THE RELATIONSHIP OF TEACHER INTERPERSONAL BEHAVIOR TO THE ACADEMIC ACHIEVEMENT, SELF-CONCEPT, SCHOOL BEHAVIOR AND SOCIAL ACCEPTANCE OF GRADE FIVE STUDENTS

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THE RELATIONSHIP OF TEACHER INTERPERSONAL BEHAVIOR, TO THE ACADEMIC ACHIEVEMENT, SELF-CONCEPT, SCHOOL BEHAVIOR AND SOCIAL ACCEPTANCE OF GRADE FIVE STUDENTS

by

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ABSTRACT

The major purpose of this study was to determine whether or not a relationship existed between teacher interpersonal behavior and each of the following variables: student self-concept, school behavior, achievement and social acceptance. The physical fitness level of a subsample of the students was examined to determine its relationship to any of the above factors.

The study involved 39 grade five teachers and their classes. Information was obtained from both students and teachers. Academic achievement was determined by using student scores from the Gates-McGinitie Reading Tests and an arithmetic achievement test. Self-concept was determined by the use of the McDaniel-Piers Young Children's Self-Concept Scale. The Ohio Social Acceptance Scale was used to determine the level of social acceptance and the Child Behavior Traits was used to give a school behavior measure. The physical fitness level of a subsample of the students was measured by the Canada Fitness Awards Test.

Results of the study were obtained by regression analysis. A significant relationship was found to exist between teacher interpersonal behavior and student achievement in reading comprehension and between teacher interpersonal behavior and student school behavior. A positive relationship existed between the dependent variables self-

concept and social attraction. No positive relationships were found to exist between: teacher interpersonal behavior and achievement in mathematics and vocabulary; teacher interpersonal behavior and student self-concept; and teacher interpersonal behavior and social acceptance.

Results of the fitness study showed no significant relationships existed between level of fitness and the dependent variables.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

OVERVIEW OF THE STUDY

Introduction

The basic assumption underlying this study was the writer's belief that the development of both the cognitive and affective domains of students are necessary for their full growth and development. The teacher is viewed as one agent responsible for this development. Costello (1974) wrote:

> The affective domain is the heart and soul of the learning experience, just as the cognitive domain is the thinking intellectual part. They are directly interrelated. The cognitive domain stimulates the affective domain and once the child is involved in affective experiences, new cognition arises. (p. 107)

Likewise, Aspy (1972) stated the affective domain must assume as much importance as the cognitive domain. He charged the public school with the responsibility for promoting the cognitive growth of students and since it is interrelated with the affective domain it cannot be developed separately. Furthermore, The Newfoundland School Act (1970) stated that "the teacher is viewed as an agent of society responsible not only for the cognitive development but also for social, emotional, physical and spiritual" (Chapter 346).

Affect is an intrinsic motivator and, according to

Wlodkowski (1978), sustains involvement and deepens interest in the subject matter. Aspy (1972) believed schooling and/or learning to be a process which occurs between individuals and which can be enhanced or diminished in effectiveness according to the degree of interpersonal facilitation with which it is carried out.

Also underlying this study was the theory of gratification of needs. Maslow (1954) believed that need gratification was the most important single principle underlying all human development. He believed needs motivated learning especially at the beginning of any academic task. Maslow established a hierarchy of needs and he felt unless the basic 'lower' needs were satisfied little motivation for school learning would take place. When students do not want to learn, it is quite probable they are either experiencing needs that interfere with the learning process or that teaching neglects or threatens their current need state. It is likely when the physiological needs are not fulfilled there is little motivation for school learning.

Also, educational researchers have not discovered many dependable relationships between teacher behavior and student outcomes (Brophy & Evertson, 1976). The present study, therefore, attempted to investigate the relationship of teacher interpersonal behavior and achievement, student self-concept, behavior, social acceptance and physical activity.

Statement of Purpose

The purposes of the study were:

1. To investigate the relationship of teacher interpersonal behavior to the self-concept, school behavior, academic achievement and social acceptance of elementary school children.

2. To investigate the effects of physical activity on each of the variables mentioned above for a subsample of the total group.

Hypotheses

The following hypotheses have been formulated as a result of consideration of the variables:

Hypothesis 1 - There exists a positive relationship between teacher interpersonal behavior and mean academic achievement of classes.

Hypothesis 2 - There exists a positive relationship between teacher interpersonal behavior and mean gain in self-concept.

Hypothesis 3 - There exists a positive relationship between teacher interpersonal behavior and mean school behavior gain.

Hypothesis 4 - There exists a positive relationship between teacher interpersonal behavior and mean

social acceptance gain of classes.

Most of the literature review on fitness levels and related variables pertained to college and older students. The studies reported on young subjects had smaller samples and were less generalizable than the studies with older students. This study attempted to examine the relationship of fitness levels of grade five students to various variables.

The following hypotheses were formulated as a result of consideration of the physical fitness variable:

Hypothesis 5 - Grade five students who are more physically fit are higher achievers than those who are less fit.

Hypothesis 6 - Grade five students who are more physically fit have more positive self-concepts.

Hypothesis 7 - Grade five students who are more physically fit are more accepted by their classmates.

Hypothesis 8 - Grade five students who are more physically fit behave in accordance with teacher wishes.

The Rationale of the Study

The inadequacies of teacher competence research have, according to Reed (1961), received considerable attention during this century, yet, despite the abundance of research, stability measures of teacher effectiveness are low (Good, 1979). Few researchers have come to any concensus regarding

the most effective behaviors of teachers in relation to their students. There has been evidence to show, however, (Brookover, 1955; Coates & Smidchins, 1966; McCall, 1952; Reed, 1961) that there exists important differences among the behaviors of teachers; that teacher behaviors have certain effects upon students; that these different behaviors produce differences in classroom climate and that classroom climate is related to pupil behavior and performance. Similarly, Ryans (1960), Reed (1961), Cogan (1963), Hughes (1973), Samph (1974), and McDonald and Elias (1976) produced evidence to show that behavioral differences among teachers can be studied and that classroom atmosphere and teacher behaviors relate to pupils' interest, pupils' work scores, pupils' academic achievement and pupils' classroom behaviors.

The present study, which is one part of a larger research project, was designed for the following reasons. Firstly, because of the need for research on teacher interpersonal behaviors and their relationship to pupils' self-concepts, specific school behaviors, academic achievement and social acceptance. Secondly, to examine physical fitness scores of students for effects on any of the variables mentioned. Thirdly, to examine the interrelationships of the dependent variables; social acceptance, student behavior, student self-concept and academic achievement.

Many of the earlier research studies about teacher behavior were of very little substantive use and had few implications for the professional field within which they

were carried out (Cogan, 1963). They did not serve as the basis for the redesign of instruction; they did not provide the rationale for changing the programs for teacher education, nor for the revision of school curriculum, nor for the selection of teachers. At best they offered few insights that an alert and sensitive educator could put to work in his practice.

The present study has potential usage for educational institutions, for teachers and pupils, and for teacher-pupil relationships. It should give educational institutions a better understanding of teacher interpersonal behavior and associated conditions, which would contribute to improved procedures for selecting teachers. It should encourage teacher self-improvement and lead to improved student performance because of the increased sensitivity to teacher factors that make a difference. The study should lead to an increase in research on the teaching process (how teaching is accomplished, the interactions, and the skills and behaviors used by teachers) as well as the outcomes of schooling (the academic results of students).

Many researchers (McMichael, 1980; Medley & Mitzel, 1959; Reed, 1961; Samph, 1974; Semler, 1960; Zahorik, 1980) obtained data from tests, surveys, questionnaires and inventories. These methods were remote and partly removed from the realistic events of a classroom. The present study attempted to obtain more realistic and natural data by using direct, in the classroom observations.

The variables of self-concept, classroom behavior, social acceptance, academic achievement, and physical fitness were chosen because together they provided a comprehensive picture of children's overall development.

In summary, cognitive, social, emotional, and physical development are seen by some researchers as isolated processes. This writer does not see them as such and believes education is concerned with their interrelated development.

Definitions

The present study was a component of a larger research project, therefore, most of the definitions of terms used in this study are identical to those in the Teacher Strategies Project (Crocker et al., 1978).

Teacher Interpersonal Behavior refers to the behaviors of warmth and enthusiasm. These behaviors are grouped because together they define the teacher behavior the study is concerned with.

Warmth refers to the extent to which the atmosphere of the class is relaxed and comfortable or tense and uncomfortable. It also encompasses the degree to which the teacher maintained positive interpersonal relationships with pupils.

A classroom that is warm is one in which the teacher is positive to the students, demonstrating friendly behavior. The children show signs of feeling secure and appear to

like or enjoy the classroom experience. There is an atmosphere of acceptance of students. This teacher demonstrates sensitivity to students. The teacher is sensitive to the private lives of students, and concerned about the personal and social growth of each student. Students are praised and reasoning is used rather than punishment. The teacher smiles and uses physical contact and humor in a positive way.

Enthusiasm refers to the enthusiasm or interest level expressed by the teacher and students during class activities.

The enthusiastic teacher conveys a great sense of committment, excitement and involvement in the subject matter. The students seem responsive and appear to enjoy the activity. The teacher seems to expect students to do their best. The teacher's tone of voice varies, and this is evidenced by the teacher's motivation and desire to help students do their work.

Academic Achievement refers to the scores the students received on the Gates McGinitie Reading Test and on the Mathematics Achievement Test (a curriculum specific test developed by the project staff, Crocker, 1978). The Gates McGinitie measured vocabulary, speed and accuracy in reading, and comprehension. The Mathematics Achievement Test, which was based on Investigating School Mathematics (I.S.M.) curriculum, 1973, measured a number of random objectives chosen from the Grade five level of the I.S.M.

School Behavior refers to the total behavior of each student as rated by their teachers regarding the following items: responsible independence, social cooperation, cognitively related skills, emotional stability and task orientation. The item scores range from one to five so that the total summative scores range from 20 to 100.

Self-Concept refers to the ratings that children gave themselves using the McDaniel-Piers Young Children's Self-Concept Scale. Feeling self, school self and behaving self were the areas rated.

Social Acceptance refers to the mean of the rankings assigned to any one student on the Ohio Social Acceptance Scale by all other members of the class.

Social Attraction refers to the mean of the rankings assigned to all other class members on the Ohio Social Acceptance Scale by any one student.

Physical Fitness refers to the level of fitness of a child that is obtained after his or her performance on five performance tests. The tests are speed sit-ups, standing long jump, shuttle run, flexed arm hand and 50-yard run.

Limitations of the Study

1. This study was limited to school teachers and students of an area in Newfoundland (outlined in Chapter 3). Results cannot be generalized to other provinces or to the more remote areas of Newfoundland.

2. One specific grade was investigated in this study. Results cannot be generalized to other grades.

3. Variations in teacher qualifications and in teacher training were not controlled. Most of the teachers, however, may have received their teacher-training at Memorial University, the only university in Newfoundland.

4. No teachers new to the teaching profession were involved in the study. All teachers had two or more years of teaching experience, yet, the number of years of experience varied considerably.

5. The teacher interpersonal behavior in question was limited to teacher warmth and enthusiasm. Perhaps stronger relationships would have been found if other behaviors had been considered.

6. The backgrounds of the children were not investigated. Teacher interpersonal behavior may have different effects on children from different backgrounds.

7. The validity of a total fitness score was

questionable without an aerobic measure - the 300-yard run. This activity was eliminated from the total fitness score because of the difficulty in obtaining a valid measure of this activity for all the classes.

Chapter 1 presented an introduction with a rationale for the study. It also included purposes, hypotheses, definitions and limitations. Chapter 2 will focus on the literature and research related to the study.

CHAPTER 2

REVIEW OF THE LITERATURE

The following chapter presents a review of the literature and research findings relevant to the present study. The prime concern of the study was the relationship of teacher interpersonal behavior to self-concept, school behavior, academic achievement and social acceptance. Some of the literature reviewed, however, was not directly related to teacher behavior. It is presented because it is concerned with the interrelatedness of the dependent variables.

This chapter is divided into six sections:

1) Introduction
2) Teacher Variables Related to Effectiveness
3) Teacher Factors and Related Variables
4) Physical Fitness and Related Variables
5) Summary

Introduction

A great deal of discussion in the literature has centered on the problem relating education to the needs of children. Much of this discussion was based on an assumption that 'needs somehow develop autonomously and

that one need is as important as another' (Eson, 1972). Maslow (1954) agreed with this and proposed a hierarchy of needs arranged in order of prepotency. The needs, from lowest to highest, are:

Physiological needs (need of food, water, sleep, sex, activity)

Safety needs (needs that deal with a person's basic security)

Love needs

Esteem needs

Self-Actualization needs

The needs must be satisfied at one level before the next higher order of needs becomes predominant in influencing behavior.

According to Cronbach (1954) the needs most frequently found important in school, as sources of positive motivation or of troublesome behavior, are those for affection, adult approval, peer approval, independence and competence and self-respect. The child must feel secure, adequate and respected before he can consistently be expected to meet expectations to achieve, and this sense of adequacy and worthiness is facilitated by the positive expression of affect and approval by the teacher (Spady, 1973). Perhaps the most important component of the teacher's repertory of abilities is the capacity to establish a sense of rapport with students by caring about them as individuals in order to aid them in developing a sense of security and confidence (Spady, 1973). Spady believed empathy and concern

were the keys to teacher effectiveness and the teacher who is empathic toward his students has a better chance of meeting their basic security and esteem needs.

Spady and Cronbach both presented several important needs. However, they failed to mention the physiological need for activity, which must be satisfied before the higher needs of esteem and security become important. Every child needs a certain amount of physical activity as he or she grows and without this activity a decline develops in the cardiorespiratory endurance and in the ability to work or play (Goode, 1976). A lack of physical activity during school time could hinder the progress of student development in many areas.

Teacher Variables Related to Effectiveness

The effectiveness of an education program depends to a large extent on the teacher and his or her behaviors in the classroom. A number of investigators (Gage, 1972; Jennings, 1957; Mastin, 1963) supported the belief that teachers who expressed warmth and enthusiasm were associated with better adjusted students, with students who showed more interest and with students who behaved and performed in accordance with teacher wishes. The following literature indicated how certain teacher interpersonal behaviors were related to effectiveness.

Spady (1973) believed that in order to be a good

teacher, one had to be effective at capturing and sustaining student's interests in learning activities. Enthusiasm from a teacher helps sell the goals of a classroom (Cronbach, 1954). When the teacher thinks it exciting to discuss a topic, the pupils find the topic lively. Jennings (1959) hypothesized that a warm, approving, enthusiastic teacher provided a motivating experience for pupils. The warm, more acceptant teacher is usually better liked by pupils; and it is expected that a well-liked teacher will have more influence on them (Cronbach, 1956).

Montz (1975) felt that as a result of teachers concerns for the development of cognitive skills, they too often ignored the affective-emotional experiences of the individual--his concerns, his feelings, his perception of himself and his environment and his motivations. He stated:

> Too often the child was seen only as a student, as a learner, who needed to be "filled up" with information and skills rather than as a human being, who also stands in need of self-actualization, self-discovery, development of awareness and emotional maturity. (p. 250)

Teachers who have not ignored the affective experiences of children, but who used these experiences to enrich the learning environment, not only enriched the student's lives and helped them grow, but made the subjects they taught more exciting and meaningful (Montz, 1975).

Medley and Mitzel (1959) studied the effectiveness and behaviors of 49 beginning elementary school teachers. Pupil-

teacher rapport was found to be related to emotional climate, rapport being highest when emotional climate was warmest. Supervisors rated those teachers who had the friendliest classrooms as most effective. Emmer, Everston, and Anderson (1980) observed classes for effective classroom management at the beginning of the school year. Personality characteristics were not generally evident in the first three weeks of school, however, the more effective teachers did exhibit better affective skills, receiving higher component ratings on both listening and expressing feelings.

The truly effective teacher, according to Spady (1973) must have each of the following:

> 1) something of substance and interest to say, 2) be capable of saying it clearly and accurately, 3) be capable of saying it in a stimulating and exciting fashion, and 4) base this communication directly on a concern for the personal welfare of each student. (p. 8)

Contrary to those researchers, who indicated that warm and enthusiastic teacher behavior and relaxation of interpersonal tension was necessary for student growth and achievement, Brookover (1955) felt that teachers who spent time in maintaining a relaxed interpersonal climate may actually sacrifice some degree of informational subject matter. Dunkin and Biddle (1974) provided numerous reviews of literature that presented conflicting results. Their reviews indicated:

> teacher indirectness (use of praise, questioning, acceptance of pupils' feelings, acceptance of ideas-

> warm behaviors) was (and was not) associated with greater pupil achievement, was (and was not) associated with more positive pupil attitudes, was associated with greater pupil achievement motivation, was associated with lower pupil anxiety. (p. 118)

Most of that literature was not based on experimental evidence.

Conflicting views exist regarding teacher effectiveness, but a review of students' ratings of their teachers helped clarify why some teachers are considered more effective and more favorably regarded than others. The first two studies reported below give students' ideas while the remainder studies give observers' ideas. Observers based their results on classroom observations.

Hart (1934) investigated the best liked and least liked teachers. From his sample of 3,725 high school students he found the four most frequently mentioned reasons for liking a teacher were:

1) Helpful in schoolwork, explains lessons and assignments clearly, and uses examples in teaching (51%).

2) Cheerful, happy, good-natured, jolly, has a sense of humor and can take a joke (40%).

3) Human, friendly, companionable, 'one of us' (30%).

4) Interested in and understands pupils (26%).

The four most frequently mentioned reasons for liking a teacher least were:

1) Too cross, crabby, grouchy, never smiles, nagging, sarcastic, loses temper, flies off the handle (50%).

2) Not helpful with schoolwork, does not explain lessons and assignments, not clear, work not planned (30%).

3) Partial 'has pets' or 'favored students' and picks on certain pupils (20%).

4) Superior, aloof, haughty, overbearing, does not know you out of class (20%).

Most of the ratings of teachers by students concerned the personalities and behaviors of the teachers rather than their teaching styles and methods.

A similar investigation was carried out by Witty (1947) in connection with a Quiz Kids Program. He received 12,000 letters on the theme "The Teacher Who Helped Me Most". The top personality traits found were:

> 1) Cooperative, democratic attitudes, 2) kindliness and consideration for the individual, 3) patience, 4) wide interests, 5) personal appearance and pleasant manner, 6) fairness and impartiality, 7) sense of humor, 8) good disposition and consistent behavior, 9) interest in students' problems, 10) flexibility, 11) use of recognition and praise, 12) unusual proficiency in teaching a particular subject. (pp. 662-667)

Hamachek (1969) reviewed these two studies and several others and he concluded:

> teachers who are warm, flexible, tolerant, interested in students and who have a sense of humor seem better

> able to positively affect the attitudes and learnings of students than do teachers in whom these personal characteristics are less evident. (p. 11)

Amidon and Giammatteo (1965) conducted a study similar to the above, but rated the verbal behavior of 153 elementary school teachers. The results indicated the verbal-behavior patterns of superior teachers differed substantially from those of average teachers. The superior teachers talked about 40 percent of their total class time, while the normative group talked about 52 percent of the time. The superior teachers were more accepting of pupil initiated ideas, tended to encourage those ideas more, and made a greater effort to build on these ideas than the average teachers. The superior teachers dominated their classes less, used indirect verbal behavior more and used direction-giving and criticism less than the normative group of teachers. There was about 12 percent more pupil participation in the classes of the superior teachers. The present writer concluded from the above information that superior teachers rated higher on interpersonal behavior than did average teachers.

Another study that supported the above findings was one conducted by Flanders (1960) in which he related pupil achievement to teacher patterns of verbal behavior. Flanders found teachers of high-achieving classes accepted, clarified, and used pupil ideas significantly more; criticized significantly less; and encouraged significantly more pupil-initiated talk than teachers of low achieving classes.

In the low achieving groups teachers used direct influence (lecture, direction-giving, criticism) about 80 percent of the time, while the teachers of the high-achieving groups used direct influence about 50 percent of the time. Samph (1974) also studied the influence of teacher verbal behavior. He found students taught by indirect teacher behaviors had greater language skill development and more positive attitudes than those taught by direct teacher behavior.

The results of these more recent studies also indicate that a warm, tolerant, friendly teacher is the more effective one. Reed (1961) agreed and summarized his findings in the following paragraph:

> The teacher's warm relationship is a rewarding experience for the pupils, classroom learning activities become rewarding as a function of the teachers' warm behaviors. Pupils' positive feelings toward the learning activities lead to participation, which in turn frequently leads to satisfaction of other needs such as the cognitive, as the learning activities become inherently attractive interest is learned. (p. 206)

An extensive review of the most recent literature failed to provide any new information regarding the specific relationship of teacher interpersonal behavior to the variables under study. The literature reviewed indicated the types of related research done and the ideas expressed by the writers.

Rich and Bush (1978) stated that an educational research commitment to search for the effective teacher regardless of content or type of student outcome appears to

be an exercise in futility. Good (1979) argued that no single teaching behavior is universally effective and that many teacher behaviors will have differential effects on students. He reported that teacher managerial abilities have been found to relate positively to student achievement in every process-product study conducted to date. He presented a review of literature to stress three major conclusions: a) elementary school teachers do exert differential effects upon student achievement; b) classroom management skills are exceedingly important; and c) a pattern of teaching behavior called 'direct instruction' seems to be a useful heuristic for describing effective elementary classroom teachers.

Zahorik (1980) appeared to agree with these writers because he felt there was still little knowledge concerning which means or teacher processes will lead to which ends or learning products. He stated that 'for decades researchers have investigated process product problems, first in methods research and later in teacher effects studies. The failure of methods research to reduce the complexity of the relationship is well known', and teacher effects research is still in a developing phase and results are unstable. From his investigation on teacher effects, however, he drew several conclusions that the present writer felt indicated a warm teacher was the type of teacher that was emerging as the most effective one. Teachers in Zahovik's study preferred praising students, thought questions, clarification

statements and other more indirect instructional techniques and rejected behaviors such as reproof and criticism. The teachers recommended being open to and supportive of students; conveying acceptance and approval, and praising students. Although one researcher (Good, 1979) felt 'direct instruction' was associated with effective teaching, it appeared from Zahovik's investigation that 'teachers viewed motivation, involvement, thinking and self-concept as goals that were just as important as academic achievement.

Brookover, Schweitzer, Schneider, Beady, Flood and Wisenbaker (1978) observed some aspects of school social environment that made a difference in the academic achievement of schools. They found 1) teachers in higher achieving schools spend a larger proportion of class time in instruction, and 2) teachers in low SES schools, where many achieved at lower levels, tended to "write off" a large proportion of their student body since very low expectations were established for their achievement.

Differences in teacher and student reinforcement practices were also found in higher achieving and lower achieving schools. In higher achieving schools teachers often made immediate corrections and provided reinstruction when students failed to give correct responses. Positive reinforcement was generally given immediately to students who gave correct answers. In lower achieving schools numerous instances were observed where the students were neither positively nor negatively reinforced for their

performance. On other occasions students identified as slow were positively reinforced for incorrect answers. Confusion in reinforcement, in which students get the same kind of reinforcement for wrong answers as they get for right answers was evident in the lower achieving schools. The researchers concluded from their analysis that the evaluations and expectations made of students and the students' perceptions of these evaluations and expectations and their feelings about possible success in the school were clearly related to the students' achievement.

Breuning (1978) experimentally compared precision teaching (material broken into daily assignments) with traditional teaching and found that precision teaching increases teacher effectiveness and student performance. The results suggested the poor academic performance of many students is due to an interaction between teaching technique and incentive motivation. Regardless of the teaching technique, Breuning felt there must be sufficient incentive to motivate the student to learn the course material. Brophy (1978) stated that Breuning's experimental design and procedures were valid, but it was not shown that the instructional aspects of precision teaching were any more effective than those in traditional teaching.

Numerous studies have been developed and conducted in other related areas that may be of interest to readers, but results of these were not reported because they did not refer directly to the present study. Several researchers,

Ashner and Gottman, 1973; Good, Sikes, Brophy, 1973; Elmore and LaPointe, 1974; Harris and Smith, 1976; Bank, Biddle and Good, 1980; and others, conducted studies on sex differences of teachers and/or students and their effects on one another. Marini and Greenberger (1978) studied sex differences in educational aspirations and expectations. Nwankwo (1979) studied school climate as a factor in student conflict. Peterson, Marx and Clark (1978) investigated differences in teacher planning and the relationship of teacher planning to teacher behavior and student achievement. Since these teacher behaviors were concerned with the organizational domain of teaching, they were not exactly related to the present study.

Good and Brophy (1974) demonstrated that a single consultation strategy for presenting teachers with feedback about their behavior was effective in changing both quantitative and qualitative teacher behavior toward target pupils. These students' behavior were influenced by the change in teacher behavior.

Most of the studies above indicated that certain teacher interpersonal behaviors had effects on certain student variables. The effects could be considered negative or/and positive. Most of the studies, however, evaluated specific areas and did not show any comparisons or interrelationships among variables.

The latter studies reviewed were included to indicate to the reader that recent research did not add substantially

to the earlier studies conducted.

Teacher Factors and Related Variables

Social Acceptance

In all formal organizations, such as a school class, there exists an informal organization based on interpersonal attractions and repulsions and these informal relationships greatly affect the official functioning of the group, as well as have important personality consequences for each person in the group (Bonney & Hampleman, 1962). Interpersonal bonds between the members of a group are necessary to good morale and to the normal personality growth of each individual. Man is a social as well as a biological being and therefore has basic needs for many associations with others and for reciprocation of positive feelings (Bonney & Hampleman, 1962). Those needs, according to Maslow's theory of needs, are the love needs and they encompass all desire for relations with people. They include acceptance by others and achievement of some status within groups by which the individual is accepted.

From these views it can be concluded that the teacher plays a large part in fulfilling the love needs of children and, according to Cronbach (1954), assists in the social acceptance of children, especially in the elementary school. The teacher damages a child's acceptance if the child's comments are treated as worthless or if the prestige

building assignments are given to others. While young children tend to accept the teacher's evaluation, in later years a pupil may become unpopular when he is too eager to satisfy the teacher (Cronbach, 1954).

The earliest period in the child's schooling career is usually characterized by high degrees of emotion and strong identification with the teacher (Spady, 1973). The value of teacher's behaviors can be, therefore, understood in terms of identification and modeling theory. Heider's theory of cognitive balance predicts that we will tend to like someone who we recognize as liking us (Heider, 1958). Warm teachers are perceived by their students as liking them and the students reciprocate the affection (Gage, 1972). Students who perceived a teacher as liking them and liking their fellow students, tended themselves to like their fellow students. Heiderian theory, also, predicted that students who regarded a teacher favorably tended to adopt that teacher's attitudes and orientations toward the objects and ideas in the environment. According to Gage (1972), this gave a rationale for the importance of warmth in terms of modeling theory.

Sears and Hilgard (1964) found that teachers who liked pupils tended to have pupils who liked each other. Many researchers in educational psychology have related the need for peer acceptance to the learning effectiveness of the individual (Guinovard & Rychlak, 1962). Serow and Solomon (1979) interpreted the results of their study on

classroom climate and students intergroup behavior to mean that the relatively strong impact of teacher warmth and acceptance was an indication that the teachers even-handed, friendly treatment of all pupils served as a model of good intergroup behavior and was emulated by students. According to Serow and Solomon, diffuse positive intergroup contacts were more likely to occur in classes in which teachers emphasized interpersonal concerns.

Similarly, Jennings (1959) identified three factors that promoted social development in the classroom to a significant extent as reflected in sociometric structure. These were 1) warmth of the teacher; 2) activities which permitted a high degree of interaction; and, 3) use of democratic methods. Teachers' warmth was expressed in many ways; some teachers expressed pleasure and enthusiasm at what happened during the day. Some included their whole class in pleasurable remarks and responded to moods of individual children. Warm teachers were usually animated, receptive, and given to quick humor even at their own expense. When teachers met children in the corridors they greeted each other spontaneously. Contacts were initiated by children and teachers spontaneously with equal frequency. The children extended to one another much the same permissive treatment they got from their teachers (Jennings, 1959).

Pupils who were happy and who enjoyed their activities put forth more effort and were less likely to develop antagonism toward school, the subjects or other group members.

Relations were friendlier when pupils had occasions to work together, cliques faded away, and the social structure of the class was such that it permitted the development of pupil needs (Cronbach, 1954).

The above studies indicated teacher warmth was an important factor in social acceptance aspects of the classroom. The present study, however, attempted to view the relationship of teacher interpersonal behavior to other classroom aspects as well as to social acceptance and to have these other aspects related to social acceptance.

Self-Concept

According to Maslow (1954) each person has a need for self-respect and a need for the respect of others. The former expresses itself as a device for achievement, adequacy, and confidence; and the latter, for recognition, attention, and regard for others. A responsive school environment was found to help build self-concept (Coopersmith, 1975). Coopersmith felt:

> among the general conditions that produce self esteem are warmth and acceptance of the child; well-defined, consistent and enforced limits and standards; and expressions of respect and appreciation for the individual child's wants, interests and opinions. (p. 128)

All of these conditions could be termed as interpersonal behaviors.

Davidson and Lang (1960) studied 203 elementary school students and found the children's perception of their

teacher's feelings toward them correlated positively and significantly with self-perception. The child with the more favorable self-concept was the one, more likely than not, who perceived his teacher's feelings toward him more favorably. The teacher's position allows him/her to enhance or destroy a child's self-concept.

No single incident or no single type of failure destroys a sense of worth. After failure in one activity the child tries others, but when a child encounters criticism over and over, either because he does poorly or because teachers hold very high standards for him, he learns to think of himself as inadequate (Cronbach, 1954).

Alschuler et al. (1975) said:

> teachers should aim for obvious interest and involvement on the part of the students, and for a growing tendency to speak personally and specifically. The general rule for teachers is: 'if interest begins to fade, stop and do something else'. Help students maintain the initiative by creating a learning environment that supports achievement concerns, enhances students' self-image, values their independence and responds to their initiative. (p. 245)

Combs (1978) wrote from the humanistic viewpoint. He stated:

> The self-concept is the most important aspect of any human interaction, a major determiner of every behavior. It is a vital determinant of intelligence, human adjustment, and success and self-realization in any aspect of life. It is learned from experience, and, once established, is often self-corroborative. It is every person's most precious possession and what happens to the self in the course of schooling may be far more important than whatever else schools think they are teaching. Self-concept is a vital part of the learning process and truly effective education

> must be humanistically oriented toward student self-concepts or education will defeat its own purposes. (p. 19)

Statements by Combs and Alschuler et al. stressed the idea that the teacher is an important agent in the development of the child's self-concept.

Hurevitz and Hurevitz (1977) investigated thirty-four teacher characteristics related to cognitive and/or affective learning in the elementary school. The results indicated a teacher should be able to relate in a meaningful way to others by helping them feel positive about themselves. Reynolds (1980) demonstrated that a moderate relationship existed between classroom behavior and self-esteem in elementary school children. He expressed the idea that a teacher who desires to modify the classroom behavior of a student should follow a procedure congruent with enhancing and maintaining the student's self-attitude.

Contrary to the above opinions and investigations, Wightman (1974), in his investigation on teacher attitudes and behaviors and their relationship to student self-concept, found no significant correlations ($p < .05$) between student self-concept measurements and the results of teacher testing on the four sub-categories of the teacher instrument (Teacher Self-Inventory of Attitudes and Behaviors). No significantly positive relationship was established between student self-concept scores and either the teacher or staff reportings on style of teaching, interpersonal relationship, classroom management and control or divergent and productive

thinking.

These studies were included to indicate that little research has been conducted on teacher warmth and enthusiasm and the relationship of these to students' self-concepts. The inconsistent results of the studies, also, led to the conclusion that further research is necessary.

Behavior

Probably the most effective teaching aid to help young people acquire habits of self-discipline is teacher example or modelling. The personally and socially adjusted teacher can exercise a tremendous influence on pupils' behavior (Crow, 1972). The following literature illustrates the relationships found between teacher and student classroom behaviors.

Ryans (1961) observed pupils in their regular classrooms in the presence of their teachers, who were also observed and assessed. Correlations between pupil behavior and patterns of teacher behavior were based on approximately 1,000 elementary school classes and a similar number of secondary school classes. The results indicated that for elementary school classes high positive relationships (with correlation coefficients ranging from .75 to .83) were noted between observers assessments of productive pupil behavior (e.g. assessments presumed to reflect pupil alertness, participation, confidence, responsibility and self-control initiating behavior) and observers assessments of teacher

behavior which seemed to refer to understanding, friendly classroom behavior, organized, businesslike classroom behavior and stimulating, original classroom behavior.

For the secondary school classes, low positive relationships (correlation coefficients ranged from .07 to .26) were obtained between productive pupil behavior and the above named categories of teacher behavior, with a tendency for the stimulating, original teacher classroom behavior pattern to show a slightly higher correlation with pupil behavior than the understanding, friendly, or the organized, businesslike teacher behavior patterns (Ryans, 1961). The teacher behavior and pupil behavior show substantially more interpendence in the elementary school as compared with the secondary school.

Cogan (1958) studied the effect of teacher 'inclusiveness' behavior (teacher behaviors that were expressive of integrative, affiliative and nurturant needs) on the amount of required and self-initiated work performed by the pupils. In a sample consisting of 987 pupils and 33 teachers, positive correlations were found for inclusiveness and pupil's scores on self-initiated work ($r = .35$, $p < .01$) and for inclusiveness and pupil's scores on required work ($r = .28$, $p < .01$). Truax and Tatum (1966) found productive pupil behavior and adjustment to be significantly related to the empathy and positive regard communicated to children by their teachers. Davidson and Lang (1960), for a group of 203 elementary students, found the more positive the

children's perception of their teacher's feelings, the more desirable were their classroom behaviors as rated by their teachers.

All the above studies indicated elementary school children's behavior was more desirable when teachers were warm and showed more positive, accepting behaviors.

Another aspect of teacher behavior that needed review was reprimands. The intensity of a teacher's reprimands was probably one of the most important aspects of the behavior of a teacher who was labeled hostile or dominating (O'Leary & Becker, 1969). O'Leary and Becker examined the effects of reprimands and commands on 19 first-graders. During the base period there was an average of 54 percent deviant behavior. Repeated reports by observers indicated there was little use of praise and frequent use of reprimands. During phase II deviant behavior dropped to 32 percent when there were approximately 12 praise comments per period and two reprimands. The average percentage of deviant behavior during phase III was 39% (when reprimands for disruptive behavior were made quietly) which was not significantly different from phase II. Reprimands audible to the class during phase IV resulted in a significant increase in deviant behavior (53%) when compared to phase II. A return to praising behavior and ignoring deviant behavior during the four days of phase V was again associated with a reduction in deviant behavior (35%).

The manner in which a teacher responded to disruptive

behavior was important. Praising appropriate behavior and ignoring disruptive behavior resulted in a decrease in disruptive behavior. The results above also suggested that not all responses to disruptive behavior led to an increase in the rate of deviant behavior (O'Leary & Becker, 1969).

One can conclude the teacher was more effective in changing disruptive behavior when warmth was expressed.

Achievement

A number of researchers (Boak & Conklin, 1975; Christensen, 1960; Davidson & Lang, 1960; Hughes, 1973; McDonald & Elias, 1972; Medley & Mitzel, 1959; and others) investigated the relationship of teacher behavior to academic achievement and pupil learning. Some of these researchers found a positive relationship between teacher interpersonal behavior and achievement while others found teacher behavior made little difference. The following studies provide support that a positive relationship exists between teacher interpersonal behavior and achievement.

Reed's (1961) study was designed to identify selected teacher behaviors (warmth, demand, and intrinsic motivation) that relate to desirable pupil learning. His sample consisted of 1,045 ninth-grade pupils and their 38 science teachers. Results showed that pupils within a class agreed closely in their ratings on the variables of warmth and of intrinsic motivation, with reliabilities between .88 and .93 for the stability of within-class responses. The

Polansky, Lippitt and Redl (1950) compared peer ratings of 64 boys and 40 girls in a summer camp, with the results of a near sociometric test. Those children, aged 10 to 15, who were best liked by their peers as camp companions, were rated most frequently by their peers as being the best athletes and being good at doing things. Hunt and Solomon (1942) also did a study in a camp setting that indicated that children who were highly chosen on a sociometric test were rated by their counsellors as possessing the greatest athletic ability.

Bretsch (1952) had 325 boys and 325 girls note their own ability on eight social skills. The boys and girls who were most highly chosen (top 25) on the sociometric test rated themselves higher on the social skills than the boys and girls who were poorly accepted (bottom 25%). The highly chosen pupils also indicated that they participated more frequently in social activities than the poorly accepted group.

None of the situations to choose from, on the sociometric tests used, pertained to activities specifically requiring skill. Apparently the prestige associated with athletic ability has a general influence on sociometric responses and the above studies confirmed this. However, these studies were based on 'ratings' as a measure of skill; whereas measures of actual performance as a measure of skill was needed for more accurate results. McCrow and Tolbert (1953) and Biddulp (1954) performed studies that included

measures of actual performance as an index of skill in activities.

McCrow and Tolbert compared athletic ability based on performance in running and jumping with the results of a near-sociometric test of 438 junior high school boys. Sociometric status was based on the number of choices received from peers on the criterion of being 'best liked'. The results indicated a significant positive relationship between athletic ability and sociometric status. They also found boys who were liked best participated more frequently in athletic activities and were rated by their peers as being the best athletes.

A similar study was conducted by Biddulph (1954) among high school students, but his sociometric test included choices for specific activities. He asked 461 students in physical education classes to choose companions for work, play and social situations. He also determined the athletic ability of each pupil by testing their strength and speed in various physical education activities. A comparison of the 50 pupils with highest athletic ability and the 50 pupils with lowest athletic ability indicated significantly higher sociometric status scores for the group with the greater athletic ability. Fienberg (1953) and Brown (1954) indicated similar results.

The above studies indicate that students who are physically active and fit are accepted more frequently by their peers than those who are less fit and less active.

CHAPTER 3

METHODOLOGY

This chapter will give an overview of how the study was conducted. It will describe the type of study, the procedure used, the instruments and the statistical procedure.

Type of Study

This is an ex-post facto study. There was no manipulation of the research variables. The writer did not attempt to determine if one variable was the cause of the other, but attempted to determine if teacher behavior was related to the other variables under study, namely: student's academic achievement, self-concept, school behavior and social acceptance. The writer also hoped to determine if a child's level of physical fitness was related to any of the other variables under study.

Sample

The entire sample for the larger research project began with 80 teachers, in grades two and five, and their students. However, the sample for this part of the project, the present study, consisted of the 39 grade five teachers and their classes. All the teachers had at least two years teaching experience.

The schools for the project were randomly chosen from

the total population of schools under the jurisdiction of the Integrated and Roman Catholic School Boards on the Avalon, Bonavista, and Burin Peninsulas of Newfoundland. The geographic area was limited to these regions so that no school was further than 300 kilometres from St. John's.

The average class size was 27.8, with a range from 16 to 45 students. Twenty-six classrooms were heterogeneous, with students assigned without regard to ability or past achievement, nine classrooms were homogeneous for reading and three classrooms homogeneous for ability.

The present study was part of the Teaching Strategies Research Project, a three-year naturalistic study of elementary classroom teaching, that is presently underway at Memorial University of Newfoundland. The procedure described below is found in Crocker (1979) and Spain (1979).

The present study utilized a classroom observation schedule consisting of separate sets of categories for teacher focus, pupil focus, and lesson structure. The dimensions of warmth and enthusiasm were rated on a five-point Likert Scale (Appendix B). Rater reliability fell between .80 and .95. Details of the rating scales and observation schedule are described in 'Manual for Classroom Observers' prepared by the research team of the Teaching Strategies Project.

The six project assistants were trained classroom observers and were engaged in full time field work. Each classroom was observed for about 20 sessions of approximately one and one-half hours each thoroughout the school year. The

same observer observed a certain classroom on most occasions because a single observer would be more familiar to the children and would be less disruptive. It was apparent that teachers felt they, too, would be more relaxed with someone familiar.

The observers were instructed to take a limited role in the classroom and were to avoid interfering with classroom events. Observers were also required to not make any comments on the classroom operation to the teacher. Their purpose was to code classroom events as they occurred, not to change anything. The observation schedule was developed for the purpose of identifying the factors which determine the repertoire of instructional techniques used by teachers, the manner in which these techniques are manifested in the classroom, and the influence of these instructional techniques on outcomes.

For further information and more specific details on the classroom observations, the number of observations and times of observations, see Spain (1979a, 1979b).

Three primary areas in which the teacher was required to plan and make decisions were identified for detailed investigation. These were labelled the substantive, structural, and behavioral dimensions. The substantive dimension referred to the content of what was taught. The structural dimension represented the manner in which pupils, materials, time and other variables are arranged by the teacher. The behavioral dimension included the issues of discipline, and group management in the classroom.

The following pre-tests were administered in the Fall of the school year and the post-tests were administered in the Spring: I) Mathematics Achievement Test (A curriculum specific test developed by project staff) II) Gates-McGinitie Reading Test III) McDaniel-Piers Young Children's Self-Concept Scale IV) Ohio Social Acceptance Scale. In addition to these outcome measures a number of items of background data were gathered on pupils in the sample using school records and teaching ratings. Levenstein's 'Child Behavior Traits' was completed by the teachers for each student and the results of the Canada Fitness Awards Tests were obtained for a subsample of the total group.

The tests were administered by the classroom teachers, who followed the instructions prepared by the Teaching Strategies Project staff. Research assistants of the Teaching Strategies Project scored the tests.

Instruments

Mathematics Achievement Test

A Mathematics Achievement Test for each of grades one, two, four and five was developed by the Teaching Strategies staff especially for use in the project. The tests were based on the Investigating School Mathematics (I.S.M.) curriculum (1973) which is in common use by the classrooms in the study. The grade four level of the test was administered in the Fall to the Grade five students and in

the Spring they were given the grade five level of the test.

Each test had the same format and was composed of 60 questions measuring twenty objectives set by I.S.M. for each of the grade levels. Each objective was measured by three questions. If a student answered all three questions carefully, it was assumed that he had mastered that objective. If he answered less than two correctly, he was presumed not to have mastered that particular objective. Answering two correctly was considered marginal, that is, a reliable judgement about mastery was not considered possible.

Objectives selected for inclusion in the tests were based upon a poll taken of a random selection of teachers in the province who were teaching I.S.M. objectives in their classrooms. The objectives included in the tests were randomly selected from those which a majority of teachers said were covered in their classes. For more information on the selection of objectives, see Spain (November, 1978).

Reliability and Validity. The mathematics sub-study involved a content analysis of the mathematics curriculum used in the sample schools, and a set of achievement tests were constructed based on this analysis. The decision by the Teaching Strategies Project Group to follow this approach was taken because it was reasonably well established that the mandated curriculum was followed more closely in mathematics than in any other subject and because the

objectives of that curriculum had been explicitly stated in a form amenable to test construction. The content analysis was supplemented by a set of teacher rankings of relative emphasis on different topics. The resulting tests have greater content validity than standardized tests (Crocker, 1978).

The test items provided by the sample of teachers were edited by members of the research staff to determine such things as mathematical correctness, precision of statement, and appropriateness for testing. Because of the necessity that test items be objectively and efficiently scored, the multiple choice format in which the answer choices are supplied was used. In order to have some empirical basis for selecting items to be included in the final version of the test instrument, preliminary forms of the test were administered to a sample of classes in the St. John's area (Spain, November 1979). For more information on this and on how the discrimination index was formed, see Spain (November, 1978).

Since not all the items comprising the final version of the pre-tests were piloted using the same students, an overall estimate of the reliability of the tests was not possible.

Gates-McGinitie Reading Test

Reading Achievement was measured by the Gates-McGinitie Reading Test (McGinitie, 1978). Level D of the test, which is intended for grades four to six, was administered to the sample with Form 1 administered in the Fall and Form 11 in the Spring.

The test has three subtests that measured the following: Vocabulary, Speed and Accuracy, and Comprehension. The Vocabulary subtest required the matching of a word with the correct synonym among five other words. The Speed and Accuracy, with speed as the critical factor, required the reading of short paragraphs, all of similar difficulty, followed by multiple choice items used to measure the comprehension. The Comprehension subtest involved short paragraphs of increasing difficulty in which comprehension was measured by asking the pupils to choose appropriate words to fit two or three omissions in the paragraph.

Reliability and Validity. Van Roekel (Buros, 1972) stated that the level manuals and the technical manual were quite complete, well organized, and easy to follow. The standardization appeared carefully done. The tryout sample and the norming group appeared to have been quite adequate, although no attempt was made to describe either group, except to say the communities were carefully selected on the basis of size, geographical location, average educational level and average family income. Powell (1969) stated,

however, that new norm data was obtained from a sample of approximately 40,000 pupils from 38 communities, selected on the basis of size, location, educational level, and average family income.

Alternate-form and split-half reliability coefficients were reported. Alternate-form reliability range from .78 to .89 except on the speed and accuracy subtests, where the coefficients tended to be somewhat lower.

Powell (1969) pointed out that no mention of validity was made in the manual and apparently no attempt has been made to organize data for specific use as evidence of validity. Content validity as such was not discussed. Selection of items were made after a field test at each grade level with each subject taking the items for his grade level and one adjacent grade level. Indices of difficulty and discrimination were computed for each item and the most effective items retained. The correlations between subtest scores provided evidence that the subtests are measuring relatively different but related tasks.

Powell (1969) gave more specific reliability scores. Both alternate form and split-half reliability were provided for each level of the tests. Split-half reliability for comprehension ranged from .89 - .96; while for vocabulary they were .88 - .93. The split-half reliabilities were based on the same community using whichever half was given first. Thus, the internal consistency of the test appeared to be satisfactory. Alternate form reliability over a six-

month interval was satisfactory for comprehension and vocabulary ranging from .80 - .89 and .78 - .87 respectively. Correlations for the speed tests were lower ranging from .67 - .75 for number attempted and from .70 - .86 for number correct.

McDaniel-Piers Young Children's Self-Concept Scale

This questionnaire is a downward extension of the Piers-Harris Children's Self-Concept Scale. Items that seemed particularly appropriate for young children were selected from the parent instrument and the wording simplified. Preliminary tryouts with first-grade children and subsequent item-analysis procedures were used to select items for the final edition. The scale contains forty items to be read aloud by the test administer. Children respond "yes" or "no" on a special answer sheet. The scale provides a total score and three part scores: Feeling Self, School Self, and Behaving Self. Norms for the total scores are based on over two thousand children from eight metropolitan school systems (Johnson, 1976).

Reliability and Validity. In a study of mid-western elementary school children, McDaniel (1978) reported coefficients of .83 for grade two children. McDaniel, Ball and Fortunato (1978) reported a test-retest correlation of .55 between second and third grade scores. Garrison (1974) found that the use of two response categories (i.e., yes/no)

did not significantly alter the internal consistency of the measure. A telephone conversation with Ernest McDaniel of Purdue University indicated an internal consistency estimate of .88 for grade 5 (Spain, November, 1978).

Evidence for validity has been produced by the following studies. McDaniel (1978) factored the scores of a combined group of grades one and two children and found three factors relating to body image: behavior and adequacy and happiness. Ames (1978) found that children with high self-concept scores attributed success and failure to their own skill. Low self-concept children explained success in terms of good luck, and failure to lack of skill. McDaniel, Ball and Fortunato (1978) found the self-concept score to be related positively with parental concern for education, and negatively with conservation parental attitudes toward school.

Ohio Social Acceptance Scale

To study the interrelationships among the children in each classroom, the Ohio Social Acceptance Scale was administered to each child. Sociometric techniques offer a method for determining the degree of acceptance of the members of a class. They provide a great deal of information about the social structure of the class and the social relationships that exist among the children in them.

The Ohio Social Acceptance Scale is a sociometric measure, but instead of an individual having to choose different members of the class who best fit a criterion,

the task involved assigning a criterion which best fits to each member of the class. The scale was comprised of a six-point continuum: 1. My very, very best friends, 2. My other friends, 3. Not friends, but okay, 4. Don't know them, 5. Don't care for them, 6. Dislike them. The degree of social acceptability for each child was determined since every child responded to every other child in the class.

The data was analyzed by finding the means of various sociometric ratings for each student. Two scores were obtained from this one rating 1) a score on how all children rated one child (social acceptance score), and 2) a score that was the mean score of how one child rated all other children (social attraction score). Sex differences were considered for both scores.

Reliability and Validity. An extensive review of the literature failed to produce much research on the reliability and validity of the Ohio Social Acceptance Scale. Rath (1974) claimed that much of the validity lies in the construction of the test. Teachers and children shared in the making of it and they focused directly on their experiences in accepting and rejecting others. Rath correlated teacher judgements with test ratings and found close agreement.

Jennings (1950) stated that sociometric choices have 'face validity' since they are direct measures of the phenomenon under investigation. Evans (1962) stated that

a sociometric test is designed to elicit the actual behavior being studied and in so far as it does this it is a valid measure of that behavior. No reference to an outside criterion is needed or indeed, possible or meaningful in this case.

Bonney and Hampleman (1962) stated that investigations had shown reliability coefficients for total scores to average about .78 for periods of several weeks and about .73 for periods of several months; Gronlund (1955) reported a median test-retest reliability coefficient of .76 for sociometric choices over a four-month interval for nine classes of elementary school children. In his research (1959), which included forty sixth-grade teachers, he found an average correlation coefficient of .60 between teachers' estimates and sociometric scores.

Bonney (1960) reported a median of .76 for three test-retest studies done by different investigators with a time interval varying from two to nine weeks. Also, Bonney (1960) determined a median of .67 for 19 coefficients obtained from studies done by six different investigators which were over a three to eight month time interval.

Levenstein's Child's Behavior Traits (CBT)

To obtain a measure of each child's behavior, the Levenstein's Child Behavior Traits Scale (CBT) was completed by the teachers for each child in the class. This instrument was first used by Phyllis Levenstein. It was developed

to evaluate the socioemotional status of low-income children at age 2 and 4 years in the Mother-Child Home Program of the Verbal Interaction Project, and in subsequent school years (Johnson, 1976). Ratings were based on the global evaluations of home interveners (toy demonstrators) who had observed the child in home sessions. In school years, the teachers rated the children from observations of classroom behavior.

Johnson (1976) gave the following description of the measure: The CBT consists of twenty items, each of which rates on a 5-point scale the degree of presence of behavior considered to be socioemotional, thus indicating the child's emotional well-being and social adjustment. The item score range is from 1 to 5, so that the total summative score ranges from 20 to 100. The twenty items are classified under five subscales as follows, with example of items:

1. Responsible Independence: Seems self confident, not timid.

2. Social Cooperation: Refrains from physically aggressive behavior towards others.

3. Cognitively related skills: Is well organized in work or play.

4. Emotional Stability: Is spontaneous without being explosive.

5. Task Orientation: Is attentive and concentrates on tasks.

Reliability and Validity. The CBT's development began in 1970 and reached final form in 1974, when the coefficient alpha for its internal reliability for 390 children, 2 to 10-years of age, was .95. A multigroup factor analysis indicated that .48 of the variance among items was accounted for by the total-score factor. For fifty-five untreated 8 to 10-year old school children rated by their teachers, the CBT was age independent ($r = -.03$), but not for program 2- to 4- year olds related by their home interveners ($r = .36$). Evidence for validity derives from three sources 1) the coefficent of -.70 ($N = 75$) resulting from correlation of CBT total score with the presence of school problems indicated by the same teachers who rated the CBT; 2) for 59 children, the coefficients of .58 and .58 respectively for mathematics teachers' CBT scores correlated with classroom teachers' indication of school problems, and vice versa; and 3) the correlation of .43 between the CBT scores and the IQ's of 273 children (in follow-up and those completing the program), aged about 4 to 10 years (Johnson, 1976).

Canada Fitness Awards Tests

To obtain a measure of the level of physical fitness, the scores from the Canada Fitness Awards Test were obtained from a subsample of the total group.

The measure was based on five performance tests from the Canada Fitness Awards Tests of the Canadian Association for Health, Physical Education and Recreation. These

included a 50-yard run, speed sit-ups, flexed arm-hang, shuttle run and standing long jump. Performance levels by age and sex have been developed.

Reliability and Validity. No studies regarding the reliability of this instrument could be found. Because of the type of instrument and the degree of accuracy in which the components of the instrument can be measured, however, there is likely to be excellent reliability. Also, because of the definition of fitness used and what this test consisted of, the instrument is likely to be valid.

Statistical Procedure

Multiple regression analysis was used to evaluate the results of the study. This is a general statistical technique through which one can analyze a relationship between dependent and independent variables. A correlation matrix is developed in the procedure and was used to evaluate relationships that might exist between the dependent variables. A significant correlation required $r > .31$ for $p < .05$, and $r > .395$ for $p < .01$, for the sample size used in this study.

Analysis of variance was also used on the fitness subtests with effects of classroom taken out.

CHAPTER 4

ANALYSIS OF DATA AND RESULTS

Introduction

The data analysis and the results of the study are presented in Chapter 4. The means and standard deviations for the dependent variables are presented in Table I. The descriptive statistics of the dependent variables for individual classes are contained in Appendix A. The independent variable termed teacher interpersonal behavior consisted of two components: teacher warmth and teacher enthusiasm. Analysis of these two components studied separately in two different subject areas showed correlation coefficients ranged between $r = .61$ and $r = .80$, both significant at $p < .01$. The means and standard deviations for the independent variables in both subject areas are contained in Table II.

Hypothesis 1. There exists a positive relationship between teacher interpersonal behavior and mean academic achievement of classes. Results presented in Table III illustrate the relationship of teacher interpersonal behavior to student achievement scores in vocabulary, comprehension and mathematics. No significant correlations were found between teacher interpersonal behavior and mathematics achievement ($r = .12$, $p > .05$) or between

TABLE 1

STUDENT VARIABLES

Test	Mean		S.D.	
	Pretest	Post	Pre	Post
Vocabulary	20.46	26.56	3.00	3.22
Comprehension	22.17	26.97	2.61	2.94
Mathematics	42.27	42.76	4.04	6.60
School Behavior	74.14	76.42	7.96	8.66
Self Concept	27.83	28.67	1.78	1.98
Social Acceptance	2.74	2.64	.78	.81

TABLE II

TEACHER VARIABLES

	Mean		Warmth		Enthus.		S.D.	
	Warmth	Enthus.	Min.	Max.	Min.	Max.	Warmth	Enthus.
Reading	3.79	3.68	2.9	4.7	2.8	4.5	.48	.38
Math	3.83	3.75	2.9	4.6	2.9	4.7	.45	.42

TABLE III

CORRELATION OF TEACHER INTERPERSONAL BEHAVIOR TO PUPIL ACHIEVEMENT

	Pupil Academic Achievement		
	Vocabulary	Comprehension	Mathematics
Teacher Interpersonal Behavior	.26	.33	.12

TABLE IV

ANALYSIS OF VARIANCE FOR TEACHER INTERPERSONAL BEHAVIOR AND COMPREHENSION

Source	S.S.	D.F.	F	P
Teacher Interpersonal Behavior	.99	1	7.06	$p < .012$
Residual	4.91	35		

teacher interpersonal behavior and vocabulary achievement ($r = .26$ $p > .05$). There was, however, a significant correlation between achievement in comprehension and teacher interpersonal behavior, ($r = .33$, $p < .05$). Table IV illustrates the analysis of variance for this significant relationship.

Hypothesis 2. There exists a positive relationship between teacher interpersonal behavior and mean gain in classroom self-concept. The relationship was analyzed and the results are contained in Table V. No significant relationship was found between teacher interpersonal behavior and student self-concept ($r = -.13$, $p > .05$).

Hypothesis 3. There exists a positive relationship between teacher interpersonal behavior and mean school behavior gain. A significant relationship ($r = -.348$, $p < .05$) was found to exist. Analysis of variance for this relationship is contained in Table VI.

Hypothesis 4. There exists a positive relationship between teacher interpersonal behavior and mean social acceptance gain of classes.

No significant relationships were found between

TABLE V

CORRELATION OF TEACHER INTERPERSONAL BEHAVIOR TO SELF-CONCEPT, SOCIAL ATTRACTION AND SOCIAL ACCEPTANCE SCORE

	Self-Concept	Social Attraction	Social Acceptance
Teacher Inter-personal Behavior	-.13	-.14	-.13

TABLE VI

ANALYSIS OF VARIANCE FOR TEACHER INTERPERSONAL BEHAVIOR AND STUDENT SCHOOL BEHAVIOR

Source	SS	DF	F	P
Teacher Interpersonal Behavior	2.08	1	6.18	$p < .018$
Residual	11.77	35		

teacher interpersonal behavior and social acceptance ($r = -.13$, $p > .05$) or teacher interpersonal behavior and social attraction ($r = -.14$, $p > .05$). Results are contained in Table V.

Social Acceptance scores were considered on the basis of sex as well as on whole class scores. Table VII illustrates the relationship of teacher interpersonal behavior on male and female social acceptance scores. No significant results were found.

A correlation matrix was established to investigate relationships between the dependent variables under study. Correlations of male and female social acceptance scores are presented in Table VIII. Several significant correlations existed between: females accepting females (FFSP) and males accepting females (FSP) ($r = .64$, $p < .01$); males accepting males (MSP) and females accepting males (FMSP) ($R = .53$, $p < .01$); males accepting males (MSP) and males accepting females (FSP) ($r = .58$, $p < .01$); females accepting females (FFSP) and females accepting males (FMSP) ($r = .54$, $p < .01$).

The correlation ($r = .57$, $p < .01$) of females accepting females (FFSP) and males accepting males (MSP) was significant, however, the correlation ($r = .29$, $p > .05$) of females accepting males (FMSP) and males accepting females (FSP) was not significant.

Table IX illustrated the results of male and female social attraction scores and the following significant correlations were proved to exist between: 1) females

TABLE VII

CORRELATION OF TEACHER INTERPERSONAL BEHAVIOR TO MALE AND FEMALE SOCIAL ACCEPTANCE SCORES

	MSP	FSP	FMSP	FFSP
Teacher Interpersonal Behavior	-.03	-.04	-.27	-.10

MSP (Males acceptance of other males)
FSP (Males acceptance of females)
FMSP (Females acceptance of males)
FFSP (Females acceptance of other females)

TABLE VIII

SOCIAL ACCEPTANCE CORRELATIONS OF MALE AND FEMALE SCORES

		Males		Females	
		MSP	FSP	FMSP	FFSP
Males	MSP	1.00	.58	.53	.57
	FSP		1.00	.29	.64
Females	FMSP			1.00	.54
	FFSP				1.00

MSP (males acceptance of other males)
FSP (males acceptance of females)
FMSP (females acceptance of males)
FFSP (females acceptance of other females).

TABLE IX

SOCIAL ATTRACTION CORRELATIONS OF MALE AND FEMALE SCORES

		Males		Females	
		MPS	FPS	FMPS	FFPS
Males	MPS	1.00	.61	.32	.29
	FPS		1.00	.27	.49
Females	FMPS			1.00	.61
	FFPS				1.00

MPS (males rankings of other males)
FPS (males rankings of females)
FMPS (females rankings of males)
FFPS (females rankings of other females)

rankings of males and females ($r = .61$, $p < .01$) and 2) males rankings of males and females ($r = .61$, $p < .01$).

Table X presented significant correlations ($p < .01$) between social acceptance and social attraction scores. The highest positive correlations were found between: 1) males accepting males (MSP) and males rankings (MPS) of other males ($r = .83$, $p < .01$), 2) females accepting females (FFSP) and females rankings (FFPS) of other females ($r = .90$, $p < .01$), 3) males accepting females (FSP) and females rankings (FMPS) of males ($r = .77$, $p < .01$, 4) females accepting males (FMSP) and males rankings (FPS) of females ($r = .79$, $p < .01$). Analysis of results illustrated that a significant correlation existed between social acceptance and social attraction scores ($r = .86$, $p < .01$) when whole classes of the sample were considered.

A significant correlation was found between self-concept and social attraction ($r = -.369$, $p < .05$), but the relationship between self-concept and social acceptance ($r = -.208$, $p > .05$) was not considered significant.

A closer observation of the descriptive statistics for individual classes and variables, from Appendix A, provided some noteable results. Fifteen percent of the highest and 15 percent of the lowest residual gain scores of the dependent variables of individual classes were selected and observed. A few teachers had a high or low residual gain in their classes, on one or two variables, which did not appear to be significant. Several teachers,

Table X

CORRELATION MATRIX FOR SOCIAL ACCEPTANCE AND SOCIAL ATTRACTION BETWEEN MALES AND FEMALES

	Social Attraction			
Social Acceptance	MPS	FPS	FMPS	FFPS
MSP	.83	.61	.53	.55
FSP	.44	.24	.77	.60
FMSP	.36	.79	.36	.56
FFSP	.27	.38	.49	.90

MSP (Males acceptance of other males)
FSP (Males acceptance of females)
FMSP (Females acceptance of males)
FFSP (Females acceptance of other females)
MPS (Males rankings of other males)
FPS (Males rankings of females)
FMPS (Females rankings of males)
FFPS (Females rankings of other females)

however, had some of the highest and/or lowest gains on three or more variables. When highest and/or lowest gains were made on more than two variables, the results appeared worthy of consideration and were illustrated in Table XI. The scores in brackets were not part of the highest and lowest gain scores, but were included to give a complete picture of that individual teacher.

From the gain scores observed eight teachers had highest gains in the academic areas (comprehension, vocabulary, mathematics) and three teachers had some of the lowest gain scores in these areas, while one teacher had high gains in vocabulary and comprehension but a low gain in Mathematics. Of the eight teachers with high gains on more than one variable only teacher number 2 had a high gain on the Social Acceptance variable. Four of the eight teachers with high gains in academic areas had some of the lowest gains in the Social Acceptance area (teachers numbers 4, 5, 9, 12). Teacher number 5 had a low gain on Self-Concept and teacher number 8 had a low gain on School Behavior. Teacher number 10 had a high gain on the Social Acceptance variable but lower gains on School Behavior and Self-Concept. Teacher number 2 had high gains on Comprehension, Mathematics, School Behavior, Social Acceptance and Social Attraction, while teacher number 3 had low gains in Vocabulary, Comprehension, Total Reading and Self-Concept. Teacher number 7 had a high gain on Self-Concept but low gains on Vocabulary, Comprehension, Total Reading and Social Attraction.

TABLE XI

TEACHERS WITH HIGHEST AND/OR LOWEST RESIDUAL GAIN SCORES IN DEPENDENT VARIABLES

Teacher	Comp.	Vocab.	Total Reading	Math.	Self Concept	Behavior	Social	
							Acceptance	Attraction
1	.24	.56	.55	-1.03	(-.15)	-.51	(.26)	(.19)
2	.33	(.03)	(.26)	.86	(-.11)	.88	.72	.56
3	-.64	-.72	-.81	(-.37)	-.30	(-.10)	-.52	-.44
4	.38	.66	.65	1.49	(.21)	(.30)	-.15	-.44
5	(.17)	.28	(.24)	(.22)	-.56	.79	(.13)	(.18)
6	(.03)	(.25)	(.07)	1.06	.42	(-.38)	-.79	-.83
7	-.88	-.88	-1.01	(-.63)	.65	(.36)	(.07)	-.42
8	.55	(.08)	.48	1.19	(.04)	-1.50	(.25)	(-.04)
9	(.35)	.36	(.38)	1.13	.47	(.10)	(.10)	(-.04)
10	(-.04)	(-.22)	(-.15)	(-.29)	-.32	-.91	.92	.67
11	(-.03)	(.08)	(.0)	.83	(.13)	(-.23)	-.69	-.58
12	.49	.62	.73	(.31)	(.09)	.90	-.37	-.56
13	-.62	(.01)	-.39	-.85	(-.12)	1.22	(.18)	(.27)

Most teachers who had high residual gains in the academic area had low residual gains in the social acceptance area (see Appendix A, teachers numbers 15, 23, 27, 34, 37).

A subsection of this study involved research on the fitness levels of some of the students from the larger sample. Fitness levels were studied in relation to achievement, self-concept, social acceptance and school behavior.

Results of the data analysis for the four hypotheses investigated are illustrated in Table XII. Classroom effects have been removed from fitness results.

Hypothesis 5. Students who are more physically fit are higher achievers than those who are less fit. This hypothesis was rejected since results showed that students with a higher level of fitness did not achieve significantly higher in mathematics ($p > .05$) or in reading ($p > .05$). Results are contained in Table XII.

Hypothesis 6. Students who are more physically fit have more positive self-concepts. This hypothesis was rejected ($p > .05$) since no positive correlation was found between student fitness levels and self-concept.

Hypothesis 7. Students who are more physically fit are better accepted by their classmates. This hypothesis

TABLE XII

RELATIONSHIP OF PHYSICAL FITNESS LEVEL TO STUDENT VARIABLES

Outcome	Source of Variance	SS	DF	MS	F	P
Reading	Class	.09865	6	.016442	2.321	$p < .05$
	Fitness	.05836	5	.011672	1.648	n.s.
	Residual	.84299	119	.007084		
Mathematics	Class	.28271	6	.0471183	8.134	$p < .01$
	Fitness	.04285	5	.00857	1.512	n.s.
	Residual	.67444	119	.005668		
Self-Concept	Class	.05296	6	.008827	1.1952	n.s.
	Fitness	.06818	5	.013636	1.8464	n.s.
	Residual	.87886	119	.007385		
School Behavior	Class	.48163	6	.80272	19.3958	$p < .01$
	Fitness	.02587	5	.005174	1.2502	n.s.
	Residual	.4925	119	.004139		
Social Acceptance	Class	.13291	6	.022152	3.1465	$p < .05$
	Fitness	.02931	5	.005862	.8327	n.s.
	Residual	.83778	119	.0070401		

*Level of significance: $.95F_{(5,119)} = 2.3$; $.99F_{(5,119)} = 3.2$

$.95F_{(6,119)} = 2.2$; $.99F_{(6,119)} = 3.$

was rejected ($p > .05$). No significant relationships were found between fitness levels and social acceptability.

Hypothesis 8. Students who are more physically fit behave in accordance with teacher wishes. This hypothesis was rejected ($p > .05$).

Discussion of Results

Academic Achievement

Results of the study indicated teacher interpersonal behavior was significantly related to pupil achievement (see Table III) in certain areas (comprehension) but not in others (mathematics, vocabulary). Comprehension can be seen by some educators as a subject more dependent on each individual teacher's approach and initiative. It is the sort of area that can involve much creativity, extensive class discussion, and student involvement, all of which are influenced positively or negatively by teacher interpersonal behavior.

The teaching of mathematics and vocabulary can also involve the above techniques, however, these subjects appear more factual and straightforward. Maybe lecture and teacher clarity are more effective tools for teaching subjects such as these.

The results of the present study were both consistent and inconsistent with earlier studies. Christensen (1960)

found warmth of the teacher significantly related to student achievement in vocabulary and mathematics, whereas the present study found no such results. Peng, Ashburn and Grey (1978) did not find positive teacher affect to be positively related to achievement. Positive affect was similar to teacher interpersonal behavior used in the present study, thus results appear inconsistent. Solomon, Rosenberg and Bezdek (1964) found gains in comprehension to be significantly related to teacher energy, flamboyance and a moderate position in a permissiveness versus control continuum. Results appeared consistent with the findings of the present study since the teacher behaviors described are similar to teacher interpersonal behavior.

Results indicated that 11 percent of the variance, the differences between individual classes on comprehension scores, was accounted for by the independent variable of teacher interpersonal behavior. The fact that a large percentage of the variance remained unaccounted for caused several issues to arise: 1) Other teacher behaviors, events or strategies affect achievement, 2) Variables other than teacher interpersonal behavior are related to comprehension, 3) Other teacher variables are related to achievement in mathematics and vocabulary since no positive relationships were found between teacher interpersonal behavior and achievement in these areas, 4) Teacher behaviors affect different students differently.

Brookover (1978) wrote teachers may sacrifice some

degree of informational subject matter if time was spent on maintaining a relaxed interpersonal climate. Solomon, Rosenberg and Bezdek (1964) found gains in factual information significantly related to teacher clarity, expressiveness and lecturing. Mathematics and vocabulary can be termed as factual and maybe factors such as the above could be related to achievement in these areas.

Need gratification and development of the affective areas were considered significant factors in student growth. The writer hypothesized, that a warm and enthusiastic teacher would help satisfy the basic needs of students. It was also hypothesized that the affective areas should be considered as important as the academic areas. Results of the present study did not support this position. The writer concluded that maybe the basic needs will have to be satisfied and the affective areas given more consideration before achievement in higher areas, such as mathematics and vocabulary, becomes evident.

School Behavior

Table VI shows teacher behavior is significantly related to school behavior. Results indicate enthusiastic teachers viewed their students as being emotionally stable, socially well-adjusted and more independent. They rated their students higher on cognitively related skills as well as on task orientation. These teachers claimed their students strived to behave in socially acceptable ways.

Other researchers (Cogan, 1958; Ryans, 1961; Truax & Tatum, 1966) also found teacher interpersonal behavior to be related to student behavior.

In the present study 12½ percent of the variance, the changes in school behavior scores for individual classes, was accounted for by the independent variable of teacher behavior. A large percentage of the variance remained unaccounted for and one wonders which other factors contributed to student behavior change. Cronbach (1954) felt a warm, more acceptant teacher is usually better liked by pupils and he felt it was expected that a well liked teacher had more influence over them. Crow (1954) felt that the personally and socially adjusted teacher exercised a tremendous influence on pupils behavior. The present researcher agreed with both Cronbach and Crow and concluded that teachers who are emotionally stable, socially well-adjusted and in control of their lives will usually rate their students as behaving in a more acceptable manner than will other teachers. They are usually more tolerant of unacceptable student behavior as well. The above teacher characteristics may be just as positively related to student behavior as the teacher behaviors described in this study.

Self-Concept

A significant correlation ($r = -.369$, $p < .05$) was found between self-concept and social attraction indicating student self-concepts were partially based on how they

ranked their peers. It was hypothesized that a significant relationship existed between teacher interpersonal behavior and student self-concepts, but no significant relationship ($r = -.13$, $p > .05$) was found. Wightman (1974) found no significant correlations between student self-concept measurements and teacher styles either. Combes (1978), however, stressed that the teacher is an important agent in the development of the child's self-concept. If this was accurate, then, there are teacher factors other than interpersonal behavior related to Grade five students' self-concept because no significant relationship was found in the present study.

Social Acceptance

It was hypothesized a significant relationship existed between teacher interpersonal behavior and student social acceptance, but no significant relationship was found. Results appear inconsistent with the ideas of Cronbach (1954) who felt teacher warmth and acceptance were important for positive intergroup contacts.

Several positive correlations, however, were found between male and female social acceptance and social attraction scores. Overall results indicated that both males and females accepted peers of their own sex more readily than those of the opposite sex. Results also indicated that both males and females rankings of their classmates, were usually consistent with their classmates acceptance of them. Social attraction to members of the same sex and the

acceptance of members of the same sex were more highly correlated than attraction to the opposite sex or acceptance of the opposite sex. Factors other than teacher interpersonal behavior must account for changes in social acceptance scores or they are stable over a period of one year.

The growing importance of the peer group and the importance of relationships and friendships would probably be evident among grade five students. It appears the peer group might be the significant others in the students' lives around this time and the teacher may have very little influence.

When individual classes were considered on the basis of their high and low gain scores, some interesting issues arose. Some teachers who had the highest gains in academic areas had the lowest gains in affective areas. Did this mean these teachers considered academics the most important part of schooling? Did these teachers attempt to develop good social relationships among the students or try to enhance their self concepts? Teacher number 10 had one of the highest gains in the social attraction/acceptance area, yet had very low gains in all other areas. Did the teacher place too much stress on good social relationships within the classroom and neglect all other areas? This same teacher had a very low gain score for student behavior. One wonders if the social aspect of the classroom affected this teacher's ratings of the behavior of the students since

the teacher rated the students low on social adjustment, independence and emotional stability.

Teacher number 3 was selected for consideration because all gain scores were very low and many of them fell within the lowest fifteen percent. One wonders how this teacher was rated by school board personnel, fellow teachers, and students.

Teacher number 7 had one of the highest gains on student self concept, and teacher number 13 had one of the highest gains on student behavior, however these teachers' academic gain scores fell within the lowest fifteen percent. When too much emphasis was placed on affective areas, did academic areas suffer? Most results indicate positive changes will occur in an area only when teacher intentions are specifically directed toward that area.

It was stated in Chapter I the development of the affective domain was as important as the academic domain. Close observation of individual classes revealed, however, that most teachers had higher residual gains in academic areas and few teachers had high gains in both academic and affective areas.

The curriculum issued by the Department of Education may not allow teachers time to focus on student self-development.

Physical Fitness

The need for activity is considered one of the basic needs (discussed in Chapter 2) and it, along with other needs, must be satisfied before motivation for higher learning takes place. The study assumed that children who were more physically fit have satisfied the basic need for activity and were ready for higher learning. Results did not prove this. Students who were more physically fit were not shown to achieve any higher in reading and mathematics than those who were less fit. Results did not show that more physically fit students were: better behaved, better accepted by peers, or more self-confident than those who were less fit.

Results are inconsistent with results of other researchers (Albinson, 1974; Hughes, 1974; Ismail, 1967; Plack, 1967; Shroeder, 1961; White, 1973 and others) who found positive relationships between fitness levels and various student variables. One wonders if a level of physical fitness becomes more important as students get older.

The validity of the fitness score in the present study is questionable. It was the intention of the researcher to include an aerobic measure of fitness, but, this measure had to be discarded because a valid measure for all classes was not obtained.

Summary

The results indicated teacher interpersonal behavior is related to student achievement in comprehension and is related to student school behavior. Results did not indicate that teacher interpersonal behavior is significantly related to school behavior, student self-concepts or student social acceptability. Fitness levels were not shown to have any significant effects on any of the student variables studied.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Summary

The intention of this study was to investigate the relationship between teacher interpersonal behavior and the self-concepts, school behavior, social acceptance and achievement of students. The physical fitness level of a subsample of the subjects was considered to determine if it had any affect on the above factors.

The review of the literature, which presented the opinions and research findings of leading educators, disclosed few significant relationships between teacher interpersonal behavior and student variables.

A sample of 39 teachers and their classes of grade five students were selected for the study. The schools from which the classes were selected were randomly chosen from a geographic area within a 300 kilometer radius from St. John's, Newfoundland.

Six instruments were used in the study and they appeared to be both reliable and valid. The Gates-McGinitie Reading Test and an Arithmetic Achievement Test were used to measure student achievement. The Ohio Social Acceptance Scale was used to determine the social acceptance of students and Levenstein's Child Behavior Traits Scale was used to measure student behavior. Student self-concept was measured by use

of the McDaniel-Piers Young Children's Self-Concept Scale. The Canada Fitness Awards Test was used to determine the fitness level of students.

Regression analysis, with a correlation matrix, was the type of statistical procedure used to evaluate the data.

Findings

A significant relationship was found between teacher interpersonal behavior and student achievement in the area of comprehension. A significant relationship was also found between teacher interpersonal behavior and student behavior. It was hypothesized, that significant relationships existed between teacher interpersonal behavior and student self-concept; student social acceptance; and achievement in mathematics and vocabulary. The present study did not support this position. A correlation matrix indicated a positive relationship existed between self-concept and social perception of students.

Results of the fitness study revealed no significant relationships between fitness levels and student variables.

Implications for Education

Some conclusions can be drawn and some implications made from the findings of the study.

1) The final results point to teacher interpersonal behavior as one of the factors related to student achievement in comprehension.

2) Results indicate that teacher interpersonal behavior is related to the behavior of students. An enthusiastic teacher rates his/her students as exhibiting more acceptable behaviors.

3) If the affective domain of students is as important as the cognitive domain, then results of the study indicate teachers place too little emphasis on the development of the affective areas. No significant gains were found in student self-concepts or social acceptance areas.

4) Teachers in the study made higher gains in academic areas than in affective areas. This may have resulted because of the way teachers were educated. Does teacher education make teachers focus on the full development of the individual child? Are the cognitive, social, emotional and physical areas given the same emphasis in the various teacher education courses as the academic areas are given?

5) The school curriculum can influence teacher effectiveness. Teachers in Newfoundland schools are given a

curriculum by the Department of Education. This curriculum provides a program for each academic subject area. It may not, however, allow time for teachers to focus on the self-development of their students.

Some programs are available at the Department of Education for student affective development, however, these programs are not compulsory and are often ignored by school boards.

Recommendations for Further Research

The following section discusses possible recommendations for further research as a result of this study.

1) Further work is needed in the same area using a larger number of teachers.

2) Research should be undertaken to determine the effect of certain teacher styles and techniques on the affective domains of individual students.

3) Results of the section of the study on sex differences warrant the need for further research with older and/or younger children. Sex of the student may not be as strong a factor in affective areas at other age levels.

4) Teacher interpersonal behavior, together with other behaviors, should be studied again with other grade

levels for relationships to student self-concept and social acceptance.

5) Further work is also needed in the physical fitness area using a larger, more generalizable number of students and using a fitness test with an aerobic measure.

6) A study of the effect of physical fitness on student variables should be undertaken with students of other grade levels.

7) Several other questions need further study:

1) Is there any relationship between self-concept and academic achievement?

2) Is gratification of needs considered by the majority of teachers?

3) Should teachers consider the affective areas as important as the academic areas?

4) Do teacher behaviors have the same effect on all students of all socioeconomic levels?

5) Do ages of the teachers account for different influences on students?

6) Which teacher behaviors or attitudes are important in dealing with the rejected student or the student with a behavior problem?

7) Can teachers change the sociometric status of the classroom for the benefit of those rejected students?

8) How does age of the student relate to social acceptance? Do differences in degrees of acceptance exist between different ages?

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APPENDIX A

Residual Gains on Dependent Variables

Teacher	Vocabulary			Comprehension			Total Reading	Math		
	Pre-test	Post-test	Residual Gain	Pre-test	Post-test	Residual Gain	Residual Gain	Pre-test	Post-test	Residual Gain
01	22.97	27.40	-.24	20.90	27.10	.20	-.03	37.93	34.80	- .57
02	22.41	28.56	.08	23.38	25.97	- .42	-.24	43.0	43.29	- .03
03	25.03	29.46	-.16	24.69	27.64	- .22	-.30	44.81	47.88	.29
04	22.76	27.89	-.1	21.62	28.21	.40	.18	45.55	41.81	- .36
05	16.96	26.48	.56	19.39	26.17	.24	.55	41.43	33.39	-1.03
06	18.38	25.18	.03	20.54	27.0	.33	.26	32.15	42.83	.86
07	20.65	27.40	.12	22.0	28.52	.24	.22	40.4	36.65	- .54
08	18.44	23.73	-.33	19.25	24.7	- .11	-.24	38.33	36.03	- .52
09	14.63	20.86	-.21	18.52	22.09	- .38	-.28	40.44	36.46	- .61
10	20.08	23.44	-.51	22.24	25.41	- .20	-.46	40.54	30.74	-1.2
11	17.30	23.05	-.19	21.17	23.0	- .46	-.32	41.9	36.14	- .68
12	18.11	21.89	-.72	18.42	20.79	- .64	-.81	42.79	40.38	- .37
13	19.79	28.83	.66	23.61	29.63	.38	.65	39.04	53.0	1.49
14	24.06	29.0	-.05	27.88	25.41	-1.31	-.96	47.38	40.39	- .24
15	16.46	22.89	-.1	18.32	24.21	.02	.01	38.96	38.83	- .20
16	18.09	25.35	.14	21.17	25.22	- .23	-.04	46.0	46.74	.15
17	20.0	25.35	-.19	22.33	28.39	.23	.03	31.94	37.39	.21
18	20.24	24.0	-.29	23.60	26.31	- .31	-.4	40.59	41.00	- .06
19	22.0	28.88	.28	25.33	30.4	.17	.24	44.04	45.81	.22
20	26.48	32.68	.25	28.92	32.6	.03	.07	44.48	53.52	1.06

Teacher	Vocabulary			Comprehension			Total Reading	Math		
	Pre-test	Post-test	Residual Gain	Pre-test	Post-test	Residual Gain	Residual Gain	Pre-test	Post-test	Residual Gain
21	12.76	16.4	-.88	16.20	17.9	-.88	-1.01	34.32	31.35	- .63
22	14.21	22.09	.08	18.21	26.64	.55	.48	39.96	51.55	1.19
23	18.40	24.4	-.11	20.07	25.4	-.02	- .05	42.27	45.87	.35
24	23.83	31.17	.36	25.0	31.04	.35	.38	44.91	54.76	1.13
25	23.17	29.55	.12	22.43	29.8	.49	.36	49.04	43.05	- .54
26	21.87	28.22	.10	23.74	29.7	.27	.20	47.43	50.0	- .41
27	19.24	24.5	-.22	20.53	25.5	-.04	- .15	44.33	41.83	- .29
28	22.52	28.66	.08	23.35	27.94	-.03	.0	44.61	51.78	.83
29	22.27	29.35	.27	23.80	28.35	-.04	.11	49.1	50.97	.33
30	22.44	27.5	-.15	26.33	31.06	.13	- .06	45.29	53.56	1.04
31	18.75	28.04	.62	20.42	28.09	.49	.73	43.3	46.65	.31
32	21.34	28.45	.21	22.58	29.83	.48	.42	40.57	44.75	.43
33	20.67	25.78	-.09	23.08	27.54	.10	.05	42.0	44.03	.15
34	21.83	27.86	-.02	22.34	27.10	-.05	- .06	41.78	41.14	- .19
35	23.4	28.06	-.2	23.3	27.84	.02	- .15	46.21	40.0	- .65
36	20.0	27.45	.14	20.85	25.80	-.14	.01	42.76	36.5	- .86
37	20.7	26.83	.01	22.42	24.06	-.62	- .39	38.42	32.83	- .85
38	23.52	30.37	.15	24.06	29.53	.04	.07	44.78	46.71	.19
39	22.15	28.96	.18	22.46	29.88	.50	.41	45.85	43.2	- .24

Teacher	C.B.T.			Self Concept			Social Acceptance/ Attraction	
	Pre-test	Post-Test	Residual Gain	Pre-test	Post-test	Residual Gain Self Conc.	Residual Gain Soc. C/S	Residual Gain Soc. S/C
01	65.72	69.04	-.08	26.86	28.50	.16	.12	.08
02	89.0	86.69	-.06	23.97	26.00	.01	-.14	.05
03	88.23	91.9	.41	26.75	27.46	-.14	.01	-.07
04	87.52	88.38	.19	31.57	32.15	.17	.28	.44
05	75.0	71.65	-.51	27.17	27.43	-.15	.19	.26
06	72.04	83.17	.88	27.19	27.9	-.11	.56	.72
07	72.04	83.17	.0	28.16	28.42	-.15	-.10	-.24
08	67.28	65.03	-.58	29.33	29.95	.02	-.04	-.22
09	64.74	64.91	-.40	29.20	29.11	-.10	-.22	-.62
10	82.52	81.48	-.11	28.20	30.26	.21	-.20	-.16
11	73.19	74.53	-.04	25.25	27.19	.07	.23	.33
12	74.26	75.47	-.10	27.63	26.0	-.30	-.15	-.0
13	77.67	82.59	.30	29.36	30.93	.21	-.44	-.52
14	77.50	84.76	.60	28.71	26.86	-.02	.14	-.19
15	68.61	65.53	-.50	27.03	27.54	-.11	.67	.52
16	76.61	84.14	.57	28.39	27.13	-.35	-.34	-.37
17	72.56	78.33	.34	25.56	29.33	.38	.18	.13
18	68.21	75.74	.57	27.65	25.60	-.55	-.04	-.09
19	65.6	76.58	.79	28.15	26.09	-.56	.18	.13
20	80.2	77.0	-.38	26.20	30.21	.42	-.83	-.79

Teacher	C.B.T.			Self-Concept			Social Acceptance/ Attraction	
	Pre-test	Post-test	Residual Gain	Pre-test	Post-test	Residual Gain	Residual Gain C/S	Residual Gain S/C
21	75.09	79.52	.36	27.0	30.35	.65	-.42	.07
22	78.92	64.91	-1.5	30.09	30.82	.04	-.04	.25
23	76.13	79.13	.14	25.8	25.8	.28	.57	.74
24	70.77	75.05	.10	27.32	30.7	.47	-.04	.10
25	76.96	91.55	1.27	27.59	29.3	.16	-.36	- .32
26	73.43	63.17	-1.24	25.59	26.7	-.17	-.09	.03
27	65.28	60.17	- .91	23.28	23.89	-.32	.67	.92
28	80.58	78.91	- .23	28.97	30.22	.13	-.58	- .69
29	92.71	94.32	.34	30.43	30.55	.09	-.08	- .14
30	81.28	78.78	- .29	28.17	29.78	.14	.16	1.0
31	67.96	80.46	.90	28.05	29.7	.09	-.37	- .56
32	74.39	73.17	- .34	30.13	30.0	-.02	.15	.04
33	72.44	69.97	- .43	29.05	30.72	.17	.43	.31
34	68.37	63.63	- .80	26.27	26.38	-.25	.32	.38
35	78.9	84.32	.45	28.3	28.58	-.09	-.33	- .21
36	59.1	64.95	- .03	30.6	32.15	.28	-.05	- .19
37	54.0	72.57	1.22	29.05	28.97	-.12	.27	.18
38	74.59	74.06	- .24	28.69	29.66	.05	-.33	- .66
39	72.19	71.56	- .30	28.68	29.81	.08	-.04	.07

Teacher	Male				Female			
	Social Acceptance/Attraction				Social Acceptance/Attraction			
	Residual Gain MSP	Residual Gain FSP	Residual Gain MPS	Residual Gain FPS	Residual Gain FMSP	Residual Gain FFSP	Residual Gain FMPS	Residual Gain FFPS
01	- .31	-.14	- .34	.69	.69	.19	- .09	.02
02	- .08	.23	- .30	-.52	- .29	.48	.16	.27
03	.25	-.51	.21	.21	.15	-.16	- .29	-.19
04	.53	.88	.28	-.03	.17	-.01	.72	-.10
05	.28	.12	.21	.17	.41	.06	.15	.09
06	1.22	.53	.82	.71	.76	.28	.50	.20
07	- .14	.02	- .07	-.25	-.34	-.15	- .01	-.04
08	- .21	-.30	- .13	.01	-.08	-.05	.02	.09
09	- .15	-.51	.07	-.10	-.37	-.67	- .22	-.37
10	- .27	.33	- .40	-.33	-.14	.03	.04	.08
11	.19	.09	- .05	.50	.46	.12	.20	.13
12	- .38	.21	- .49	.23	.58	-.19	- .04	-.05
13	- .34	-.49	- .24	-.23	-.14	-.65	- .35	-.65
14	- .33	-.06	- .86	-.35	.37	-.26	1.19	.22
15	.91	.19	1.03	.72	.60	.17	.15	.48
16	- .91	.04	- .77	-.70	-.99	.09	- .16	-.01
17	- .68	-.62	- .54	.48	1.06	.20	- .55	.36
18	- .05	.20	- .33	-.28	-.43	.05	.28	.08
19	- .22	.63	.05	.10	-.07	-.12	.63	-.07
20	- .55	-.80	- .67	-.96	-.95	-.55	- .80	-.72

Teacher	Male				Female			
	Social Acceptance/Attraction				Social Acceptance/Attraction			
	Residual Gain MSP	Residual Gain FSP	Residual Gain MPS	Residual Gain FPS	Residual Gain FMSP	Residual Gain FFSP	Residual Gain FMPS	Residual Gain FFPS
21	- .58	-.03	-.39	-.79	.34	- .15	-.08	-.48
22	.16	-.38	-.06	-.23	.22	.20	.14	.01
23	1.00	.50	.41	.38	.52	.71	.50	.61
24	.24	.43	.40	-.45	- .14	- .07	.11	-.11
25	- .53	-.17	-.01	-.33	- .44	- .53	-.56	-.38
26	.18	.22	.01	-.22	- .13	- .07	.09	-.18
27	1.07	.77	.83	.27	.40	.91	.69	.54
28	- .54	-.50	-.44	-.66	- .64	- .68	-.55	-.54
29	- .04	.15	-.23	-.49	- .68	.11	.17	.24
30	.64	.35	-.38	.30	1.09	1.47	.01	.97
31	- .22	-.64	-.06	.22	- .26	- .82	-.65	-.67
32	- .22	.24	-.07	-.23	- .29	.33	.32	.42
33	.56	-.04	.41	.64	.61	- .06	.32	.19
34	.17	.35	.11	.27	.44	.42	.47	.38
35	- .18	-.40	-.40	-.14	- .20	- .06	-.58	-.25
36	- .13	-.47	-.09	-.01	.19	- .34	-.03	-.06
37	- .09	.38	.07	-.01	- .06	.37	.50	.43
38	- .49	-.66	-.30	-.31	- .58	- .57	-.31	-.22

APPENDIX B

Rating Scales for Warmth and Enthusiasm

WARMTH. This dimension refers to the extent to which the atmosphere of the class is relaxed and comfortable or tense and uncomfortable. It also encompasses the degree to which the teacher maintains positive interpersonal relationships with pupils.

A classroom that is warm is one in which the teacher is positive to the students, demonstrating friendly behavior. The children show signs of feeling secure and appear to like or enjoy the classroom experience. There is an atmosphere of acceptance of students. This teacher demonstrates sensitivity to students. The teacher is sensitive to the private lives of his students, and concerned about the personal and social growth of each student. Students are praised and reasoning is used rather than punishment. The teacher smiles and used physical contact and humor in a positive way.

A classroom that is cold is one in which the teacher is negative to the students, with no evidence of friendly behavior. The teacher does not encourage the pupils by the use of praise and generally, only responds to pupils in order to correct a mistake. A very cold teacher is quite critical and stern. The atmosphere is one of apparent insensitivity to students. This teacher seems to think of students as "things" or "objects" to be dealt with. Verbal or physical punishments are given for misbehavior. Sarcastic humor may be used to control and discipline students. There may be some differential treatment of students. Students exhibit feelings of insecurity and tension.

Rate the classroom atmosphere on a warmth continuum.

1.	2.			
Very cold.	Cold			
3.		4.		5.
Neither cold nor warm.		Warm		Very warm

ENTHUSIASM. This dimension refers to the enthusiasm or interest level expressed by the teacher and students during class activities.

The enthusiastic teacher conveys a great sense of commitment, excitement, and involvement in the subject matter. The students seem responsive and appear to enjoy the activity. The teacher seems to expect students to do their best. The teacher's tone of voice varies, and this is evidenced by the teacher's motivation and desire to help students do their work.

The dull teacher does not show any sense of commitment, excitement or involvement in the subject matter. The dull teacher does not appear interested in the subject matter. The pupils seem non-responsive and do not appear to be involved in the class activities. The teacher doesn't seem to care whether or not pupils do their best.

Rate the class on an enthusiasm continuum.

1.

Very unenthusiastic (dull).

2.

Unenthusiastic.

3.

Neither dull nor enthusiastic

4.

Enthusiastic

5.

Very Enthusiastic (interesting)