for teachers to display emotional understanding of students' needs; it was labeled Being Compassionate to Students. Factor 6 consisted of 4 items,  $\alpha =$ .77, that reflected students' desires for teachers to relate to them as individuals in a lighthearted way. This factor showed the importance students placed on relationships that were slightly more informal than the traditional classroom teacher-student relationship, and was labeled Being Accessible to Students. The seventh factor consisted of 4 items,  $\alpha = .74$ , that reflected students' desires for teachers who showed an understanding of their feelings and respected their opinions. This factor was labeled Understanding and Valuing Students' Opinions and Feelings.

## Discussion

Findings from the principal component analysis based on the sample of 274 students who took the Student-Teacher Relationship Survey: Student Version indicated the survey had seven distinct factors. These were labeled: (a) Providing Academic and Personal Support for Students, (b) Showing Concern For and Interest in Students, (c) Motivating Students and Attending to Their Personal Interests, (d) Treating Students with Respect, (e) Being Compassionate to Students, (f) Being Accessible to Students, and (g) Understanding and Valuing Students' Opinions and Feelings. The scores on each factor were internally consistent and the magnitude of the Cronbach alpha estimates appeared adequate for generalizability purposes. Although good student-teacher relationships have typically been conceptualized as a unidimensional construct (e.g., Blankenmeyer, Flannery, & Vazsonyi 2002) or subsumed under larger scales of social support (e.g., Malecki & Demaray, 2002), this study provides support for the multidimensional nature of good student-teacher relationships.

Previous research points to good student-teacher relationships as involving teachers who purposively nurture caring relationships with students, express warmth and supportiveness toward students, and spend time listening to and talking with students about personal and social issues (Solomon, Watson, Battitstich, Schaps, & Delucchi 1992). The quality of student-teacher relationships is the foundation for all aspects of students' functioning. Emphasizing relational approaches by attending to the social context in which learning occurs is important for students' educational experiences.

A limitation of the current study is that the initial pool of items was obtained by reviewing existing measures that contained items related to student-teacher relationships. A limitation of working from existing measures is that some important dimensions of good student-teacher relationships may be missed. This study tried to address this problem through the pilot study in which students were asked to contribute additional items. However, asking students to contribute new items after they had taken the survey may have limited the possibilities that came to mind, as students may have been thinking within the parameters of the survey they just took. Another limitation lies with the demographic background of the student sample. Because of the overrepresentation of African American students in the urban school district in which this study was conducted, the proportion of African American students in the sample is much higher than the proportion of African American students in the general U.S. population. The findings may therefore not be generalizable to samples in settings that are not large high schools in urban areas with disproportionate numbers of African American students.

### Conclusions

Although it is widely accepted that good student-teacher relationships are important for increasing students' sense of attachment to school as well as facilitating their academic success, researchers and practitioners do not typically consider the multidimensional nature of good student-teacher relationships. This research demonstrates that from the perspectives of students, there are seven distinct constructs that comprise good relationships with teachers. The constructs show students' desires for teachers who provide both academic and emotional support. Previous research has identified connections between good-student teacher relationships and students' academic success. Findings from this research move our understanding of this connection forward. Specifically, students desire teachers who give them individualized attention, encourage them, and demonstrate patience while teaching. Students also want teachers who can relate to them in a lighthearted way, a situation that creates a safe learning environment. Students who fall behind academically often have personal barriers that prevent them from prioritizing schoolwork. Therefore, students value teachers who take the time to listen to them, and who try to understand their problems. It can be seen that although all these behaviors contribute to good student-teacher relationships, they form distinct constructs. This finding provides additional insight into the teacher behaviors identified in previous research as the behaviors students desire and that contribute to their educational success.

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