Teacher empathy and fairness: elementary school children's perceptions

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TEACHER EMPATHY AND FAIRNESS: ELEMENTARY SCHOOL CHILDREN'S PERCEPTIONS

Iowa State University

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Teacher empathy and fairness: elementary school children's perceptions

by

Leander Anthony Brown

A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of the Requirements for the Degree of DOCTOR OF PHILOSOPHY

Department: Professional Studies in Education
Major: Education

Approved:

Signature was redacted for privacy.

In Charge of Major Work

Signature was redacted for privacy.

For the Major Department

Signature was redacted for privacy.

For the Graduate College

Iowa State University
Ames, Iowa
1980
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INTRODUCTION

... if you saw the school as a social system, a case could be made that its input is all the children of all the people; its output is people who know their place. Its chief function is teaching people their place. ... 

The result is that school now faces the issue of an up and coming group of young people who are taking dead aim at these historic operations of the school system. They are demanding a legitimacy of the school that never was required before. ... (Dodson, 1970, p. 35)

Charles E. Silberman (1971) took note of a prediction by Harvard Professor Robert H. Anderson (1964) that "... the decade which began in 1955, and through which we are still churning, may ultimately come to be regarded as one of the major turning points in American public education" (Silberman, 1971, p. 158). Silberman, some seven years later, was making the observation that "Nothing of the sort has happened, the reform movement has produced innumerable changes, and yet the schools themselves are largely unchanged" (p. 158).

That educational experimentation had occurred was acknowledged by Silberman, but still in Silberman's view, it appeared to involve "... techniques to increase efficiency which left both the content of the curriculum and the process of instruction untouched and, for the most part, unexamined" (p. 160). Among the educational strategies and innovations commented upon by Silberman were team teaching, instructional television, and the ungraded primary. The latter innovation, noted Silberman, was one which seemed to grow out of, or
reflected seriously upon, the nature of childhood or the nature or purposes of education.

The practicing educator, of course, is fully cognizant of many other efforts at innovation, during and subsequent to the 1955-1971 period, which may have to one degree or another considered the nature of childhood. Open spaces or open classroom, multi-age grouping, and learning centers come quickly to mind. Most of these innovations have been attempted in an effort to bring a more human element into the school environment.

Perhaps one of the more prominent innovations in the secondary schools, among those already mentioned, is the learning center. Other efforts of teachers to change educational strategies have also touched both elementary and secondary teachers. In the last several decades, teachers have been participants in sensitivity-type group training and have been exposed to a litany of ideas in the area of interpersonal relationships. They have increasingly focused attention toward improvement of their effectiveness in the affective domain in an effort to bring those skills in balance with those that teachers command in the cognitive domain. More frequent and more intensive inservice study is visible testimony of this fact.

Yet, the progress these efforts seem to yield appears to fall far short of their intended goal. The visible impact
upon schools appears to be minimal. In George Gallup's 1976 poll of the public's attitudes toward our schools, interviewers asked what changes would do the most to improve the overall quality of public school education. Fifty percent of those interviewed selected "Enforce stricter discipline" (Elam, 1977, p. 521). "Lack of discipline" was again cited as one of the biggest problems confronting schools in Gallup's 1977 version of this same poll (Gallup, 1977, p. 46). What direction the clamor for greater discipline will take us is uncertain.

It is likely that the 1980s will be a period of reflection for educators as well as a period characterized by some regression from earlier attempts at innovations. If this does occur, it is possible that much of what was learned during the period of experimentation could be overlooked. The regressive thrust may well be signaled by some of the emphases in the current "Back to Basics" movement. Ben Brodinsky (1977) has pointed out that two of the many demands of the advocates of the "Back to Basics" movement are directly aimed at the topic of classroom control. They are:

1. At all levels, the teacher is to take a dominant role, with no nonsense about pupil-directed activities.

2. Discipline is to be strict with corporal punishment an accepted method of control.
While these are but two of the many demand features of the "Back to Basics" movement, they are critical ones. They seek to radically alter the educational environment as it has evolved and, to the extent that these objectives are realized, transform educational outcomes in rather crucial ways. Thus, the direction in which the focus of education seems to be turning threatens to take us full circle in spite of what we have learned in the last three decades.

Although there has been considerable discussion, in print and word, about the extreme need for discipline, there has been little hard analysis and study as to how it might be realized. There remains the crucial question as to how teachers might attain sufficient authority to maintain the classroom control advocated by so many people. What factors, or set of factors, which would allow a teacher to maintain discipline should be considered? One approach often mentioned has stressed "being fair" to students. The premise here is that if students feel they are being treated fairly, they will respond to teachers in a disciplined manner. Pratt (1974) underscored this viewpoint when he stated:

One of the cornerstones supporting a good learning environment is the teacher's use of fair rather than unfair verbal behavior. Students are acutely sensitive to the concept of teacher fairness, and its violation is central to many of the disorders that occur in the classroom. Fair verbal behavior on the part of the teacher is a prerequisite if optimum student learning is to take place. (p. 151)
Spady (1974) has also commented on the importance of fairness:

The implications for the classroom teacher are explicit: if the dominant mode of classroom organization is to be legitimate rather than persuasive or coercive, the teacher must earn the respect and trust of each student. Unless other fortuitous conditions are met, this will only be accomplished by treating him fairly and compassionately over a sustained period of time. (p. 52)

This writer is convinced that Spady's observation, that legitimate classroom organization (or discipline) can be achieved through the careful application of the two variables of fairness and compassion by the teacher, has not received sufficient attention. It seems that while this concept is not new, teachers have taken it so much for granted and have failed to see its tremendous value. It has been with us all along and yet it is perhaps the key we need which will change that all-important classroom and school environment.

Thus far the following points have been noted:

1. The era of innovation and experimentation in education, from 1955 until the late 1970s, has not changed schools substantially.

2. Public attitudes toward schools have revealed considerable concern about discipline in the schools.

3. "Back to Basics" is a movement which can potentially change the focus of education so that most of what little was gained through experimentation could be underutilized.

4. Treating students fairly and compassionately can achieve for teachers a legitimate classroom organization (or discipline) and may need to be the area of intense focus.
Rationale

If today one should spend time among students in most any public school in the United States, one would likely hear students appraising teachers. Also quite likely is the possibility that the question of teacher fairness or unfairness would be central in such appraisals. Teachers, of course, are not unaware of this fact. Indeed, they are concerned and sensitive to such appraisals. In all likelihood, a survey of teachers would affirm that teachers feel that it is important to be fair in their dealings with students. But being fair is only part of what is important. Being perceived by students as being fair is at least as important. Being fair and being perceived to be fair are not the same. Thus, it is possible for a teacher to be fair by reasonable standards of justice and be perceived to be unfair by the affected student(s).

In courts of law or other tribunals the perception of the defendant as to whether actions have been just or unjust are extremely important, but in some ways it is not as critical as it is within a school. In the former, the judge or jury will exercise judgment and arrive at an appropriate verdict and penalty. Neither judge nor jury is subsequently required to relate further with the defendant. There is a critical difference in the case of teachers. Teachers, after
the exercise of their judgment in an attempt at fairly re-
solving a point of contention, remain in social and profes-
sional proximity to their subjects and students. Therefore,
it becomes essential that the teacher be perceived by
students as being fair. Indeed, it is most important that
any school personnel, dealing with students in conflict
situations, be perceived to be fair. Actually being fair
is also essential, but in and of itself it is often not
enough.

In discussing leadership, Homans (1974) stated that:

A leader's past record of success in coordinating the
actions of his followers toward reaching some reward-
ing result and of justice in his distribution of the
reward among them renders it more probable, by the
stimulus proposition, that they will again obey orders
specifically coming from him. In this light, his
record may be looked on as risk capital. It gives
him room for maneuver: The next time he issues an
order, his followers will allow him the benefit of
the doubt, give compliance a try and wait to see what
the result may be. (p. 282)

Although Homans analyzes social behavior in terms of
exchanges resulting in rewards or punishments and risk
capital, the point is clear that outcomes of actions involving
justice are not discrete but rather are cumulative. For
teachers or school personnel, who begin their relationships
with students being perceived as unfair, the possibility of
positive interactions at later points in time are seriously
minimized.
How universally are educators aware of, and sensitive toward, the dynamics of this relationship? Blumberg and Perry (1974) studied the question: "Do secondary and elementary school teachers differ significantly in the way they diagnose their human relations problems with their pupils?" The results of their study showed that secondary teachers were more aware of their interpersonal teacher-pupil conflicts than were elementary teachers. Blumberg and Perry also pointed out that the obvious difference between the two kinds of schools may be a partial explanation of this finding. What was also found, and is important to this discussion, was that teachers didn't see the quality of their interpersonal relations with students as having a great bearing on the human relations problems with which they must deal. "The orientation seems to be personalized: 'It's his fault, not mine'" (p. 209).

What directions might be taken in educational research to influence teacher attitudes so that their human relationships with students might become more positively oriented? Studies over the years on the subject of empathy, genuineness, positive regard, unconditional positive regard, and congruency have shown many beneficial results for both teachers and students. Empathy on the part of the teacher for students has been related to higher student cognitive gains (Aspy, 1967), achievement and behavior (Davidson and Lang, 1960;

In the Harbach and Asbury (1976) study, a skill training program was undertaken to train teachers in human relations. A part of this program included training in how to respond with empathy. In the experimental stage the teachers were instructed to contact a previously identified problem student at least once per day and to initiate a facilitative conversation in which empathy was communicated. This experiment was continued for two weeks. Results were that teacher communications of empathic understanding appeared to reduce the frequency of occurrence of negative student behaviors. From the baseline week in which 194 student negative behaviors were recorded, to the posttreatment week in which 64 student negative behaviors were recorded, a 67.0 percent decline in these behaviors was observed.

Using a Wilcoxon Signed-Ranks test the decrease in negative behaviors, from the baseline week to the post-treatment week, was found to be significant at the .01 level. Although the decrease in negative behaviors was impressive, Harbach and Asbury also noted other positive results of the training. First, the teachers found it difficult initially to approach the students. Some teachers indicated that were it not for the experiment they would have stopped the empathic
interactions after the first day or so. Secondly, the problem students were initially skeptical as the teachers approached them and responded empathetically. Thirdly, teachers reported favorable attitude change on their part as a result of gaining new information about the students. One teacher stated, "I don't think mine worked right. It was I who changed, not my student" (p. 23).

Farmer (1971) interviewed administrators and teachers to get their perceptions of what qualities they believed the "turned on" teacher possessed. The "turned on" teacher as defined by Farmer was the teacher who was "with it" in being emotionally, intellectually and existentially involved with: (a) the subject matter being taught; (b) the contemporary scene; and (c) what is relevant for students. The administrators and teachers interviewed stressed personal characteristics and interpersonal abilities as being of primary importance for the "turned on" teacher.

Davidson and Lang (1960) studied the relationship between children's perception of their teacher's feelings toward them and the children's perception of themselves, their achievement and their classroom behavior. Relationships between these variables and the children's perception of their teacher's feelings toward them were all significant at the .01 level or better. Davidson and Lang noted that children who were rated as being disorderly, defiant,
unfriendly, or troublesome, perceived their teacher's feeling toward them as being less favorable than the children who were rated as being eager, cooperative, assertive and the like.

Elementary children diagnosed as having behavioral and academic difficulty were studied by Stoffer (1970). Provision of high levels of nonpossessive warmth as related by judges was found to be significantly related to gains in achievement and reduction in teacher-rated behavior problems.

Gurney (1977), citing findings from a study by Jenkins and Bausell (1974), pointed out that the process of education is more important than the product. Gurney, studying a college population, found that dynamism and warmth were important aspects of teaching as reflected in the student ratings. Included in the ratings were criteria related to such humanistic aspects as teacher flexibility, personalization of teaching, good rapport, and sensitivity to the student's point of view.

The studies cited here indicate that teacher empathy, warmth and positive regard are significant aspects of the teaching process. They also provide ample reason to believe that it is likely that these aspects underlie students' perceptions of fairness.
Fairness

To develop an operational construct of the perception of fairness, this writer began with a study of moral development wherefrom the concept of justice emerges. Piaget (1965) developed the concepts upon which much of the thinking regarding moral development rests today. Piaget (Pulaski, 1971) asserts that the essence of morality is respect for a system of rules most of which are initially handed down from the parent to the child. This process begins as a morality of constraint.

To study morality, Piaget got down on his knees and played marbles with little Swiss boys (Pulaski, 1971). In terms of stages, Piaget noted that at stage 1 the child used the marbles simply as free-play materials, without any attempt to adapt to social rules. Stage 2 (about 3-5 years) begins when the child imitates aspects of the rule-regulated play of elders although it is clear that the child assimilates what he sees to egocentric schemas. In stage 3, starting at about 7-8 years, the child begins to play the game in accordance with a mutually agreed upon set of rules (Flavell, 1963). This attitude toward rules Piaget called the morality of cooperation (Pulaski, 1971). In stage 4, about 11-12 years, rules are completely understood and obeyed.
Related closely to the levels of morality is the concept of justice. The earliest concept of justice Piaget found was based on retribution and is referred to as retributive justice. The child in this instance believes misbehavior must be punished. The punishment might be of two types: (a) expiatory, the wrongdoer should suffer, or (b) reciprocity, punishment is logically related to the offense. The belief in expiatory punishment prior to age 7-8 constitutes roughly the first phase of development in the child's understanding of justice. Belief in punishment by reciprocity, age 7-8 to 11-12, describes the second phase of development in the understanding of justice. The third and final phase is designated the phase of distributive justice. Piaget feels that most children by age 11 or 12 have progressed to this phase (Pulaski, 1971). In the final phase youngsters take on varying degrees of responsibility. "The child tempers equality with equity--a kind of relativistic egalitarianism in which strict equality will sometimes be winked at in favor of a higher justice" (Flavell, 1963, p. 294).

Kohlberg (1976), building upon Piaget's cognitive theories, developed a moral development theory stipulating three levels of moral reasoning containing six stages. Kohlberg described his six stages as:
I Preconventional Level
Stage 0: Egocentric judgment
Stage 1: The punishment and obedience orientation

Most children under nine and some adolescents

Stage 2: The instrumental relativistic orientation (Right action consists of what instrumentally satisfies one's own need and occasionally the needs of others)

II Conventional Level
Stage 3: The interpersonal concordance or "good boy-nice girl" orientation
Stage 4: The "law and order" orientation

Most adolescents and adults

III Postconventional, Autonomous, or Principled Level
Stage 5: The social-contract legalistic orientation
Stage 6: The universal ethical-principle orientation

Minority of adults and reached after the age of 20-25

Kohlberg holds that all individuals start making moral judgments at stage 1 in childhood. Further, almost everyone progresses to a higher stage. "An individual may stop developing at any stage, but he or she never skips a stage" (Kohlberg, Kauffman, Scharf and Hickey, 1976b, p. 232, emphasis is authors').

The term "conventional" means conforming to and upholding the rules and expectation of society or authority just because these are society's rules, expectations or
conventions. The preconventional level individual has not yet come to really understand and uphold conventional or societal rules and authority. The postconventional level individual understands and basically accepts society's rules based, however, on the prior formulations and acceptance of general moral principles underlying society's rules. These principles in some cases come into conflict with society's rules, in which case the postconventional individual judges by principle (Kohlberg, et al., 1976a, p. 251).

Kohlberg (1970) believes that major moral values in our society are the values of justice. He holds that the concepts of justice develop along a continuum from egocentrism to an orientation characterized by high ethical principles. Children develop from the egocentric stage to the "law and order" stage. Studies by Turiel (1966, 1974) and Rest, Turiel and Kohlberg (1969) support Kohlberg's stages of development.

Stage 2 of Kohlberg's theory is specifically described as the stage where elements of fairness appear. "Elements of fairness, reciprocity, and equal sharing are present, but they are always interpreted in a physical pragmatic way" (Kohlberg, 1976, p. 12). Although "fairness" is not explicitly mentioned in each of Kohlberg's other stages, it is always implied. Therefore, like Piaget, Kohlberg conceptualizes justice as a developmental phenomenon. However,
Piaget's distributive justice phase seems to suggest that children develop to a higher consciousness of justice than Kohlberg's conventional level would allow.

**Developmental aspect of the perception of fairness**

The perception of fairness (justice) in this writer's view is also developmental and roughly corresponds to Kohlberg's theory. For example, it could be said that in the initial stages of the perception of fairness a child would not perceive the resolution of a conflict by an authority figure to be fair unless it "instrumentally" satisfied the child's own need—a stage 2 characteristic in Kohlberg's theory.

A second stage, which does not appear to have emphasis in Kohlberg's theory, would be characterized by behavior on the child's part where conflict resolutions are not questioned as the child has grown to trust the other to be fair and to act in the child's interest. During this stage, the child does not consciously make judgments about the "fairness" or "unfairness" of the other. The other person has already established a legitimacy in stage 1. That is to say that having already resolved conflicts in such a way that the child perceives as proper, the child has reason to trust the person in subsequent conflict resolutions.
In different words, if a teacher has satisfied the child that conflict resolutions have been and will be resolved in the child's interest, that child will begin to trust the teacher and perceive the teacher to be fair. If the teacher applies an objective or universal standard of justice in a conflict resolution with a given child who has not gone through stage 1 and in turn receives good results, it can be said that this was possible purely because the universal standard and the child's inner needs were by chance identical. If the teacher applies an objective or universal standard of justice where the child's need structure requires a different standard or where the child's concept of fairness is immature, the results are likely not to be perceived as fairness and the outcome will probably be alienation.

The third stage in the development of the perception of fairness may be said to come by the time the child is beginning to enter roughly what Kohlberg describes as stage 4, "the law and order orientation." At this point, children may assess what they perceive to be fair on the basis of whether or not the action, or the resolution of a conflict, corresponds to fixed rules. In this instance the teacher is perceived to be fair simply by following and applying fixed rules because that's the way society and schools operate. It needs to be said that while this is ordinarily the case
for intermediate and secondary school students, it is not necessarily the case as any teacher will attest.

Kohlberg points out that most adolescents and adults usually progress no further than his stage 4 (Kohlberg, et al., 1976a, p. 251). However, in a significant number of school conflicts charges of "unfairness" emerge because the stage 4 type of morality has been applied. In these instances, the conflicts and resulting charges of unfairness often arise from the arbitrary application of fixed rules or the inappropriate use of authority by teachers or other school personnel. Students often pursue goals of justice based upon ethical principles as they know them. These principles may disagree with the "law." This level of perception of fairness in such conflicts may roughly correspond with Kohlberg's stage 5 (The social-contract legalistic orientation) and more nearly with Piaget's stage 4 (distributive justice).

In summary, it is suggested that the perception of fairness also has a developmental quality: (a) The child perceives fairness at an egocentric level; (b) The child perceives fairness at a disengaged level (trusts others); (c) The child perceives fairness on the basis of how uniformly rules are applied; and (d) Some children perceive fairness on a level where beliefs in higher principles and feelings move them beyond acceptance of fixed rules or invoked authority. The development of a perception of fairness proceeds in this
direction for all children although some children may not reach every level.

The Problem

It has been shown that empathy for students on the part of the teacher is related to higher student cognitive gains, achievement and behavior, teacher effectiveness, and teacher job satisfaction. It has been theorized and researched by Kohlberg, Piaget and others that moral judgment is developmental. Additionally, it has been shown in Kohlberg's and Piaget's research that the concept of justice (fairness) is developmental.

Therefore, questions arose: In teacher-student relationships, was teacher fairness or students' perceptions of teacher fairness the critical factor? If it was students' perceptions of teacher fairness, then to what extent were these perceptions dependent upon teacher empathy for students and to what extent was the relationship developmental and/or sex related? Additional questions which surfaced involved: To what extent were students' perceptions of teacher fairness themselves an empathic process? and, how able were students in determining fairness from unfairness?

Specifically, then, there were two basic questions that this investigation sought to study: (a) Were students' perceptions of teacher empathy affected by the number and kind
of exposures to the teacher? and (b) Were students' perceptions of teacher fairness related to students' perceptions of teacher empathy? In the event that one or both of the preceding questions were supported affirmatively, then there were three additional questions that this investigation also sought to study: (a) Were students' perceptions of teacher empathy or teacher fairness related to the age of the students? (b) Were students' perceptions of teacher empathy or teacher fairness related to the sex of the students? and (c) Were students able to distinguish between fair teacher behavior and unfair teacher behavior?

Hypotheses

To sharpen the focus and to further clarify those questions already discussed, five hypotheses were posed. These hypotheses assert that:

1. Students who have observed a varied number and kind of empathic teacher behaviors for a given teacher will perceive that teacher as having a level of empathy which will be directly related to those observations.

2. Students who have observed a varied number and kind of empathic teacher behaviors for a given teacher will perceive that teacher as having a level of fairness which will be directly related to those observations.

3. Students with greater maturity will tend to more often perceive teacher fairness apart from their perception of teacher empathy than will students with lesser maturity.

4. Females at a given age will tend to more often perceive teacher fairness based upon their perception of teacher empathy than will males of the same age.
5. Students who have only observed a given teacher while engaged in a fair and an unfair conflict resolution will be able to distinguish between the two.

Definition of Terms

Hobart and Fahlberg (1965) suggested that the differences between psychologists and social psychologists was much symbolized by the preference of social psychologists for the term "social perception" and the preference of psychologists for the term "empathy." Thus the term "empathy" is not without controversy. The intent in this section is to review some of the definitions and resulting approaches to the study of "empathy." Finally, definitions of "empathy" and "fairness" as they apply in this study will be stipulated.

In the Hobart and Fahlberg discussion the existent contrast between "empathy" and "social perception" was examined. In general, empathy was perceived as "taking the role of the other" and it was implied that this was a feelingful, perhaps intuitive process whereby one "identifies" with another. The concept of "social perception," on the other hand, pays little attention to feeling. The possible role of intuition is ignored and the emphasis tends to be on the accuracy or inaccuracy of perception.

A widely held concept of empathy is attributed to Rogers (1961). Rogers' concept of empathy evolved out of what he described as the learning conditions in psychotherapy. These
conditions, Rogers asserted, have comparable significance to the learning conditions as they exist in education. Included among them are such elements as congruence, unconditional positive regard and empathic understanding. Congruence in this context refers to a unified, or integrated, person who is exactly what he seems to be—not a facade or a pretense. Unconditional positive regard is taken to mean a warm caring for the client which is not possessive and which demands no personal gratification. Empathic understanding denotes an accurate understanding of the client's world as seen from the inside. In the latter instance Rogers described this state as one where the therapist senses the client's private world as if it were his or her own, but without ever losing the "as if" quality.

Rogers' conditions of learning evolved out of the therapeutic construct in which the total mode of communication is always a critical component. In studying this component critically it is advantageous and helpful to the therapist to examine the total communicative process in small increments. Nevertheless, Rogers suggested that the quality of the classroom climate could also be improved through attempting to approximate the psychotherapeutic conditions of learning in the classroom.

There is little doubt among researchers that Rogers is correct in his contention that the psychotherapeutic
conditions of learning are appropriate for the classroom. Subsequently, efforts to measure these conditions have been undertaken. Carkhuff (1967, in Carkhuff and Berenson, 1967) developed the Scale for Empathic Understanding to facilitate the study of empathic understanding and interpersonal processes. This scale requires that a rater make a judgment about the level at which a counselor or a teacher is responding. Usually this procedure is used in a post analysis of an audiotape or videotape.

Barrett-Lennard (1962) developed the Relationship Inventory which is a Likert-type scale. It is also designed to measure the Rogerian constructs of level of regard, empathic understanding, congruence, unconditionality of regard and an additional construct of willingness to be known.

While Rogers' conditions of learning are admittedly appropriate for the classroom, they are too narrowly defined to be operationally useful for many classroom investigations. Another much used definition has been advanced by Dymond (1949), who defined empathy as the imaginative transposing of oneself into the thinking, feeling and acting of another and by so doing structures the world as he does. Dixon and Morse (1961), with the teaching function specifically in mind, stated that "The important quality of empathy, as we recognize it in teaching, is a highly interpersonal phenomenon with the subject and object bound up in a mutual response."
The teacher and the pupil develop a positive relationship" (p. 323, emphasis is author's). It seems that Dixon and Morse's concept of empathy is more broad than Rogers' empathic understanding and subsumes unconditional positive regard and congruence. With further attention to the teacher and empathy, Dixon and Morse also noted that Olden (1953, in Dixon and Morse, 1961) observed that:

Empathy is the capacity of the subject instinctively and intuitively to feel as the object does. . . . Empathy may be described as a feeling that emerges spontaneously in social contact, that enables the subject instantaneously to sense the object's screen of defenses behind which the real feelings may hide. (p. 324)

It can be seen in Dixon and Morse's definition of empathy as a component of teaching, as well as in Olden's definition, that Rogers' specific conditions are combined or are implied. The acceptance of this premise allows considerable latitude in the study of classroom climates where verbal and non-verbal processes are often too numerous to isolate.

Empathy, therefore, may be theoretically defined as:

a highly interpersonal phenomenon with the subject and object bound up in mutual response which is presumed to be inclusive of Rogers' conditions of congruence, unconditional positive regard, and empathic understanding.

Fairness may be theoretically defined as:

the distribution of rewards and punishments in such way that justice is done.
Perception of empathy may be theoretically defined as:

the observation that there is empathy between oneself and another or, more specifically, the observation by the pupil that the teacher has empathy for the pupil,

and operationally defined as:

that quality which is measured in this study by "The Teacher," an empathy questionnaire.

Perception of fairness is defined as:

the observation of one that the other has been fair or, more specifically, the observation by the pupil that the teacher has been fair,

and operationally defined as:

that quality which is measured in this study by "The Teacher (b)," a fairness questionnaire.

Plan of Presentation

This chapter has provided a brief introduction to the efforts schools have undertaken to improve school environments, and to a recognition of the fact that much remains to be done. A rationale for this study, a statement of the problem, research questions, hypotheses and definitions were presented. A review of the literature related to the present study will be undertaken in Chapter II. In Chapter III, a description of the methodology and instrumentation will be presented. A discussion of the findings and their interpretations will be included in Chapter IV. The last section, Chapter V, will contain a summary, conclusions, and recommendations.
REVIEW OF RELATED LITERATURE

Introduction

The investigator searched the literature relevant to empathy, psychological identification, personality perceptiveness, insight, fairness, impartiality, justice, teacher attitudes, student attitudes, teacher characteristics, teacher behavior and teacher response. While there are numerous articles and studies relating to these individual topics, there is almost a total void in the literature concerning a relationship between empathy and fairness or between perceived empathy and perceived fairness.

In view of this fact, an effort was made to examine the theoretical constructs of empathy and fairness and to review those investigations in which empathy and fairness had been considered in ways pertinent to the present study. Therefore, the literature is reviewed under the following subheadings and subdivisions:

1. Empathy
   a. Theoretical constructs
   b. Related research concerning empathy

2. Fairness
   a. Theoretical constructs
   b. Related research concerning fairness

The literature relating to fairness is largely philosophical and theoretical. Consequently, in order to consider this
topic adequately, it was found that topics such as moral development, social exchange theory, and the theory of cognitive dissonance should be examined.

Empathy

Theoretical constructs

Empathy as a construct is not noncontroversial. In most psychological literature and research there appear to be a preference for the term "social perception" or "person perception." It appears that the underlying basis for this position is the belief that empathy is not recognizable as a scientific construct since it cannot be objectified. Thus, the psychological approach evolves out of the psychology of perception and tends to emphasize the accuracy or inaccuracy of perception. Empathy, on the other hand, is a feelingful, perhaps intuitive, process whereby one "identifies" with another (Hobart and Fahlberg, 1965).

Dymond (1949), as quoted earlier, defined empathy as the imaginative transposing of oneself into the thinking, feeling and acting of another and so structuring the world as he does. Among Rogers' (1961) elements of learning conditions in psychotherapy, which were also mentioned earlier, was the concept of empathic understanding which was defined as follows:
The third condition we may call empathic understanding. When the therapist is sensing the feelings and personal meanings which the client is experiencing in each moment, when he can perceive these from "inside," as they seem to the client, and when he can successfully communicate something of that understanding to his client, then this third condition is fulfilled. (p. 62)

In addition to the condition of empathic understanding there are two other conditions—congruency and unconditional positive regard. Briefly, with the reader's indulgence for some repetition, congruence is defined as the psychotherapist being what he is (Rogers, 1961, p. 61, emphasis is author's). That is to say, in the relationship with the client the psychotherapist is genuine and without "front" or facade. Unconditional positive regard is defined as the therapist's genuine willingness to allow the client to be whatever feeling that is going on in him at that moment. The therapist cares for the client in a nonpossessive way. Also, the therapist prizes the client in a total way rather than a conditional way (p. 62).

It can be seen that Rogers' conditions for facilitating psychological growth are discretes which are closely related or interrelated. Indeed, it is difficult to picture a genuinely empathic therapist who was not also congruent or who lacked the quality of unconditional positive regard for the client. Barrett-Lennard (1962) saw the relatedness of congruence to the other facilitative conditions of Rogers:
Level of congruence clearly has implications for the other variables already defined. It is conceived to set an upper limit to the degree to which empathic understanding of another is possible, although the individual's immediate interests and purposes will also determine whether he uses the potentiality provided by his congruence to empathically understand the other. The degree to which an individual can actually respond unconditionally to another is considered a function of his security and integration in relation to the other. However, a less congruent individual might give the appearance of being more unconditional in his regard than a person functioning with a high degree of congruence, so that the operational relationship between these two variables may well be a complex one. Presumably, the general level of one person's regard for another is also partly a function of his congruence in the relationship, because lack of congruence implies threat and defensiveness and this would tend to reduce overall regard. (Barrett-Lennard, 1962, p. 5)

Hogan (1969) posed the question: "Is empathy an artificial concept?" In addition, he questioned whether "In view of the apparent gap between theory and measurements, the possibility exists that the term 'empathy' is a creature of Academia" (p. 308).

Rogers, however, has clearly stated that the conditions postulated by him as being facilitative of psychological growth were conditions for which ample empirical evidence exists. Aspy (1969), Aspy and Hadlock (1967), Barrett-Lennard (1962), Harbach and Asbury (1976), Stoffer (1970), and Truax and Tatum (1966) are but some of the many investigators who have presented evidence supporting Rogers' thesis.
Much of the research with respect to Rogers' facilitative conditions has been aided by the development of the Carkhuff Scales (Carkhuff and Berenson, 1967) for rating facilitating conditions within a broad range of interpersonal relationships. The Carkhuff Scales assess five levels of interpersonal functioning and are presented below.

**Empathic Understanding in Interpersonal Processes**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Significantly Nonfacilitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>The first person's (the counselor or therapist, teacher, or parent) responses either do not attend to or detract significantly from the expressions of the second person (the client, student or child) in that they communicate significantly less of the second person's feelings than the second person has communicated himself.</td>
<td></td>
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<table>
<thead>
<tr>
<th>Level 2</th>
<th>Nonfacilitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>While the first person does respond to the expressed feelings of the second person, he does so in such a way that he subtracts noticeably from the affective communications of the second person.</td>
<td></td>
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</tbody>
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<table>
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<tr>
<th>Level 3</th>
<th>Minimally Facilitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>The verbal or behavioral expressions of the first person in response to the verbal or behavioral expressions of the second person, are essentially interchangeable with those of the second person in that they express essentially the same affect and meaning.</td>
<td></td>
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</tbody>
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<tr>
<th>Level 4</th>
<th>Additively Facilitative</th>
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<tbody>
<tr>
<td>The responses of the first person add noticeably to the expressions of the second person in such a way as to express feelings a level deeper than the second person was able to express himself.</td>
<td></td>
</tr>
</tbody>
</table>
Level 5 The responses of the first person add significantly to the feelings and meanings of the second person in such a way as to express accurately feeling levels below what the person himself was able to express or, in the event of ongoing deep self-exploration on the second person's part, to be fully with him in his deepest moments. (Carkhuff and Berenson, 1967, p. 5, emphases are authors')

Carkhuff and Berenson, with regard to the scales, observed that:

The scales themselves present many limitations, most obviously a high degree of subjectivity on the part of the raters or judges. This subjectivity could not be avoided, even if it were desirable. In actuality, counseling and psychotherapy are highly subjective experiences, and the scales merely attempt to assess the levels of the dimensions involved in these experiences. . . . (p. 5)

Aspy and Roebuck (1975), in discussing the Carkhuff Scales, noted that the procedure had been used most frequently in studies for the assessment of facilitative conditions as contained on audio-tapes. Further, they observed that "while this procedure was successful for research purposes, it left much to be desired in terms of communicating its contents to educators in such a manner that its implications could be usefully applied in the classroom and for inservice training" (p. 217). To overcome this weakness, Aspy and Roebuck developed a scale, much like Carkhuff's but used language more appropriate to the classroom context. Heavy emphasis upon
the tonal qualities of the teacher's verbal communications
was a prominent feature. The scale is reproduced below.

A Scale for the Measurement of a Teacher's Understanding
of the Meaning of Classroom Experiences
for Her Students

Level 1 Neither the tone quality nor the
words of the teacher's verbal com­
munication conveys any feeling and/or
she responds inaccurately to the
meaning of the student's experiences.

Level 2 The tone quality of the teacher's
verbal communication conveys slight
evidence of feelings which are only
somewhat appropriate to her students'
experiences. She uses no words to
explicate feelings.

Level 3 The tone quality of the teacher's
verbal communication conveys feelings
which are quite appropriate to her
students' experiences. She is "with"
hers students. However, she uses no
words to explicate feelings.

Level 4 The tone quality of the teacher's
verbal communication conveys feelings
which are quite appropriate to her
students' experiences. Additionally,
she uses mild words to describe the
feelings.

Level 5 The tone quality of the teacher's
verbal communication conveys feelings
which are appropriate to her students'
experiences. Additionally, she uses
"strong" words to accurately describe
feelings. (Aspy and Roebuck, 1975,
pp. 217-218, emphases are authors')

Aspy and Roebuck's scale, though more appropriate for the
classroom, also requires the use of raters or judges as did
the Carkhuff Scales. Also like the Carkhuff Scales, it is prone to the same limitation of subjectivity. Nonetheless, it is one more step in the direction of operationalizing the theory of empathic understanding, or empathy, for the classroom.

The appraisal of the teacher's empathy requires some assessment of the feelings of pupils. Such assessment of pupil feelings might be accomplished in various ways; but, Dixon and Morse observed that "admittedly, the sense of being accepted by and feeling positive toward a teacher is certainly not a simple phenomenon to assess and probably appears at both the conscious and unconscious levels" (p. 324). Nevertheless, as Dixon and Morse also point out, empathy, being akin to rapport, lies at the core of the classroom tone.

Related research concerning empathy

Nurturant behavior and learning

Dynamism, warmth, positive attitudes toward teaching and children, and empathy are qualities of the teacher which have been examined by various investigators. Perhaps the essence of the importance of such investigations is suggested in Webb's (1971) statement that "the way a teacher behaves, not what he knows, may be the most important issue in the transmission of the teaching-learning exchange. The psychological behavior, the quality of how the teacher relates to the child, is perhaps
the most important basis for the learning attitude held by the child" (p. 455).

To study this relationship, Webb compared the effect of teachers, rated as sensitive or less sensitive, on students in two ability groups. The two ability groupings further included students who had been identified as: (a) insecure, (b) school problems, and (c) problem-free. It was hypothesized that students identified as insecure, school problems, and problem-free would demonstrate fewer educationally negative responses after having been placed with teachers rated as highly sensitive than would similar students placed with teachers of less sensitivity.

Four hundred and eighteen eighth graders participated in the study. Seventeen areas of significant differences were found which supported the hypotheses. The trend that emerged indicated that more positive student attitudes were associated with placement with the more sensitive teacher. The greatest educationally negative impact of the less sensitive teachers was felt among students of lower academic aptitude and among those identified as either insecure or as having school problems. Thus, Webb speculated that lower ability, problem-oriented students are more dependent upon a patient, nurturing, and understanding teacher for a successful school experience than are more able and problem-free students.
Teacher effectiveness Differences between groups of teachers who were rated effective and ineffective by their respective principals were studied by Gates (1968). Sixty-seven elementary school teachers in three separate school systems participated in the study. All teachers were administered the Minnesota Teacher Attitude Inventory, the Edwards Personal Preference Schedule, and the Sixteen Personality Factor Questionnaire. Among the qualities that Gates found as characteristic of teachers rated effective was a more positive attitude toward teaching and children than was the case for teachers rated as ineffective.

Lawson (1970) studied teacher behaviors which correlated significantly with a criterion measure of "teacher ability to relate to students." It was hypothesized that the ability of a group of teacher interns to relate to students would have a strong positive linear relationship with certain classroom interactions such as "praise and reward," "teacher acceptance of student ideas," and "teacher empathy."

Videotapes of 50 teacher interns who each presented a short lesson on the same subject matter were randomly shown to approximately 100 high school students. Subsequent to viewing the videotapes for approximately six minutes, students were asked to complete a teacher relatability rating scale. Flanders' interaction analysis was also used in an analysis of the videotapes for potential correlates of relatability.
Among the many findings of this study was the finding that, in general, students tended to assign relatively high ratings on "ability to relate to students" to teachers who used praise extensively in rewarding students, and who allowed students the freedom to initiate discussion.

Dixon and Morse (1961) undertook the development of an assessment inventory concerned with the empathic status of the classroom. One of the primary questions raised in this investigation was: "Are student teachers who received 'good' empathy scores from pupils' ratings perceived as better teachers by these respondents" (p. 328)? To help answer this question, Dixon and Morse included a specific item in the pupil assessment inventory which asked how the respondent would rate the person as a teacher--everything considered. As far as the pupils were concerned, it was believed that student teachers who had "good" empathy were also better teachers. An analysis of the supervising teachers' evaluations also showed they saw student teachers with good empathy as better teachers than those with poor empathy.

**Perceptions of teacher behavior** Some studies tend to show that teachers' perceptions of their empathy or warmth vary from the students' perceptions of these qualities. Freese and West (1972) compared teacher self-perception with adolescent perceptions of the teacher in the areas of congruence, empathy and regard. Eighteen teachers and 90
students were involved in this study. Teachers completed a
teacher form of the Barrett-Lennard Relationship Inventory
and students completed a student form of the same inventory.

Results showed that there were significant differences
in how the teachers rated themselves and how the adolescents
rated the teachers on the variables of empathy and congruence.
The adolescents saw their teachers as less empathic and less
congruent than the teachers viewed themselves. The findings
also showed that the adolescents in this study were not too
concerned about the age, sex, or experience of the teacher.
Nor was the grade received in the course the previous semester
found to be a factor. The teacher as a person appeared to be
the quality about which adolescents seemed most concerned.

Gafner (1976) investigated students' perceptions of
teacher warmth through verbal, nonverbal, and combined channels
of communication. An assumption of this study was that teach­
ing was a communicative process that was facilitated by the
participant's ability to perceive empathy. Seventy-five high
school subjects reacted to a videotape using a teacher warmth
rating scale. Random subjects were interviewed and their
protocols were kept. Gafner's findings were that: (a) warmth
was perceived primarily through nonverbal channels; (b) stu­
dents could identify specific teacher behaviors; (c) certain
behaviors contributed to students' perceptions of warmth; and
(d) students were aware of affective states conveyed by teachers.

**Student behaviors** The result of teacher empathy on positive attitudes and positive adjustment of children was studied by Truax and Tatum (1966). In their investigation 20 preschool children who received differing levels of accurate empathic understanding, nonpossessive warmth and therapist congruence were studied. It was hypothesized that the preschool child who experienced a relatively high level of these therapeutic conditions would show greater change from initial to later preschool socialization adjustment than would preschool children receiving relatively low amounts of these conditions from their teachers. Truax and Tatum found that among the children, two of the conditions, empathic understanding and nonpossessive warmth, were significantly related to change toward more positive adjustment to school, teachers, and peers.

The effect of teacher empathy, unconditional positive regard and self-congruence of college teachers, along with their effectiveness as adjudged by students, was studied by Perkins (1971). In this study, Perkins found that college professors who scored high on the facilitative conditions of empathy, genuineness and nonpossessive warmth tended to receive higher ratings of effectiveness from students. Perkins also found that among college teachers empathy and
Genuineness increased at a significant level with the teacher's age while empathy and nonpossessive warmth increased significantly with the length of time the professor had been employed by the institution.

Gurney (1977) also reported findings which support Perkins' results. Gurney found that for college students the process of education was more important than the product. Dynamism and warmth appeared to be the important aspects of teaching as reflected in the high ratings given by students on such criteria as teacher flexibility, personalization of teaching, good rapport, and sensitivity to the student's point of view.

Junior college students were studied by South (1975). One of South's hypotheses was that student-centered teachers were perceived by their students to be more effective than subject-centered teachers. Results obtained through questionnaires supported this hypothesis. Together, these studies report consistently that empathic understanding and related facilitative conditions are viewed by college students as important.

Aspy (1975) noted that in his 1969 summary of the research he had observed three things about empathy in the classroom: "First, when teachers provide high levels of empathy, they facilitate their students' learning; second, low levels of teacher-offered empathy tend to retard
learning; and third, a person's mental health is related to the levels of empathy provided by those who interact with him or her" (Aspy, 1969, cited in Aspy, 1975, p. 59).

Spady (1973) asserted that the imposition of achievement expectation by the teacher must be preceded by a sufficient period of supportive and affirmative behavior. Further, with regard to the period of supportive and affirmative behavior, Spady held that:

> Only in this way can the necessary rapport, confidence and feelings of security between student and teacher be established which enable the child to react positively to demands for high performance. 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 clearly facilitated by the positive expression of affect and approval by the teacher. (p. 8)

Thus Aspy's summary of the research and Spady's analysis of classroom dynamics add support to the concept that empathy is importantly related to school achievement.

**Student self-perception**

Davidson and Lang (1960) investigated the question of whether there was a relationship between children's perception of their teachers' feelings toward them and the variables of self-perception, academic achievement, and classroom behavior. Two hundred and three pupils of grades four, five, and six were subjects in this study. The children, representing a wide range in socioeconomic status, were administered an adjective-type checklist in which they indicated their perception of how
their teachers perceived them. Teachers, in turn, rated the pupils.

From their study, Davidson and Lang found a significant relationship between favorable perception of teachers' feelings and academic achievement. There was also a significant relationship between favorable perception of teachers' feelings and desirable classroom behavior, and between children's perception of their teacher's feelings toward them and children's perception of themselves.

**Achievement**

Aspy and Hadlock (1967) studied the interactions of high and low functioning teachers upon student performance. In this study, Aspy and Hadlock also tape-recorded and assessed classes of grammar school teachers to determine the levels at which teachers were functioning in their classroom interactions. The results of this study showed that students of teachers functioning at the highest levels of facilitative conditions demonstrated higher levels of academic achievement than students of teachers functioning at the lowest levels of conditions.

Aspy (1969) investigated the influence of a classroom emotional climate upon the cognitive growth of third-grade students. The 120 subjects were administered five subtests of the Stanford Achievement Test at the beginning and conclusion of the same academic year. Tape recordings of reading groups of the children's six teachers were made and
analyzed by experienced raters for levels of empathy, congruence, and positive regard. Students whose teachers exhibited higher levels of empathy, congruence, and positive regard made relatively high achievement, while students who experienced lower levels of these conditions made lower achievement.

Some findings which fail to fully affirm Aspy's investigations have been reported. One such finding was reported by White (1968) in a study which investigated whether teaching effectiveness of mentally retarded students, as measured by student achievement gains, was related to the personality variables of empathy, warmth and genuineness. The subjects were 20 special education teachers and 60 students from their classes. The students had IQs of 60-80 and CAs of 8-16 years. Achievement gains of students whose teachers rated high in empathy, warmth and genuineness and students whose teachers rated low in these respects were not significantly different.

Another partially nonaffirming study was one by Aspy and Roebuck (1972) which investigated the relationship between teacher classroom behavior and student level of cognitive functioning. Forty elementary teachers, grades 3-6, and their students participated in the study. Anonymously submitted one-hour audio recordings of reading group instructions were analyzed. Each teacher's performance was
evaluated by (a) the Carkhuff Scales for empathy, congruence, and positive regard, (b) Flanders Interaction Analysis, and (c) levels of cognitive functioning achieved by students as determined from Bloom's Taxonomy.

Findings in this study showed that only the relationship between student level of cognitive functioning and positive regard was significant. Aspy and Roebuck noted that the study was not definitive since a one-hour sample of teacher behavior presented serious difficulties for making generalizations as to style or effect of the teacher. Nevertheless, the importance of the study as concluded by Aspy and Roebuck was its indication that a teacher's increased positive regard for students was translated into classroom behavior which elicited higher levels of cognitive functioning from students.

Stoffer (1970) studied elementary school children who were experiencing behavioral and academic difficulty. Thirty-five students and 35 adult helpers participated in the study. Each of the 35 adult helpers was a female volunteer who met with a single child twice weekly for approximately three months. The children who participated in the study had behavioral problems which were manifest in such maladjustments as interpersonal difficulties, lack of self-confidence, withdrawal, defiance of authority, and aggressiveness. In addition, each student had an IQ of 80 or above plus one or more of the following: (a) was one grade or more retarded in
grade placement, or (b) was one grade or more retarded in achievement on a standardized achievement test, or (c) was failing or had marginal grades.

Children who met those criteria were randomly assigned to either the experimental or control group. Each child was examined before and after treatment. Indications of behavioral change were assessed from gains on the Stanford-Binet or Wechsler Intelligence Scale for Children, the Wide Range Achievement Test, the Gray Oral Reading Test and teacher grades. Other indications of behavioral change were assessed from reduction in teacher-rated behavior problems as indicated by the Quay-Peterson Behavior Problem Checklist and the Interpersonal Adjective Checklist, and gains in motivation as indicated from selected picture projectives.

Three scales developed by Truax were used in the Stoffer study to rate levels of genuineness, nonpossessive warmth, and accurate empathy that the helper provided the child. Barrett-Lennard's Relationship Inventory was used to measure the child's perception and the helper's perception of the levels of therapeutic conditions offered by the helper.

Similar to Freese and West (1972), Stoffer found that helpers rated themselves more favorably on the relationship inventory than did the children. Children tended to respond in a global fashion, indicating a general feeling about the relationship, while helpers were more likely to differentiate between variables. Nonetheless, the results showed that
provision of high levels of nonpossessive warmth as rated by judges was found to be significantly related to gains in achievement, and reduction in teacher-rated behavior problems. Similarly, high ratings of accurate empathy were significantly related to gains in achievement.

Also reported in the literature are instances where reading specialists cite the importance of empathy in the teaching of reading. Hastings (1968) listed "compassion and empathy" among the qualities of the effective teachers of adult reading. Emeruwa (1970) cited "sympathy and empathy for the personal and group needs of the students" as a necessary quality of teachers of reading to the inner-city child.

While research has been undertaken to discover the effects of empathy upon a number of aspects of the classroom, there has not been a specific focus in research upon a relationship between empathy and fairness or upon a relationship between perceived empathy and perceived fairness. The investigations of the effects of empathy upon negative behaviors (Harbach, 1976; Stoffer, 1970) and the study of nonverbal cues of teacher warmth as perceived by students (Gafner, 1976) appear to come close to answering, in an indirect way, some of the questions posed in the present study. However, it seemed desirable to go beyond rational
inferences from past studies. Much could be gained from addressing the questions posed in the present study directly.

Fairness

Theoretical constructs

Fairness, in its presence as a dynamic within the school environment, may not appear to be a strain of the venerable variety of justice as once debated by Socrates, and by others since Socrates, though it is of that derivation in every sense. Piaget (1965) paid deliberate attention to the philosophical discussions of justice as he formulated developmental theories from his observations of young children. Subsequent theories of moral development, also involving discussions of justice, likewise draw heavily upon the earlier work of Piaget.

As discussed earlier, Piaget's investigations suggest three stages through which children pass in acquiring a sense of justice. In the first stage (prior to age 7-8) the child is inclined to regard expiatory punishment, of the retributive justice stage, as "just" or "fair." In the second stage (about 7-8 to 11-12 years), the child's concept of justice is characterized by the reciprocal punishment orientation of retributive justice and is based upon ideas of equality and mutual cooperation. The final stage (from
age 11-12 on) is that of distributive justice in which a relativistic egalitarianism is predominant.

Kohlberg (1976), similar to Piaget, holds that the acquisition of a sense of justice is a developmental phenomenon. Kohlberg, however, identified three levels and six stages through which an individual may progress. The three levels are designated as preconventional, conventional, and post-conventional. Each level has two stages. Whereas Piaget believed that most children reached what he considered to be his highest level of development of a sense of justice, Kohlberg suggested that only a small minority of individuals reach his higher stages, the principled levels.

Whether the principled levels of Kohlberg's theory are substantively different from Piaget's distributive justice is open to argument. Simpson (1976) has pointed out that Kohlberg's stages 4, 5, and 6 may be viewed as alternative types of mature moral responses rather than as a sequence. It is also to be noted that Kohlberg has heavily based his moral development theory upon Piaget's cognitive theories. The cognitive implications were such that Simpson was moved to criticize Kohlberg's principled stages as requiring so high a degree of analytical and theoretical thinking, as well as language skills, that most of the world population would be unable to attain them and thus never know principled reasoning. This seems to be a significant criticism. However,
these questions aside, research by Turiel (1966, 1974) and Rest, Turiel and Kohlberg (1969) has supported the developmental aspects of Kohlberg's theory at least as described in Kohlberg's first four levels.

Fairness is specifically pointed out as beginning to appear as a concern of individuals in Kohlberg's stage 2 of the preconventional level. While fairness is not specifically discussed in all of Kohlberg's stages, it is clear that the essence of fairness is what Kohlberg's stages are about.

To summarize, both Kohlberg and Piaget describe children's sense of justice or fairness as developmental. Both also identify significant stages of moral development in children during years which are also school years.

Social exchange theory The consideration of the concept of fairness, apart from other concerns, is not an emphasis within exchange theory. Although this is true, fairness is still almost always seen as being implicit or explicit in the theory. As Skidmore (1975) has pointed out, these exchanges concern trades or exchanges among individuals of valuables as a basis of the social order. The exchanges do not pertain to tangible things. Intangibles such as esteem, liking, assistance and approval are involved.

Homans (1974) is one of the leading proponents of exchange theory. Homans explains social order through
deductive theorizing and through the formulation of exchange propositions. There are five propositions in Homans' theory, all of which are significant in the consideration of social behavior. Only the fifth proposition, however, has special significance for the present discussion. This proposition is called the "rule of distributive justice" and states that "the more to a man's disadvantage the rule of distributive justice fails of realization, the more likely he is to display the emotional behavior we call anger" (Homans, 1961, quoted in Skidmore, 1975, p. 90). In Homans' (1974) revised work, the fifth proposition is called the aggression-approval proposition and is further divided into two propositions in which the term "distributive justice is dropped:

**Va.** When a person's action does not receive the reward he expected, or receives punishment he did not expect, he would be angry; he becomes more likely to perform aggressive behavior, and the results of such behavior become more valuable to him.

**Vb.** When a person's action receives reward he expected, especially a greater reward than he expected, or does not receive punishment he expected, he will be pleased; he becomes more likely to perform approving behavior, and the results of such behavior become more valuable to him. (pp. 37-39)

Although the term "distributive justice" has been dropped from the latter propositions, Skidmore has observed that the revised propositions introduce the additional theoretical term "expectation" and suggest that expectation of reward must be consistent with actual reward or displeasure
would follow. Additionally, if reward was not up to expectation, aggression would result and such aggression would be satisfying. Thus, Skidmore concluded that this seemed to be Homan's way of writing the getting-even idea found in the original distributive justice proposition.

Homans (1974) defined distributive justice as involving a relationship between at least four terms: two persons, one of whom can be assessed as higher than, equal to, or lower than the other; and their two shares or rewards. The condition of distributive justice, stated Homans, is satisfied when the ratio of the measures of the persons is equal to the ratio of the measures of their respective rewards. "That is, if the two persons are equal they should, in justice, receive equal rewards; if one is better than the other, he should receive the larger reward" (p. 249).

It can be seen in exchange theory that justice, or fairness, is a relativistic quality. It places a heavy responsibility upon the person influencing relationships between others as well as those involving himself/herself and another. Homans makes the point as follows:

If the leader can do little positively to encourage good feeling among his followers, he may at least be able to do something to avoid bad feeling and jealousies by maintaining as best he can the condition of distributive justice among them, for injustice leads its victims to resent not only the author of injustice but its beneficiaries. . . . If the leader's chief external task is to be successful, his chief internal
one is to be fair. "He's fair!" are the words in the mouths of his followers from which all other praises spring. (pp. 280-281)

It is to be noted that the discussion of exchange theory as presented here is a superficial treatment of only one aspect of the theory. The theory allows for many contingencies as obviously a theory of human behavior must. However, if the leader in the foregoing quote is taken to be a teacher, the implications are many as well as significant.

Blau (1974) in many ways parallels Homans' work along the lines of exchange theory. Blau, however, specifically pointed out that fairness was a type of secondary exchange which comes about as an outcome of other primary exchanges which are characteristic of interpersonal relations. The use of power is one exercise in which Blau discussed the importance of fairness. In this regard Blau saw power as the force which made it possible to enforce demands. The demands are judged by those subject to the power in terms of social norms of fairness. Thus, Blau stated that "the fair exchange of power by a ruler or ruling group elicits social approval whereas unfair demands that are experienced as exploitative or oppressive evoke social disapproval" (p. 213). Consequently, the secondary exchange of fairness can emerge as power and can be exercised in return for social approval from subordinates.
Blau also pointed out that social exchanges require a trusting of others, and that social exchange relations evolve at a slow pace through minor transactions. In such minor transactions, little trust is required because little risk is involved. This atmosphere permits both partners to prove their trustworthiness and allows them to expand their relations and engage in later major transactions. Creating trust, Blau suggests, seems to be a major function of social exchanges.

Thibaut and Kelley (1959) also extensively studied social exchanges, but between dyads. Even though dyads were the unit specifically focused upon in their work, generalizations to larger groups were also made. Similar to Blau, Thibaut and Kelley viewed social exchanges as evolving from tentative exploratory types of exchanges. Also similar to Blau, these tentative exchanges would be looked upon as indicators of potential for future exchanges.

While Homans explicitly stressed the importance of fairness as an element of social exchanges and Blau viewed it as a secondary type of exchange, Thibaut and Kelley emphasized the interdependence of the parties in the dyadic relationship in which fairness could be viewed as being implied. Interdependence in this instance is taken to mean that each party within the dyadic relationship has some power over the other which in effect places limits on the extent to which each may with impunity exercise his power over the other.
To this point, fairness, whether explicit or implicit, has been discussed as an essential aspect of social exchange theory. Thus, the importance of exchange theory to the present study rests in its emphasis upon fairness and in its power for explaining that teacher-student behaviors are interactive, and that teachers and students are interdependent. Further, it shows dramatically that fairness is a relativistic relationship dynamic.

**Cognitive dissonance**  The discussion of cognitive dissonance appears occasionally in the writings of social exchange theorists. It is briefly developed in the present paper. In terms of its relatedness to fairness, the state or condition of unfairness might be said to be a case of cognitive dissonance. Festinger (1957), in defining dissonance, stated that "two elements are in a dissonant relation, if considering these two alone, the obverse of one element would follow from the other" (p. 13, emphasis is author's). In other words, two elements are considered dissonant if for one reason or another they do not fit together. Festinger noted also that dissonance may develop from inconsistencies or contradictions, or from culture or group standards that do not fit and so on.

Again, as was the case in Thibaut and Kelley's social exchange work, fairness is not explicitly a focus of the theory of cognitive dissonance. Yet, it is in many ways the
essence of the theory. It can be deduced that in this theory fairness would approximate that condition wherein the elements, or cognitions, would be minimally dissonant. There can be numerous causes of dissonance and the classroom is obviously an environment in which dissonance can surface in generous proportions.

Festinger observed that the presence of dissonance gives rise to pressures which tend to reduce or eliminate dissonance. While this tendency is important in the dynamics of the classroom environment, it should be noted that unlike the dynamics of social exchange theory, a singular effort on the part of the student, or on the part of the teacher, can achieve this reduction in dissonance. Conceivably, a combined effort on the parts of both the teacher and student can also achieve a reduction in dissonance, but in this case the effort could be viewed as a specific example of a social exchange.

Related research concerning fairness

Research specifically focusing upon the topic of fairness as a classroom or school variable has not received much attention. Along the lines of the present study, LaPlante's (1978) research on fairness as a school variable was the most relevant work which the writer was able to locate. Other more tangential approaches have been undertaken by researchers who have made important inferences about fairness.
Some attention is given here to a small sampling of such studies for the purpose of noting the inferential findings and for relating them to some of the theories of fairness.

**Developmental stages** Turiel (1966) studied the developmental propositions of Kohlberg's theory of moral judgments. Specifically examined were the propositions that (a) the stages form an invariant sequence and (b) that passage from one stage to the next involves an integration of the previous stages. Both propositions were confirmed in the study. This effect is also discussed in Turiel (1974).

Rest, Turiel and Kohlberg (1969) studied a related aspect of moral development. They hypothesized that modes of moral thought above an individual's own stage would be preferred to those modes below an individual's own stage. It was found that the fifth-grade subjects in this experiment generally did prefer concepts above their own stage to concepts below their own stage.

**Teacher influence** Considering the above research of Turiel (1966), Rest, Turiel and Kohlberg (1969), together with that of Cornett (1976) suggests some possible dilemmas where fostering moral development in the classroom is intended as an emphasis. Cornett, in a study involving 14 sixth-grade teachers and their students, undertook the task of identifying the moral stage of reasoning of each teacher and the moral stages of students in his/her classroom. Nine research questions were investigated yielding data which
showed that the majority of teachers (57 percent) in this study were at stage 3. No relationship between moral stage and teacher sex, age, or level of education was found to be significant, although a slight trend was noted indicating increased moral stage attainment with increased education. No students were found to exceed their teacher's moral stage level. This raises the question, as suggested by Cornett, as to whether or not the teacher's moral stage level acted as a ceiling for students.

Language Research in early childhood moral development was reviewed by Kuhmerker (1975). Analysis of this research, as well as the formulation of her own hypothesis, caused Kuhmerker to conclude (a) that adult verbalization in moral development helped the child to bridge the gap between his own feelings and his awareness of the feelings of others; (b) when language underscored the child's experiences and when the message was consistent with the social behavior the child saw around him, the language undoubtedly contributed to social learning; and (c) a stable, consistent and accepting environment can help the child learn about fairness even though the teacher makes no overt effort to teach about justice.

Attitudes of teachers Teacher attitudes, as well as the system-dynamics of schools and their effect on students, have been topics of scrutiny by some observers. Alschuler,
Atkins, Irons, McMullen and Santiago-Wolpow (1977) noted that teachers often assumed that school problems resided in the individual student when in fact they resided in the system. Students and teachers alike are victimized in the process. Teachers who are expected to observe the rules are often seen as inhumane rule enforcers, and Alschuler and others raised the question as to whether this assessment was fair. The tendency to blame persons, they pointed out, prevented one from seeing the more fundamental system causes and created adversary relationships.

Blumberg and Perry (1974) sought answers to the question of whether or not secondary and elementary teachers differed in the way they diagnosed human relations problems with pupils. Eighty-one teachers were subjects and findings showed that secondary teachers were more aware of their interpersonal teacher-pupil conflicts than were elementary teachers. However, Blumberg and Perry also found that most teachers appeared to be inclined to blame the student—"It's his fault, not mine" (p. 209).

Teacher bias has been extensively studied by researchers. Most widely known perhaps is the Rosenthal and Jacobson (1968) study of teacher expectation. Rosenthal and Jacobson found that children from whom intellectual gains were expected showed such gains. At least as interesting, if not more so, was the finding that children who gained intellectually when
improvement was not expected of them were looked upon as showing undesirable behavior. The more they gained the more unfavorably they were found to be rated.

Rist (1970) conducted an observational study of ghetto children during their kindergarten, first and second grade years. The purpose of the study was to explore aspects of the classroom out of which the social organization of the class was derived through expectations and social interactions. In this study involving only black subjects, Rist found that the problems of children who were of lower status were compounded. Not only did the teacher's indication of low esteem for lower status children influence them, peers also turned against them:

The children in the class learned who was vulnerable to hostility and who was not through the actions of the teacher. She established the patterns of differential behavior the class adopted. (Rist, 1970, p. 430)

On the basis of what essentially was social information, Rist observed that kindergarten children were placed in reading groups which ultimately appeared to achieve a caste-like stratification system tending to follow them as they moved through the grades. Thus, Rist concluded that it appeared that the public school system not only mirrored the configurations of the larger society but contributed significantly to maintaining them. In addition, the observation is made that "the implications for the future schooling of a
child who lacks the desired status credentials in a classroom where the teacher places high value on middle-class 'success' values and mannerisms are tragic" (p. 426).

Kirk and Goon (1975) after examining desegregation literature also noted that "It seems probable that unequal schooling begins with unequal teaching in the classroom;" and, that "there is some evidence that teachers tend to direct their teaching to higher-status children, and tend to spend their time either ignoring or criticizing the lower-status students in their classes" (p. 608).

Pollack (1968) entertained the question of whether or not teachers were unfair to boys. Considering the research and studies of primarily elementary schools, Pollack hypothesized that boys generally were not treated as fairly as girls in the crucial elementary grades. Twice as many boys as girls, contended Pollack, were reported to principals for behavior and learning problems. Three times as many developed stuttering difficulties and nearly two-thirds of all grade-repeaters were boys. Further, by second grade many boys considered school a female institution which was hostile to them. Sixth grade boys were reported to have received more disapproval or blame than girls and to have gotten into eight times more trouble where classroom "control" or "management" aspects were involved.
Effects of teacher personality

The personality of the teacher and how students are affected has also been investigated. Robertson (1970) studied the personal characteristics of effective secondary teachers in inner-city and noninner-city schools. One hundred and fifty-two teachers participated in the study. Certain personal characteristics were found to be common among effective teachers in general. They felt a need to conform to custom, to have things arranged so that they ran smoothly without change, and tended to complete any job undertaken. Effective teachers of disadvantaged youth, however, were found to differ from teachers of middle-class youth. They felt a greater need to form strong attachments and less need to attack contrary points of view or to persuade and influence others to do what they wanted. In other words, effective teachers of disadvantaged youth were found to be more nurturant.

Research designed to study the effects of matched and mismatched teacher-student belief systems on levels of student state anxiety was undertaken by Pauker (1976). Also investigated in Pauker's study was the influence of matched and mismatched teacher-student belief systems on self-esteem and academic achievement. Eight hundred and six students in grades six through ten and 14 teachers at three sites were involved in the study. Pauker found that there was no significant difference in student state anxiety between
teacher-student belief systems in matched and mismatched situations. Also, levels of self-esteem in school and academic achievement did not fluctuate significantly with matched or mismatched belief systems. However, on a second questionnaire given to only 37 of the 806 students, students revealed that they were aware that certain teachers made them nervous and that when placed in a classroom with such a teacher, their academic achievement and self-esteem declined.

Wickman (1928), in an investigation of teachers' reactions to the behaviors of their pupils in a selected school in Minneapolis and one in Cleveland, noted that the welfare of the child seemed not infrequently to be confused with the convenience of the adult. Wickman observed that teacher frustration results generally in a counter-attacking type of behavior. The counter-attack might take the form of shaming the child, criticising him before the class, exacting confessions, requiring apologies, restrictions, impositions of tasks, negations, prohibitions, admonitions, or demotions. In all of these methods of discipline, Wickman suggested there is the display of the aggrieved adult whose authority or personal integrity has been violated. Wickman concluded that intelligent punishment was precluded so long as behavior problems were evaluated in relation to their frustrating character. "The requirement that the
child must obey simply because 'I say so' or because the school demands it cannot be defended rationally" (p. 163).

Authority and fairness LaPlante (1978) investigated teacher authority in the classroom and the perception of its fairness or unfairness as reported by teachers and students. The focus of the study was to determine if high school and college level teachers and students would differ in their responses of fairness and unfairness to descriptive acts of teacher authority. Subjects were 180 high school students, 53 high school teachers, 142 university students and 18 university professors. A questionnaire consisting of 11 situational dilemmas was administered to teachers and students. Subjects were asked to respond to the dilemmas according to how they judged the teacher's action. The choices provided were "fair" and "unfair." LaPlante found that students and teachers, both in high school and college, had a fairly large shared perception or shared set of meanings concerning the fairness of teacher actions in general areas of school and classroom discipline. However, significant differences were found in areas in which the high school teacher could be seen as attempting to rigidly control both the content and the process of the academic environment.

Such behaviors as sending a student to the principal's office for circulating a petition protesting certain policies in the classroom, punishing the class for making fun of the
elderly by requiring each class member to write a paper about their observations of the elderly, or failing to accept a paper from a student because it had not been written about an approved subject would pose difficulties for the high school teacher in attaining or maintaining legitimate authority. These difficulties, observed LaPlante, did not appear to be as acute for the university professor possibly due to the small differences found between university professors and students.

In summary, the literature regarding empathy and fairness has been fairly broadly reviewed from both a theoretical view and a research point of view. Some tangential theories have been included in an attempt to gain as much insight as possible. Nevertheless, while illuminating and helpful, the literature that does exist tends to reveal a void concerning the interrelatedness of empathy and fairness.
METHODOLOGY

Introduction

The purpose of this study was to examine to what extent, if any, students' perceptions of teacher fairness were dependent upon students' perceptions of teacher empathy for students. In the event there was such a relationship, the purpose was also to determine, if possible, to what extent the relationship was developmental or related to the age of the students and to what extent it was related to the sex of the student. An additional question was concerned with whether students' perceptions of teacher fairness could themselves be interpreted to be an empathic process.

Students in this investigation were shown four varied segments of a videotape which either: (a) introduced the teacher to the students, or (b) showed the teacher engaged in positive interactions with a small group of students, or (c) showed the teacher in a conflict resolution situation in which the teacher resolved the conflict fairly, or (d) showed the teacher in a conflict resolution situation in which the teacher resolved the conflict arbitrarily and unfairly. Six treatments were designated which varied the segment, or combination of segments, that were shown to students (see Appendix A for script of videotaped segments).

Two questionnaires were used for data collection in this investigation. The procedures undertaken during this
investigation are presented in the following topical sub-sections: the Construction of the Videotaped Segments, the Instruments, the Design, the Sample, the Collection of Data and the Treatment of Data.

Construction of the Videotaped Segments

Four segments of teacher behaviors were videotaped specifically for this investigation. A female teacher and students from a fifth-grade class in the Malcolm Price Laboratory School of the University of Northern Iowa in Cedar Falls, Iowa, participated in the making of the videotape. The same teacher appears in all four segments.

Fifth graders were selected for making the videotape. This selection was made because it has been this investigator's experience that young children respond more enthusiastically to audio-visuals depicting children that appear to be their age or depicting children that appear to be slightly older than themselves. Therefore, it was felt that this selection would minimize the probability of a distancing phenomenon entering into students' responses.

A description of the four videotaped segments follows. It is to be noted that the segment designations were lettered somewhat randomly to minimize student speculation as to what segments were being shown or not being shown.

Segment L - Teacher Introduction--Teacher introduces herself. General information such as name, various grades taught and years teaching are given. A neutral statement such as "I believe that a teacher's job is important" is included.
Segment N - Teacher Interaction--Teacher is seen in a small group session with students where the activity involves students sharing collages which illustrate facets of their own personalities. Teacher warmth, openness, acceptance, understanding and sharing of positive feelings is portrayed.

Segment P - Conflict Resolution (Fair)--Teacher is seen arriving at a fair resolution of a conflict which involves one student complaining that another has knocked him down for no reason.

Segment R - Conflict Resolution (Arbitrary and Unfair)--Teacher is seen arbitrarily resolving a conflict in which she sends a girl to the principal's office for behavior, unknown to the teacher, that the girl is not guilty of.

Instruments

Two questionnaires were used for data collection in this investigation. A modified subset of items from the Student Evaluation of Teacher Instrument II (SET II) developed by Haak, Kleiber, and Peck (1972) titled "Your Teacher" was used as a measure of empathy and was titled "The Teacher." A questionnaire specifically designed for this investigation and titled "The Teacher (b)" was used as a measure of fairness.

Empathy questionnaire

The SET II by Haak, et al., (1972) is a 23-item questionnaire. Haak, et al., found through factor analysis of this instrument that the loadings of items for students in grades four through six were upon the factors of (a) teacher rapport, (b) teacher competence, (c) unreasonable negativity of teacher, and (d) fosterance of self-esteem by teacher. In grades one through three, Haak, et al., found that
students tended to be unable to distinguish competence from rapport in evaluating teachers. Therefore, a three factor configuration describes the loadings for these grade levels. In the latter instance, items which load upon the factors of teacher rapport and teacher competence are shown to coalesce into one factor which is referred to as "Stimulating, Interactive Style." The remaining two factors, factors two and three, are the same as factors three and four in the four factor configuration for grades four through six. Examples of the kind of items found in this instrument are: "She likes us kids" and "She thinks kids are good."

In developing this test, Haak, et al., utilized data generated from the testing of 1,040 children in grades K-6 in the Austin, Texas public schools. Since the Student Evaluation of Teacher Instrument II (SET II) is presented in a true-false format, the method Haak, et al., chose for determining reliability was a percentage of agreement (PA) statistic. Thus the test, re-test data over a ten day period resulted in PAs ranging from 66.9 percent to 94.0 percent for grades one through six.

It should be noted, however, that the developers of this instrument point out that the reliability statistics for grades four through six are based only upon the testing of a sample of Mexican-American children who happened to have been available at one testing site. As a result,
Haak, et al., recommend the test primarily for children in
grades one through three for all ability levels and cultural
groups and through grade six for disadvantaged populations.
Other than the fact that Haak, et al., did not test widely
in grades four through six, there are no conspicuous reasons
for this limitation.

The items taken from SET II and modified for this
investigation are those items which constitute the first
factor of the three factor analysis referred to as Stimulat­
ing, Interactive Style. The two subscales within this factor
are labeled teacher rapport and teacher competence. Since
the entire subset of items in Factor 1 fit the theoretical
definition of empathy as developed in this study, the fact
that it divides into two subscales for students at grades
four through six was not considered to be particularly
significant in the present investigation. The Factor 1
structure of SET II is shown below:

I. Stimulating, Interactive Style
   Subscale:  Rapport
   She makes school fun.
   The kids like her.
   She likes us kids.
   She thinks we are a smart class.
   She thinks kids are good.

   Subscale:  Interactional Competence
   She helps us a lot.
   She listens to what we want.
   We can tell how she wants things done.
   She likes to teach.
Haak, et al., used SET II, "Your Teacher," to measure student reactions to their individual classroom teacher. A true-false format was also employed. The present study departed from that scheme in that the measures made were of reactions to a videotaped teacher. Therefore, modifications, with permission of the developers, in the title, directions to the students and wording of the items were made. The primary purpose of these modifications was to minimize, as far as possible, student impulse to respond to items based on feelings for their own teacher rather than the videotaped teacher. Thus, the title was changed from "Your Teacher" to "The Teacher." In the directions, students were told to "Please remember we are not talking about your teacher. We are talking only about the teacher we have just seen on television." In the wording, the words "This Teacher" were substituted for the pronoun "She." (See Appendix B.)

One other departure from the SET II was the provision for a "Don't Know" response. Since some of the segments from the videotape were extremely short (less than one minute in the case of the introduction, Segment L), it was believed that many students would find that the true-false format was too restrictive or unrealistic.

For students in grades one through three, Haak, et al., developed a card-envelope format for the administration of the SET II. The items were printed upon small cards with
an identifying "stamp" in the upper right hand corner of each card. This stamp facilitated in the administration of SET II as explained below.

When the test is administered, the tester orally identifies each card by its "stamp" to the children. The wording of the items is printed upon the cards merely for its face validity value. (Some children can read the wording of course, but the ability to do so is not necessary). The tester then reads the item aloud, and the child classifies the item on each card as being true or false by placing the card in one side of a two-sided sorting envelope. On one side of the sorting envelope appears the picture of a post-office box: this is where the card is to be placed if the child thinks that what the card "says" is true. On the other side of the sorting envelope appears a picture of a wastebasket: this is where the card is to be placed if what the card "says" is not true . . . . (Haak, Kleiber and Peck, 1972)

In the present investigation the same format as used by Haak, et al., was continued. The cards used for "The Teacher" were tan colored. Since a "Don't Know" response was provided for, the modification to the test envelope was an added pocket with a "question mark" appearing in the middle for the "Don't Know" responses. (See Appendix C and Appendix D for illustrations of the cards and envelope. See Appendix E for the directions for administering "The Teacher.")

Fairness questionnaire

The instrument for measuring fairness was developed specifically for this investigation. It was designed to serve primarily as a measurement of how fair or how unfair the teacher portrayed on videotape was perceived to be. Initially the questionnaire contained 10 items:
This teacher is fair.
This teacher follows the rules.
This teacher cares about children's feelings.
This teacher wants children to know she is fair.
This teacher does what is expected by the school.
This teacher does what she believes children expect.
This teacher is right in her actions.
This teacher solves problems fairly.
The kids like this teacher.
This teacher likes kids.

The physical format of the fairness questionnaire, "The Teacher (b)," was made similar to that of the empathy questionnaire, "The Teacher." Provision for a "Don't Know" response was made and, with the generous permission of the developers of SET II, blue colored cards for "The Teacher (b)" were made using the same "stamps" as those which appear on other cards in the unused subsets of SET II. The final form of "The Teacher (b)" emerged as a seven-item questionnaire after a practice administration of the initial questionnaire to a first-grade class in the Price Laboratory School in Cedar Falls, Iowa. During this practice administration of "The Teacher (b)," some students experienced difficulty in responding to three items:

This teacher follows the rules.
This teacher does what is expected by the school.
This teacher does what she believes children expect.

These items were subsequently eliminated from the questionnaire. (See Appendix F for the questionnaire, Appendix G for illustration of the cards for "The Teacher (b)" and Appendix E for the directions for administering "The Teacher (b).")
Design

Six treatments were utilized which consisted of (a) showing varied combinations of videotaped segments of teaching behaviors, (b) the administration of the questionnaire, "The Teacher," which measured empathy for the teacher, and (c) the administration of the questionnaire "The Teacher (b)," which measured teacher fairness. All six treatments were administered to each of the three grades. Sex differences were noted with the resulting configuration being a $6 \times 3 \times 2$ design.

The six treatments were designed so that varying degrees and varying kinds of exposure to the teacher would constitute the primary difference between them. Treatment 3 was expected to be the most different from the others as it involved exposing students to all the segments of videotaped teacher behaviors. Treatment 6 was designed primarily to show the extent to which students could differentiate between fair teacher behavior and arbitrary and unfair teacher behavior. Table 1 outlines the six treatments.

The number of treatments in this investigation made it highly unlikely that the study could be conducted at a single site. Thus, four Cedar Falls, Iowa schools, Hansen, Humbert, Lincoln and Southdale, which have similar populations were grouped together and randomly assigned treatments. One school, Humbert, contained only the first three grades and
<table>
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<th>T6</th>
<th>T5</th>
<th>T4</th>
<th>T3</th>
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<td>Segment L</td>
<td>Introduction</td>
<td>Student Evaluation II</td>
<td>The Teacher (Empathy Questionnaire)</td>
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<td>Segment N</td>
<td>Interaction</td>
<td>Student Evaluation II</td>
<td>The Teacher (Empathy Questionnaire)</td>
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<td>Conflict Resolution (Fair)</td>
<td>Student Evaluation II</td>
<td>The Teacher (Emp) (Trt. 6) The Teacher (b) (Fairness)</td>
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<tr>
<td>Segment R</td>
<td>Conflict Resolution (Arbitrary and Unfair)</td>
<td>The Teacher (b) Fairness Questionnaire</td>
<td></td>
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</tbody>
</table>

Table 1. Experiment design

The primary treatment assignment schedule was as is shown in Table 2. The random treatment assignment schedule was not included in the random treatment assignment schedule.
Table 2. Treatment assignment schedule (a)

<table>
<thead>
<tr>
<th>Grades</th>
<th>Lincoln</th>
<th>Southdale</th>
<th>Hansen</th>
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</thead>
<tbody>
<tr>
<td>1a</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1b</td>
<td>4</td>
<td>5</td>
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<td>1</td>
<td>2</td>
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<tr>
<td>5a</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5b</td>
<td>5</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

As can be seen from Table 3, although all treatments were not administered at each grade level in each school because of the limited number of subjects, all treatments were administered in each grade across schools and in each school across grades. One school, Southdale, divided its six classes, two at each grade level, into three groups of students at each of the three grade levels. Lincoln School had three full-time classes at the fifth-grade level. These third tier groups were assigned generally to Treatment 3. This assignment was made because, as stated earlier, Treatment 3 was expected to show the greatest difference among treatments. Third tier classes were also assigned to treatments other than Treatment 3 in instances where the number of subjects in those treatments were particularly small. This latter type of assignment was made with all of
the Humbert School subjects which involved two classrooms randomly subdivided into two groups and which essentially make them third and fourth tier assignees. Thus, the final assignment schedule was as is shown in Table 3.

Table 3. Treatment assignment schedule (b)

<table>
<thead>
<tr>
<th>Grades</th>
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<th>Southdale</th>
<th>Hansen</th>
<th>Humbert</th>
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</thead>
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<tr>
<td>1a</td>
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<td>1b</td>
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<td></td>
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<td>5</td>
</tr>
<tr>
<td>5a</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5b</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5c</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5d</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Sample

Five hundred and thirty-five students, 237 females and 298 males, participated in this investigation during April, 1980, over a period of 10 school days. The subjects were primarily white and came from middle- and upper-middle-class homes.
The four participating schools appeared to be in basic agreement insofar as their philosophical approach to elementary education was concerned. The students enrolled in each of the four schools were from comparable middle-income families. The latest available Iowa Tests of Basic Skills results for 1978, 1977, and 1976 also show comparable achievement profiles for third and fifth graders in the four schools. The achievement percentiles referred to here are composite scores based on national norms and are shown in Table 4.

Table 4. Iowa Tests of Basic Skills for participating schools

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>School</th>
<th>Achievement Percentiles&lt;sup&gt;a&lt;/sup&gt;</th>
<th>1978</th>
<th>1977</th>
<th>1976</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Lincoln</td>
<td>84</td>
<td>99</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>89</td>
<td>87</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Hansen</td>
<td>88</td>
<td>98</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>96</td>
<td>99</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Southdale</td>
<td>80</td>
<td>96</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>98</td>
<td>99</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Humbert</td>
<td>96</td>
<td>99</td>
<td>99</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Based on national norms.

Experiments were conducted in a total of 22 classes. Twenty females and two males were teachers for these students.
Teacher-student sex identity was not a focus of this investigation and a perception of teacher fairness is a perception of teacher fairness regardless of the sex of the teacher. Therefore, the fact that two groups of students in this population differed from other groups by having had male teachers was not seen as consequential.

Collection of Data

Prior to conducting this investigation the principal in each of the participating schools was visited. Among the topics discussed with the principals were the purpose of the experiment, the number of subjects needed, the grades involved, the length of the experiment, the possible amount of interruption to the school day, and the question as to whether or not a formal parental permission for participation in the experiment was desired. Having secured the principal's approval and cooperation, an offer to meet with teachers at a subsequent meeting was made. Teachers at one school did indicate an interest in having such a meeting. At this meeting the same topics discussed with the principals were discussed with the involved teachers. These prior meetings also resulted in commitments on dates and times for administration of the experiment.

The nature and scope of this study was such that school administrators felt that formal parental permission was not
needed. However, in the Experiment Administrator's directions there were specific directions for the administrator to say "... We believe you will find this exercise to be fun, but if you feel that you would not like to take part that will be okay too."

The experiment was conducted in a central location in each school except for three first-grade classes in the Southdale school. The prearranged schedule agreed upon with the principal or the teachers was followed. Copies of the schedule were in the hands of the school principal and each member of the investigative team at least three school days prior to arrival on the site. (See Appendix H for a sample schedule.)

The investigative team consisted of a paid Experiment Administrator who administered the experiment to all groups in each school, a Video Operator who was a graduate student, several assisting teacher-education undergraduate students, office personnel and this investigator as monitors and general assistants.

Practice administration of the experiment was carried out in the Price Laboratory School resulting in modifications to the Experiment Administrator's instructions and to the fairness instrument, "The Teacher (b)." The on-site experiments ranged from 10 to 15 minutes in length.
Total classes were administered the experiment at one sitting in most instances to minimize interruptions to the school program. For first and third-grade subjects, who were administered the card-envelope form of the questionnaire, the responses were later transferred to the respective paper questionnaires. This step facilitated record keeping and the preparation of the data for statistical analysis. Green colored tabs were also placed in the envelopes of boys as they were being collected in order that the sex of the subject could be determined later. The tally of subjects by treatments, by grade and by sex can be seen in Table 5.

Table 5. Tally of subjects

<table>
<thead>
<tr>
<th>Treatments</th>
<th>Grade and Sex</th>
<th>1</th>
<th>3</th>
<th>5</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
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<td>M</td>
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<td></td>
<td>10</td>
<td>12</td>
<td>14</td>
<td>14</td>
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<td>3</td>
<td></td>
<td>19</td>
<td>15</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>93</td>
<td>69</td>
<td>100</td>
<td>89</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>162</td>
<td></td>
<td>189</td>
<td></td>
</tr>
</tbody>
</table>
The Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner and Bent, 1975) format was used for most statistical analyses. Factor analysis, as well as a reliability test, were undertaken in the assessment of both the empathy questionnaire, "The Teacher," and the fairness questionnaire, "The Teacher (b)."

The factor analyses of the two questionnaires were undertaken for two purposes. In the first instance it was desirable to assess how well the subset of items taken from SET II and used as the empathy questionnaire in this investigation held together as a separate instrument. In the second instance it was desirable to determine what factors would evolve out of the fairness questionnaire and to assess whether or not they could separately or collectively be said to adequately measure fairness.

Similar to the rationale for factor analyzing the empathy questionnaire, the reliability test of this questionnaire was also undertaken to assess what effect its use as an instrument standing alone had upon its already established reliability as a measure of empathy. The purpose of the reliability test for the fairness questionnaire was to assess its level of consistency as a measure of fairness.

The weights assigned to the responses on "The Teacher" and "The Teacher (b)" ranged from one to three. "The Teacher" was administered after segments in which the teacher was
either introduced, or shown interacting with a small group of students, or resolving a conflict fairly, or a combination of these segments (see Table 1). A "True" response was rated three (3) signifying that the videotaped teacher was perceived to possess the empathic quality concerned. A "Don't Know" response was rated two (2). A "False" response was rated one (1) which signified that the videotaped teacher was not perceived to possess the empathic quality concerned.

Except for Treatment 6, in which "The Teacher (b)" was administered twice, this questionnaire was administered after the segment in which the videotaped teacher was shown resolving a conflict unfairly (see Table 1). A "False" response was rated three (3) signifying that the videotaped teacher was not perceived to possess the fairness quality concerned. A "Don't Know" response was rated two (2). A "True" response was rated one (1) which signified that the videotaped teacher was perceived to possess the fairness quality concerned (see Appendix K for frequencies on "The Teacher" and "The Teacher (b)").

A three-way classification analysis of variance was chosen to study the means of data derived from the administration of the empathy questionnaire, "The Teacher." The attending assumptions with this analysis were that the measures within each category were not significantly different among themselves and that the population data from which the
samples were drawn were normally distributed (or at least did not radically depart from a normal shape). To further analyze main effects found to yield significant F-values at the .05 level or greater, the Tukey "Honest Significant Difference" was used to determine which means differed significantly from one another. The choice of the Tukey method from among several multiple-comparison techniques was based on its apparent wide acceptance as a technique of comparison and also because its computation is one of the more straightforward solutions.

A three-way classification analysis of variance with empathy as a covariate was chosen for studying the means of data derived from the administration of the fairness questionnaire, "The Teacher (b)." This approach permitted an assessment of the fairness main effects of treatments, grade and sex after adjusting for the empathy covariate. The resulting adjusted means from this analysis necessitated a modification of the Tukey "Honest Significant Difference" procedure. Again, the comparisons were made to further analyze main effects which yielded significant F-values at the .05 level or greater.

A separate t-test for paired data was used as a comparison technique for analyzing the means of data resulting from two administrations of the fairness questionnaire in Treatment 6. In this treatment students were administered the fairness questionnaire twice. The first administration
was after viewing the fair resolution of a conflict (Segment P). The second administration was after viewing the unfair resolution of a conflict (Segment R) which was the procedure in all other treatments as well.

**Statistical approach**

In this subsection a general explanation of the statistical techniques as used in this study will be developed. Since most of the procedures for analysis were performed with SPSS, the explanations will be approached largely from the point of view of what the SPSS capabilities and options allow.

**Factor analysis** This procedure typically involves the process of (a) preparation of a correlation matrix, (b) extraction of initial factors, and (c) rotation to terminal factors. Unless otherwise specified, which wasn't the case in this study, the SPSS default format automatically provides the user with a method of factor analysis referred to as "principal factoring with iteration PA2." In this method the classical-factor analysis is carried out and is based fundamentally on the faith that the observed correlations are mainly the results of some underlying regularity in the data. It is assumed that the observed variable is influenced by determinants or communalities which are shared by other variables in the set and by determinants which are not shared or are unique. The basic model as executed in the SPSS format is as follows:
\[ z_j = a_{ji}F_i + a_{j2}F_2 + \ldots + a_{jm}F_m + d_j U_j \quad j = 1, 2, \ldots, n \]

where \( z_j \) = variable \( z \) in standardized form

\( F_i \) = hypothetical factors

\( U_j \) = unique factor for variable \( j \)

\( a_{ji} \) = standardized regression coefficient of variable \( j \) on factor \( i \) (factor loading)

\( d_j \) = standardized regression coefficient of variable \( j \) on unique factor \( j \)

The following correlations are assumed to hold among the hypothesized variables:

\[ r(F_i U_j) = 0 \quad i = 1, 2, \ldots, n; \quad j = 1, 2, \ldots, n; \quad \text{and} \quad i \neq j, \quad j \neq k \]

\[ r(U_j U_k) = 0 \]

The unique factor \( U_j \) is assumed to be unrelated to all the common factors and the unique factors associated with other variables. Therefore, what correlation that does exist between the two variables \( j \) and \( k \) is assumed to be due to the common factors.

The rotation of the initial solution results in the identification of factors which provide a meaningful pattern of variables. In this study the varimax rotation was employed. This procedure achieves a result of maximizing the variance of the squared loadings in each column of a factor matrix and so is termed VARIMAX. (For a discussion of factor analysis see SPSS (Nie, et al., 1975) and Ferguson (1971).)
Reliability  The internal-consistency method of estimating reliability is an available option among the SPSS reliability subprograms. This method of estimating internal consistency is achieved through an analysis of the individual items. Both the empathy and fairness questionnaires were analyzed to determine their reliability.

The SPSS reliability coefficient is computed as alpha—a derivation from Cronbach's alpha (Nie, et al., 1975). This coefficient is particularly designed to analyze data in dichotomous form and is equivalent to the Kuder-Richardson formula 20. For an item with more than two response categories, where each category has been assigned a weight, Ferguson (1971) observes that the individual item variances may be calculated and their sum may be substituted into the Kuder-Richardson formula 20. This approach is noted in the SPSS calculation of alpha.

\[
\alpha = \frac{k}{k-1} \left(1 - \sum_{i=1}^{k} \frac{s^2_i}{s^2_T}\right)
\]

where \(s^2_i = \) variance of the measuring instrument \(i\)

\(s^2_T = \) variance of the sum over the \(k\) items

ANOVA   The primary analysis techniques applied to the data in this study was the three-way analysis of variance with and without a covariate. A subsequent multiple
comparison of means, the Tukey Honest Significant Difference method, was performed to determine the pairwise differences. To compute the relevant F-values for the three-way factorial, SPSS provides the classical experimental approach as a default option. This option was used in the present study. The sources of variation are discernible through the partitioning of the sum of squared variances in $Y$. The classic partitioning of the sum of the squares in $Y$ for a three-way analysis of variance with unequal cell frequencies is as follows:

1. $SS_{A,B,C}$ (main effects)

2. $SS_{\text{two-way interaction}} = SS_{A,B,C,AB,AC,BC} - SS_{A,B,C}$

3. $SS_{\text{three-way interaction}} = SS_{A,B,C,AB,AC,BC,ABC} - SS_{A,B,C,AB,AC,BC}$

4. $SS_{\text{residual}} = SS_y - SS_{A,B,C,AB,AC,BC,ABC}$

$SS_y = \text{total sum of squares} = (1) + (2) + (3) + (4)$

where $A$ = treatments

$B$ = grade

$C$ = sex

The classic approach to partitioning out the individual main effects with unequal $n$ is accomplished as follows:

A main effect $SS_{A-BC} = SS_{A,B,C} - SS_{B,C}$

B main effect $SS_{B-AC} = SS_{A,B,C} - SS_{A,C}$

C main effect $SS_{C-AB} = SS_{A,B,C} - SS_{A,B}$

$SS_{A,B,C} = \text{total additive effects}$
The three-way covariate analysis procedure involves the use of regression to remove variation in the dependent variable due to the covariate. Beyond this step, the analysis procedure is the same as that described in the case of the three-way ANOVA. The covariance analysis can be accomplished with a correction for the effect of the covariate coming before, with or after the assessment of the effects of non-metric factors, or variables. The default provision of SPSS corrects for the covariate first. The default procedure was used in the present study. The partitioning of the sum of square is identical to that as described for the ANOVA except that the sum of squares attributable to the covariate have been accounted for first. Thus the partitioning of the sum of squares in Y are as follows:

1. SS (covariate)
2. $SS_{A,B,C}$ (main effects)
3. $SS_{\text{two-way interaction}}$
4. $SS_{\text{three-way interaction}}$
5. $SS_{\text{residual}}$

$$SS_y = \text{total sum of squares} = (1) + (2) + (3) + (4) + (5)$$

where covariate = empathy
A = treatments
B = grade
C = sex

Multiple-comparison technique Differences indicating a significant dimension were subjected to further examination
through the application of the Tukey Honest Significant Difference (HSD) method. This approach uses a single value from the Studentized Range table. This statistic represents the value which, at a given level of probability, must be met or exceeded in order to consider the observed differences as being significant. To use the Studentized Range table two values are needed: (a) the degrees of freedom associated with the within mean sum of squares, and (b) the number of treatment means in the experiment. It is a nonsequential method. Namboodiri, Carter and Blalock, Jr. (1975) define the Tukey method as follows:

\[
\text{HSD} = \frac{Q}{\sqrt{\frac{\text{Within MSS}}{r}}}
\]

where \( Q \) = the appropriate value obtained from the table for Studentized Range
\( r \) = the number of observations under each treatment

Among the virtues of the Tukey HSD method is the fact that the experimentwise error rate is held to alpha. Experimentwise error rate is defined as the probability that one or more erroneous conclusions will be drawn in a given experiment. In other words, experiments are divided into two classes: (a) those in which all conclusions are correct and (b) those in which some conclusions are incorrect. The error rate experimentwise belongs in class (b). For the
Tukey, then, a 5 percent level test is one where 5 percent of the experiments will give one or more false significant differences and 95 percent will give no significant differences, on the average, when the means are a homogeneous set.

Unequal n has been reported to cause the Tukey HSD method to be only an approximate comparison test. However, Petrinovich and Hardyck (1972) reported that they found the effects of unequal n actually reduced the probability of a type II error (accepting the null when it is false). Still, to deal with unequal n's in multiple comparisons, recent tests (Ferguson, 1971; Hopkins and Glass, 1978; Namboodiri, Carter and Blalock, Jr., 1975) advise substituting the harmonic mean, of the observations for the groups to be compared, for the quantity r (the number of observations under each treatment). This substitution of the harmonic mean for r into the previous equation achieves the following results:

\[ HSD = Q \sqrt{\text{Within MSS} \frac{P}{\frac{1}{r_1} + \frac{1}{r_2} + \ldots + \frac{1}{r_p}}} \]

where \( P = \) the number of groups.

Differences between the means were computed in a matrix pattern utilizing the following order: the largest mean minus the smallest mean, the largest mean minus the second smallest mean, up through the largest mean minus the second largest mean. Next, the smallest mean was subtracted from
the second largest mean, then the second smallest mean was subtracted and so on, finally finishing with the second smallest minus the smallest mean. Each difference was significant at the .05 level or the .01 level if it exceeded the computed HSD values.

**Modified multiple-comparison technique**

The fact that means in a covariate analysis have been adjusted for the effects of the covariate X causes the error term in the Tukey HSD procedure to have lower precision. Therefore, the error term in the Tukey HSD procedure was modified in an effort to increase its precision in testing adjusted means. Cochran and Cox (1957) discuss an adjustment wherein one may use an average value for the contribution of the x's in the estimated variance. Thus, the estimated variance becomes

\[
s_{y.x}^2 \left[ 1 + \frac{t_{xx}}{E_{xx}} \right]
\]

as the effective residual error MSS where

- \( s_{y.x}^2 \) = estimated variance
- \( t_{xx} \) = treatments MSS for x
- \( E_{xx} \) = error sum of squares for x

Substituting the residual error term from the covariate analysis for the value \( s_{y.x}^2 \) in the above equation results in a modified error term which can then be substituted for the value "within MSS" in the Tukey HSD equation. The estimated variance technique suggested by Cochran and Cox should only be used when: (a) error degrees of freedom exceed
20, and (b) when the treatments mean square for X is non-significant. The treatments mean square for X in the present study was significant. Therefore, the modified Tukey HSD procedure was used as an approximate test for testing the differences between adjusted means.

**t-test for paired data** The t-test for paired data was used for analyzing the differences between the means of data resulting from two administrations of the fairness questionnaires in Treatment 6. The purpose of pairing was to reduce extraneous influences on the variable being measured which was fairness. Pairing also reduces the effect of subject to subject variability.

To compute t for paired data, the paired difference variable \( D = X_1 - X_2 \) is formed, where \( X_1 \) is the measurement before and \( X_2 \) the measurement after. Thus, a representation of the formula is as follows:

\[
t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{\Sigma D^2 - (\Sigma D)^2}{N}}}
\]

where \( n = \text{number of pairs of scores} \).

**Null Hypotheses**

The judgment that the review of the literature supports the initial rationale and affirms the tenableness of the
initial five hypotheses was made. Consequently, the five hypotheses were expanded to seven hypotheses to allow for analyses of age and sex differences. To facilitate the statistical analysis, those seven hypotheses and 36 sub-hypotheses are stated in null form and are listed as follows:

1. There is no difference between student responses to "The Teacher," an empathy questionnaire, even when the number of exposures to vignettes portraying teacher empathy have varied across the sample.

1.a. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself and while engaging in positive small-group interactions with students, and responses by other students who have only viewed that same teacher while introducing herself.

1.b. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself.

1.c. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself.

1.d. There is no difference between responses to "The Teacher" by students who have viewed a teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself.

1.e. There is no difference between responses to "The Teacher" by students who have viewed a teacher while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself.
1.f. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself and while engaging in positive small-group interactions with students.

1.g. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself and while engaging in positive small-group interactions with students.

1.h. There is no difference between responses to "The Teacher" by students who have viewed a teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself and while engaging in positive small-group interactions with students.

1.i. There is no difference between responses to "The Teacher" by students who have viewed a teacher while resolving a conflict fairly, and responses by other students who have viewed that same teacher while introducing herself and while engaging in positive small-group interactions with students.

1.j. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and responses by students who have only viewed that same teacher while introducing herself and while resolving a conflict fairly.

1.k. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself, while engaging in positive small-group interactions
with students and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly.

1.1. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while resolving a conflict fairly.

1.m. There is no difference between responses to "The Teacher" by students who have viewed a teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself and while resolving a conflict fairly.

1.n. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while resolving a conflict fairly.

1.o. There is no difference between responses to "The Teacher" by students who have viewed a teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while resolving a conflict fairly.

2. There is no difference between responses to "The Teacher," an empathy questionnaire, by students in a higher grade and by students in a lower grade.

2.a. There is no difference between responses to "The Teacher" by students in grade 1 and by students in grade 3.

2.b. There is no difference between responses to "The Teacher" by students in grade 1 and by students in grade 5.
2.c. There is no difference between responses to "The Teacher" by students in grade 3 and by students in grade 5.

3. There is no difference between responses to "The Teacher," an empathy questionnaire, by same aged males and females.

4. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)," a fairness questionnaire, after viewing a vignette portraying unfair teacher behavior.

4.a. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself and while engaging in positive small-group interactions with students and those responses by other students who have only additionally viewed that same teacher while introducing herself.

4.b. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while introducing herself.

4.c. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while introducing herself.

4.d. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only viewed that same teacher while introducing herself.
4.e. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while resolving a conflict fairly, and those responses by other students who have only viewed that same teacher while introducing herself.

4.f. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only viewed that same teacher while introducing herself while engaging in positive small-group interactions with students.

4.g. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while introducing herself and while engaging in positive small-group interactions with students.

4.h. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while introducing herself and while engaging in positive small-group interactions with students.

4.i. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while introducing herself and while engaging in positive small-group interactions with students.
4.j. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while introducing herself and while resolving a conflict fairly.

4.k. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly.

4.i. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while resolving a conflict fairly.

4.m. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while introducing herself and while resolving a conflict fairly.

4.n. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself and while resolving a conflict fairly,
and those responses by other students who have only additionally viewed that same teacher while resolving a conflict fairly.

4.o. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while resolving a conflict fairly.

5. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)," a fairness questionnaire, by students in a higher grade and by students in a lower grade.

5.a. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)" by students in grade 1 and by students in grade 3.

5.b. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)" by students in grade 1 and by students in grade 5.

5.c. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)" by students in grade 3 and by students in grade 5.

6. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)," a fairness questionnaire, by same aged males and females.

7. There is no difference between responses to two administrations of "The Teacher (b)" by the same group of students when administered once after viewing only a vignette portraying fair teacher behavior and administered a second time after viewing a vignette portraying unfair teacher behavior.

The findings related to the instrumentation and to the preceding null hypotheses are presented in the following
chapter. After presentation of the data related to instrumentation, those data related to the null hypotheses will follow.
FINDINGS

This investigation was designed to examine the relationship between student perception of empathy and student perception of fairness. A videotape of teacher empathic behaviors and teacher conflict resolution behaviors was employed. The data were collected via two questionnaires. Seven major null hypotheses and 36 sub null hypotheses were framed to statistically study the data. Findings are organized and presented under the following major headings: (a) Instrumentation Findings and (b) Research Findings.

Instrumentation Findings

Factor analysis

"The Teacher," the empathy questionnaire, was a subset of items taken from the Student Evaluation of Teacher Instrument II (SET II) by Haak, Kleiber and Peck (1972) which were found to measure teacher rapport and teacher competence while contained in the 23-item SET II. "The Teacher (b)" was designed specifically for this study. Factor loadings for items in both questionnaires are found in Table 6.

Finding Eighty-four percent of the variance in the two instruments was extracted by two Roots as follows:

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>57.9</td>
<td>26.1</td>
</tr>
</tbody>
</table>
Table 6. Factor analysis of "The Teacher" and "The Teacher (b)"

<table>
<thead>
<tr>
<th>Variable Item</th>
<th>Factor Loadings After Rotation to Simple Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Factor 1</td>
</tr>
<tr>
<td>E1</td>
<td>.10</td>
</tr>
<tr>
<td>E2</td>
<td>.02</td>
</tr>
<tr>
<td>E3</td>
<td>-.04</td>
</tr>
<tr>
<td>E4</td>
<td>-.03</td>
</tr>
<tr>
<td>E5</td>
<td>-.09</td>
</tr>
<tr>
<td>E6</td>
<td>.00</td>
</tr>
<tr>
<td>E7</td>
<td>-.02</td>
</tr>
<tr>
<td>E8</td>
<td>-.16</td>
</tr>
<tr>
<td>E9</td>
<td>-.21</td>
</tr>
<tr>
<td>F1</td>
<td>.34</td>
</tr>
<tr>
<td>F2</td>
<td>.70</td>
</tr>
<tr>
<td>F3</td>
<td>.58</td>
</tr>
<tr>
<td>F4</td>
<td>.35</td>
</tr>
<tr>
<td>F5</td>
<td>.49</td>
</tr>
<tr>
<td>F6</td>
<td>.63</td>
</tr>
<tr>
<td>F7</td>
<td>.73</td>
</tr>
</tbody>
</table>

aE = Empathy.
F = Fairness.

The loadings after varimax rotation show the questionnaire to be measuring markedly different factors. It can also be noted that items 1, 3 and 4 in "The Teacher" showed much lower loadings on Factor 2 than did other items.

Reliability analysis

A reliability analysis of both questionnaires was made. Table 7, Table 8 and Table 9 show the effect that individual
items have upon "The Teacher" and "The Teacher (b)" should any one item be omitted from the scale.

Table 7. Reliability analysis of "The Teacher" for items 2, 5-9

<table>
<thead>
<tr>
<th>Variable Item</th>
<th>Scale Values if Item is Deleted</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Variance</td>
<td>Reliability</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>12.93</td>
<td>4.27</td>
<td>.659</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>12.96</td>
<td>3.98</td>
<td>.613</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>12.75</td>
<td>4.58</td>
<td>.637</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>12.90</td>
<td>3.99</td>
<td>.569</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>12.90</td>
<td>3.91</td>
<td>.564</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>13.00</td>
<td>4.00</td>
<td>.602</td>
<td></td>
</tr>
</tbody>
</table>

Note. True = 3.  
Don't Know = 2.  
False = 1.  
n = 535.

Table 7 shows the effect of each item on the reliability of "The Teacher" when the three items identified as having low loadings on Factor 2 (items 1, 3 and 4) are not included. It can be seen that when only six of the nine items comprise the measure for empathy, items 7 and 8 were more important to overall scale reliability than were any of the other items. The overall reliability coefficient for the measure without items 1, 3 and 4 was .651. Table 8 shows what effect deleting an item has upon remaining items when all nine items comprise the measure for empathy.
Since a "true" response was rated as 3, a "don't know" response as 2, and a "false" response as 1, the range of possible scores for all of the six items in Table 7 would have been from 6 to 18. That is to say that if a respondent had responded with all "false" responses to "The Teacher," the overall score would have been 6. With all "don't know" responses, the overall score would have been 12. Likewise, with all "true" responses, the overall score would have been 18. The percentage of "don't know" responses for each of the six items contained in Table 7 ranged from 16 to 29 percent of the total responses made. Therefore, the means shown in Table 7 are based upon "true" and "false" responses which fall within a range of 71 to 84 percent of the total responses made on a given item. (See Table E in Appendix K for frequencies and percentages of responses to items on "The Teacher."

From Table 8 it can be seen that when the items with low factor loadings are included, the effects of any one item on the scale reliability is not as extreme as it was in the six-item version of "The Teacher." The overall scale reliability coefficient for the all-item version was .659. Table 9 shows the effects that the omission of any given item has upon "The Teacher (b)."
Table 8. Reliability analysis of "The Teacher" for all items

<table>
<thead>
<tr>
<th>Variable Item</th>
<th>Scale Values if Item is Deleted</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Variance</td>
<td>Reliability</td>
</tr>
<tr>
<td>1</td>
<td>20.45</td>
<td>7.87</td>
<td>.635</td>
</tr>
<tr>
<td>2</td>
<td>20.67</td>
<td>7.58</td>
<td>.655</td>
</tr>
<tr>
<td>3</td>
<td>20.54</td>
<td>7.95</td>
<td>.656</td>
</tr>
<tr>
<td>4</td>
<td>20.95</td>
<td>7.60</td>
<td>.666</td>
</tr>
<tr>
<td>5</td>
<td>20.69</td>
<td>7.02</td>
<td>.614</td>
</tr>
<tr>
<td>6</td>
<td>20.49</td>
<td>7.74</td>
<td>.631</td>
</tr>
<tr>
<td>7</td>
<td>20.64</td>
<td>7.18</td>
<td>.603</td>
</tr>
<tr>
<td>8</td>
<td>20.64</td>
<td>7.09</td>
<td>.600</td>
</tr>
<tr>
<td>9</td>
<td>20.73</td>
<td>7.28</td>
<td>.626</td>
</tr>
</tbody>
</table>

Note. True = 3. Don't Know = 2. False = 1. n = 535.

From Table 9 it can be seen that the deletion of any one given item from "The Teacher (b)" would not of itself have a great effect on overall scale reliability. The overall reliability coefficient for "The Teacher (b)" when all items are included was .854. (See Table 9 in Appendix K for frequencies and percentages of responses to items on "The Teacher (b)."

Findings The reliability of "The Teacher" was not improved by removing items with low loadings on the empathy factor. The overall reliability coefficient was slightly higher with the all-item version of "The Teacher" than with
the six-item version moving from .651 to .659. The reli-
ability coefficient of .659 for the all-item version of
"The Teacher" suggests it was a satisfactory measure of
empathy. The reliability coefficient of .854 for "The
Teacher (b)" suggests it was a satisfactory measure of
fairness.

Table 9. Reliability analysis of "The Teacher (b)" for all items

<table>
<thead>
<tr>
<th>Variable Item</th>
<th>Scale Values if Item is Deleted</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Variance</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>14.10</td>
<td>12.92</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>14.52</td>
<td>11.39</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>14.22</td>
<td>12.73</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>14.16</td>
<td>12.31</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>14.54</td>
<td>12.02</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>14.82</td>
<td>12.07</td>
</tr>
</tbody>
</table>

Note. True = 1.
Don't Know = 2.
False = 3.
n = 535.

Research Findings

In the material that follows, the findings related to
the major null hypotheses will be discussed first. The order
of presentation will be the introduction of the pertinent
ANOVA table with the written presentation following. Sub-
sequent to those expositions, tabular and written presenta-
tions related to specific sub null hypotheses will be offered.
A significance at or beyond the .05 level was necessary for rejection of a given null hypothesis. Discussion of these findings is presented in the following chapter.

Effects on empathy

The analysis of variance of responses to the empathy questionnaire, "The Teacher," is presented in Table 10.

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>d.f.</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatments (A)</td>
<td>5</td>
<td>114.383</td>
<td>22.877</td>
<td>3.106**</td>
</tr>
<tr>
<td>Grade (B)</td>
<td>2</td>
<td>505.869</td>
<td>252.934</td>
<td>34.339**</td>
</tr>
<tr>
<td>Sex (C)</td>
<td>1</td>
<td>101.923</td>
<td>101.923</td>
<td>13.837**</td>
</tr>
<tr>
<td>A x B</td>
<td>10</td>
<td>350.631</td>
<td>35.063</td>
<td>4.760**</td>
</tr>
<tr>
<td>A x C</td>
<td>5</td>
<td>25.367</td>
<td>5.073</td>
<td>.689</td>
</tr>
<tr>
<td>B x C</td>
<td>2</td>
<td>35.454</td>
<td>17.727</td>
<td>2.407</td>
</tr>
<tr>
<td>A x B x C</td>
<td>10</td>
<td>114.597</td>
<td>11.460</td>
<td>1.556</td>
</tr>
<tr>
<td>Residual</td>
<td>499</td>
<td>3675.558</td>
<td>7.366</td>
<td></td>
</tr>
</tbody>
</table>

**p < .01.

Null Hypothesis 1. There is no difference between student responses to "The Teacher," an empathy questionnaire, even when the number of exposures to vignettes portraying teacher empathy have varied across the sample.

The tabular F-value with 5 and 499 degrees of freedom \( \frac{F_{5,499}}{.95} \) was 2.23. An F-ratio of this magnitude or greater is required for significance at the .05 level. The treatment main effect, as shown in Table 10, shows a highly
significant difference exists among treatment means. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 1.

Null Hypothesis 2. There is no difference between responses to "The Teacher," an empathy questionnaire, by students in a higher grade and by students in a lower grade.

The tabular F-value with 2 and 499 degrees of freedom ($\frac{F_{2,499}}{2}$) was 4.65. An F-ratio of this magnitude or greater is required for significance at the .05 level. The main effect of grade, as shown in Table 10, shows a highly significant difference among grade means exists. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 2.

Null Hypothesis 3. There is no difference between responses to "The Teacher," an empathy questionnaire, by same aged males and females.

The tabular F-value with 1 and 499 degrees of freedom ($\frac{F_{1,499}}{1}$) was 6.70. An F-ratio of this magnitude or greater is required for significance at the .05 level. The main effect of sex, as appears in Table 10, shows a highly significant sex difference to exist. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 3.

Empathy--treatment effect

As observed in the finding related to Null Hypothesis 1, treatment effect was significant at or beyond the .01 level. Fifteen sub null hypotheses related to Null Hypothesis 1 were
tested to determine which treatment or treatments might be significantly different from other treatments. Table 11 summarizes the comparisons represented by sub Null Hypotheses 1a through 10.

Table 11. Tukey HSD Procedure—comparison of treatment means for significant differences on "The Teacher"

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean</th>
<th>Differences Between Treatment Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>24.18</td>
<td>-- .71 .98 1.18* 1.27* 1.38*</td>
</tr>
<tr>
<td>1</td>
<td>23.47</td>
<td>-- .27 .47 .56 .67</td>
</tr>
<tr>
<td>3</td>
<td>23.20</td>
<td>-- .20 .29 .40</td>
</tr>
<tr>
<td>5</td>
<td>23.00</td>
<td>-- .09 .20</td>
</tr>
<tr>
<td>2</td>
<td>22.91</td>
<td>-- .11</td>
</tr>
<tr>
<td>6</td>
<td>22.80</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. HSD .95 = 1.1686.  
HSD .99 = 1.3850.

*p < .05.

Three comparisons of treatment means resulted in differences which were significant.

Null Hypothesis 1g. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself and while engaging in positive small-group interactions with students.

Using a Q value equal to 4.05 from the Studentized Range table and the within MSS equal to 7.366 the computed Tukey HSD
value was equal to 1.1686 at the .05 level. As can be seen in Table 11, the difference of 1.27 between means for Treatment 2 and Treatment 4 was significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 1g.

Null Hypothesis 1m. There is no difference between responses to "The Teacher" by students who have viewed a teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while introducing herself and while resolving a conflict fairly.

Compared to the computed 1.1686 Tukey HSD value, it can be seen in Table 11 that the difference of 1.18 between means for Treatment 4 and Treatment 5 was significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 1m.

Null Hypothesis 1n. There is no difference between responses to "The Teacher" by students who have viewed a teacher while introducing herself and while resolving a conflict fairly, and responses by other students who have only viewed that same teacher while resolving a conflict fairly.

Compared to the computed 1.1686 Tukey HSD value, it can be seen in Table 11 that the difference of 1.38 between means for Treatment 4 and Treatment 6 was significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 1n.

An examination of Table 11 also reveals values below the calculated HSD value of 1.686 for the .05 level.
Therefore, twelve comparisons yielded differences which resulted in failure to reject the related sub null hypotheses.

**Empathy--grade effect**

As observed in the finding related to Null Hypothesis 2, grade effects were significant at or beyond the .01 level. Three sub null hypotheses related to Null Hypothesis 2 were tested to determine which grade mean or means might be significantly different from other grade means. Table 12 summarizes the comparisons represented by sub Null Hypotheses 2a through 2c.

Table 12. Tukey HSD Procedure--comparison of grade means for significant differences on "The Teacher"

<table>
<thead>
<tr>
<th>Grade</th>
<th>Mean</th>
<th>Differences Between Grade Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>24.62</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>23.06</td>
<td>--</td>
</tr>
<tr>
<td>5</td>
<td>22.21</td>
<td>--</td>
</tr>
</tbody>
</table>

**Note.**

HSD .95 = .6783.

HSD .99 = .8453.

**p < .01.

Null Hypothesis 2a. There is no difference between responses to "The Teacher" by students in grade 1 and by students in grade 3.

Using a Q value equal to 3.33 from the Studentized Range table and the within MSS equal to 7.366, the computed Tukey
HSD value was equal to .6783 at the .05 level. As can be seen in Table 12, the difference of 1.56 between means for grade 1 and grade 3 was highly significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 2a.

Null Hypothesis 2b. There is no difference between responses to "The Teacher" by students in grade 1 and by students in grade 5.

Compared to the computed .6783 Tukey HSD value, it can be seen in Table 12 that the difference of 2.41 between means for grade 1 and grade 5 was highly significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 2b.

Null Hypothesis 2c. There is no difference between responses to "The Teacher" by students in grade 3 and by students in grade 5.

Compared to the computed .6783 Tukey HSD value, it can be seen in Table 12 that the difference of .85 between means for grade 3 and grade 5 was highly significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 2c.

Effects on fairness

The analysis of variance of responses to the fairness questionnaire, "The Teacher (b)," with responses to the empathy questionnaire, "The Teacher," as a covariate, is presented in Table 13.
Table 13. Summary of an analysis of variance of responses to "The Teacher (b)"—perceived teacher fairness—with responses to "The Teacher" as a covariate

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>d.f.</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Teacher</td>
<td>1</td>
<td>454.434</td>
<td>454.434</td>
<td>47.180**</td>
</tr>
<tr>
<td>Treatments (A)</td>
<td>5</td>
<td>170.280</td>
<td>34.056</td>
<td>3.536**</td>
</tr>
<tr>
<td>Grade (B)</td>
<td>2</td>
<td>2773.967</td>
<td>1386.983</td>
<td>143.988**</td>
</tr>
<tr>
<td>Sex (C)</td>
<td>1</td>
<td>8.789</td>
<td>8.789</td>
<td>.912</td>
</tr>
<tr>
<td>A x B</td>
<td>10</td>
<td>213.212</td>
<td>21.321</td>
<td>2.214*</td>
</tr>
<tr>
<td>A x C</td>
<td>5</td>
<td>57.826</td>
<td>11.565</td>
<td>1.201</td>
</tr>
<tr>
<td>B x C</td>
<td>2</td>
<td>6.722</td>
<td>3.361</td>
<td>.349</td>
</tr>
<tr>
<td>A x B x C</td>
<td>10</td>
<td>161.362</td>
<td>16.136</td>
<td>1.675</td>
</tr>
<tr>
<td>Residual</td>
<td>498</td>
<td>4796.715</td>
<td>9.632</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
**p < .01.

Null Hypothesis 4. There is no difference, after responses to "The Teacher" are accounted for, between student responses to "The Teacher (b)," a fairness questionnaire, after viewing a vignette portraying unfair teacher behavior.

The tabular F-value with 5 and 498 degrees of freedom (\( .95F_{5,498} \)) was 2.23. An F-ratio of this magnitude or greater is required for significance at the .05 level. The treatment main effect, as shown in Table 13, shows that a highly significant difference exists among means. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 4.

Null Hypothesis 5. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)," a fairness
questionnaire, by students in a higher grade and by students in a lower grade.

The tabular F-value with 2 and 498 degrees of freedom (\(F_{2,498}^{95}\)) was 4.65. An F-ratio of this magnitude or greater is required for significance at the .05 level. The main effect of grade, as shown in Table 13, shows that a highly significant difference among grade means exists. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 5.

Null Hypothesis 6. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)," a fairness questionnaire, by same aged males and females.

The tabular F-value with 1 and 498 degrees of freedom (\(F_{1,498}^{95}\)) was 6.70. An F-ratio of this magnitude or greater is required for significance at the .05 level. The main effect of sex, as appears in Table 13, was not significant resulting in failure to reject Null Hypothesis 6.

**Fairness--treatment effect**

As observed in the finding related to Null Hypothesis 4, treatment effects were significant at or beyond the .01 level. Fifteen sub null hypotheses were tested to determine which treatment or treatments might be significantly different from other treatments. Table 14 summarizes the comparisons represented by sub Null Hypotheses 4a through 4o.
Table 14. Modified Tukey HSD Procedure—comparison of means, adjusted for the covariate "The Teacher," for significant differences between treatments on "The Teacher (b)"

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Mean</th>
<th>1</th>
<th>6</th>
<th>5</th>
<th>2</th>
<th>4</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17.39</td>
<td>--</td>
<td>.17</td>
<td>.31</td>
<td>.40</td>
<td>.79</td>
<td>1.69**</td>
</tr>
<tr>
<td>6</td>
<td>17.22</td>
<td>--</td>
<td>--</td>
<td>.14</td>
<td>.23</td>
<td>.62</td>
<td>1.52*</td>
</tr>
<tr>
<td>5</td>
<td>17.08</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.09</td>
<td>.48</td>
<td>1.38*</td>
</tr>
<tr>
<td>2</td>
<td>16.99</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.39</td>
<td>--</td>
<td>1.29</td>
</tr>
<tr>
<td>4</td>
<td>16.60</td>
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<td>--</td>
<td>--</td>
<td>.90</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>15.70</td>
<td>--</td>
<td>--</td>
<td>--</td>
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<td>--</td>
</tr>
</tbody>
</table>

Note. HSD .95 = 1.3428.
HSD .99 = 1.5915.

*P < .05.
**P < .01.

Three comparisons of treatment means resulted in differences which were significant.

Null Hypothesis 4b. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly and those responses by other students who have only additionally viewed that same teacher while introducing herself.

Using a Q value equal to 4.05 from the Studentized Range table and a within MSS modified for adjusted means equal to 9.726, the modified computed Tukey HSD value was equal to 1.3428. As can be seen in Table 14, the difference of 1.69
between means for Treatment 1 and Treatment 3 was highly significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 4b.

Null Hypothesis 4k. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while engaging in positive small-group interactions with students and while resolving a conflict fairly.

Compared to the computed 1.3428 modified Tukey HSD value, it can be seen in Table 14 that the difference of 1.38 between means for Treatment 3 and Treatment 5 was significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 4k.

Null Hypothesis 4l. There is no difference between responses to "The Teacher (b)," as a result of viewing a vignette of unfair teacher behavior, by students who have viewed that teacher while introducing herself, while engaging in positive small-group interactions with students and while resolving a conflict fairly, and those responses by other students who have only additionally viewed that same teacher while resolving a conflict fairly.

Compared to the computed 1.3428 modified Tukey HSD value, it can be seen in Table 14 that the difference of 1.52 between means for Treatment 3 and Treatment 6 was significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 4l.
An examination of Table 14 also reveals values below the calculated HSD value of 1.3428 for the .05 level. Twelve comparisons yielded differences which resulted in failure to reject the related sub null hypotheses.

**Fairness--grade effect**

As observed in the finding related to Null Hypothesis 5, grade effects were significant at or beyond the .01 level. Three sub null hypotheses related to Null Hypothesis 5 were tested to determine which grade mean or means might be significantly different from other grade means. Table 15 summarizes the comparisons represented by sub Null Hypotheses 5a through 5c.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Mean</th>
<th>Differences Between Grade Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>18.55</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>18.24</td>
<td>--</td>
</tr>
<tr>
<td>1</td>
<td>13.16</td>
<td>--</td>
</tr>
</tbody>
</table>

**Note.** HSD .95 = .7794.  
HSD .99 = .9713.  
**p < .01.**

Null Hypothesis 5a. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)" by students in grade 1 and by students in grade 3.
Using a Q value equal to 3.33 from the Studentized Range table and a within MSS modified for adjusted means equal to 9.726, the modified computed Tukey HSD value was equal to .7794. As can be seen in Table 15, the difference of 5.08 between means for grade 1 and grade 3 was highly significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 5a.

Null Hypothesis 5b. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)" by students in grade 1 and by students in grade 5.

Compared to the computed .7794 modified Tukey HSD value, it can be seen in Table 15 that the difference of 5.39 between means for grade 1 and grade 5 was highly significant. Therefore, sufficient evidence existed for the rejection of Null Hypothesis 5b.

Null Hypothesis 5c. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)" by students in grade 3 and by students in grade 5.

Compared to the computed .7794 modified Tukey HSD value, it can be seen in Table 15 that the difference of .31 between means for grade 3 and grade 5 was not significant resulting in failure to reject Null Hypothesis 5c.

t-test between fair and unfair vignettes

To test whether or not students could distinguish adequately between fair teacher behavior and unfair teacher
behavior, Treatment 6 was added to the experiment and the following null hypothesis was posed:

Null Hypothesis 7. There is no difference between responses to two administrations of "The Teacher (b)" by the same group of students when administered once after viewing only a vignette portraying fair teacher behavior and administered a second time after viewing a vignette portraying unfair teacher behavior.

The tabular value for a two-tailed test of t at the .05 level with 98 degrees of freedom was 1.990.

As a result of the obtained t value of 19.69, sufficient evidence existed for the rejection of Null Hypothesis 7. Results of the analysis are presented in Table 16.

Table 16. The t-test for the difference between "The Teacher (b)" after Segment P and "The Teacher (b)" after Segment R

<table>
<thead>
<tr>
<th>Condition</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Difference</th>
<th>T Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>After Segment P</td>
<td>8.8384</td>
<td>2.363</td>
<td>8.5455</td>
<td>19.69**</td>
</tr>
<tr>
<td>After Segment R</td>
<td>17.3838</td>
<td>4.073</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p < .01.

This chapter has been limited to a factual written and tabular account of the results of the seven major null hypotheses and the 36 sub null hypotheses. Discussion and implication have been reserved for presentation in the chapter which follows.
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Purpose

The suggestion that the perception of fairness is developmental can be said to be implied in the literature which pertains to moral development. Kohlberg (1970, 1976a, b) and Piaget (1965) are researchers whose works are most illuminating in this regard. Kohlberg's stages of moral development can be particularly viewed as an approximate parallel of the stages through which a perception of fairness also progresses.

On the other hand Blau (1974), Homans (1974) and Spady (1973, 1974) approach the perception of fairness from the point of view that fairness evolves out of social exchanges. In these instances the perception of fairness, as well as the expectation that fairness will characterize future behavior, comes about as a result of having observed ongoing behaviors as manifested in the context of present and past social exchanges.

These two related approaches to the perception of fairness have many significant implications for the teacher. Among them are the question of whether fair responses, at least with very young children, are adequate in creating a perception that fairness has in fact been exercised. Another
question which might be entertained is whether or not the perception that the teacher likes children might be more important than the fact that the teacher has been scrupulously fair.

Therefore, the purpose of this investigation was to study the aforementioned questions by seeking answers specifically to the following questions: (a) Were students' perceptions of teacher empathy affected by the number and kind of exposures to the teacher? and (b) Were students' perceptions of teacher fairness related to students' perceptions of teacher empathy?

In the event that one or both of the preceding questions were supported affirmatively then there were three additional questions thought to be pertinent: (c) Were students' perceptions of teacher empathy or teacher fairness related to the age of the students? (d) Were students' perceptions of teacher empathy or teacher fairness related to the sex of the students? and (e) Were students able to distinguish between fair teacher behavior and unfair teacher behavior?

The intent was to analyze such data as generated in this investigation in such a manner as would facilitate insight into these questions on the part of teachers and those who work with children. Optimistically it was also hoped that the insights gained might also contribute to the effort of making schools and school experiences more satisfying for children.
Methodology

**Videotaped vignettes** Students in this investigation were shown varied segments of a videotape of a teacher which either (a) introduced the teacher to the students, or (b) showed the teacher engaged in positive interactions with a small group of students, or (c) showed the teacher resolving a conflict fairly, or (d) showed the teacher resolving a conflict arbitrarily and unfairly. The same teacher appeared in all four segments.

The intent was to present students with simulations which were believable. It was also intended that the simulations presented would be ones students could identify with easily and respond to enthusiastically.

**Instruments** Two questionnaires were used for data collection in this investigation. One questionnaire, "The Teacher," was a modified subset of items from the **Student Evaluation of Teacher Instrument II** (SET II) developed by Haak, Kleiber and Peck (1972) and was used as a method of measuring perceived teacher empathy for students after either Segment L, N, or P of the videotaped vignettes or after a combination of these segments. The other questionnaire, "The Teacher (b)," was constructed specifically for this investigation and was intended to answer whether or not the teacher's behavior, as presented in Segment R of the videotape, was fair.
Factor analysis of the two questionnaires established that they were measuring different factors. The reliability coefficient for "The Teacher" was .659 and for "The Teacher (b)" it was .854.

The intent was to pose questions that students could understand and respond to easily and without long deliberation. It was also intended that the questionnaire should be long enough to reliably measure the factors involved and yet not become obstrusive to the point of detracting from the intent of the experiment.

Design This experiment consisted of six treatments which varied three vignettes of videotaped teacher behaviors believed to portray varying degrees of empathy followed by an empathy questionnaire, and a fourth vignette portraying unfair teacher behavior followed by a fairness questionnaire. All six treatments were administered to each of the three grades. Sex differences were studied resulting in a 6 x 3 x 2 design.

The six treatments were designed so that varying degrees and varying kinds of exposure to the teacher constituted the primary difference between them. The four selected schools were chosen on the basis of their population similarity which permitted pooling the total population for a sample where random assignment of treatments for grades across schools was possible.
The intent was to ensure that the questions posed in this investigation would indeed be answered. The intent was also to minimize interruptions to the ongoing school program and yet involve a sufficient number of students in the experiment to achieve the stated objectives.

**Sample**  Five hundred and thirty-five students, 237 females and 298 males, participated in this investigation over a period of ten school days. The subjects were primarily white and came from middle- and upper-middle-class homes. Achievement profiles, based on test scores from the Iowa Tests of Basic Skills, were comparable for students in the four schools.

**Collection and treatment of data**  Except for three first-grade classes in one school, the experiment was conducted in a central location in each school. The investigative team consisted of a paid Experiment Administrator, who administered the experiment to all groups in each school, a Video Operator and several assistants. Total classes were administered the experiment at one sitting in most instances.

The *Statistical Package for the Social Sciences* (Nie, et al., 1975) was used for most statistical analyses. A three-way classification analysis of variance was used to analyze data generated from administering the empathy questionnaire, "The Teacher." A three-way classification analysis of variance with empathy as a covariate was used to analyze
data generated from administering the fairness questionnaire, "The Teacher (b)."

The .05 level was chosen as the level of probability necessary to reject a given null hypothesis. ANOVA main effects found to be significant were further analyzed with Tukey's Honest Significant Difference procedure for comparing means. ANOCOVA main effects found to be significant were further analyzed with a modified Tukey HSD procedure for comparing adjusted means. Again, the .05 probability level was used as a criterion for rejecting a null hypothesis. In addition, a t-test was employed to test means of two administrations of the fairness questionnaire in Treatment 6.

Results

This section has been organized around the seven major null hypotheses tested. Further comment pertaining to these hypotheses, as well as the sub null hypotheses, will be found in the conclusions and discussion section of this chapter.

Null Hypothesis 1. There is no difference between student responses to "The Teacher," an empathy questionnaire, even when the number of exposures to vignettes portraying teacher empathy have varied across the sample.

Null Hypothesis 1 was rejected on the basis of a highly significant F-ratio (p < .01). The data were subsequently tested using the Tukey HSD procedure. On this basis, Treatment 4 was found to be significantly (p < .05) different from Treatments 2, 5 and 6.
It was apparent from a study of Table 10 that a highly significant ($p < .01$) interaction between the effects of treatments and grades was operative. From an examination of the treatment means by grade, the overall trend tends toward higher empathy mean scores per treatment as grade declines. In other words, third-grade treatment mean scores are lower than fifth-grade treatment mean scores and first-grade treatment mean scores are lower than third-grade treatment mean scores. (See Table A in Appendix I.)

Null Hypothesis 2. There is no difference between responses to "The Teacher," an empathy questionnaire, by students in a higher grade and by students in a lower grade.

Null Hypothesis 2 was rejected on the basis of a highly significant F-ratio ($p < .01$). The data were subsequently tested using the Tukey HSD procedure. These comparisons yielded findings that all grades in this investigation were highly significant in differences ($p < .01$) from each other.

Null Hypothesis 3. There is no difference between responses to "The Teacher," an empathy questionnaire, by same aged males and females.

Null Hypothesis 3 was rejected on the basis of a highly significant F-ratio ($p < .01$). An examination of scale means shows that females perceived the teacher's empathy for students as being higher than did boys. (See Table C in Appendix J.)

Null Hypothesis 4. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)," a fairness
questionnaire, after viewing a vignette portraying unfair teacher behavior.

Null Hypothesis 4 was rejected on the basis of a highly significant F-ratio ($p < .01$). The data were subsequently tested using a modified Tukey HSD procedure. On this basis Treatment 3 was found to be highly significant ($p < .01$) in difference from Treatment 1 and significantly different ($p < .05$) from Treatments 5 and 6.

A study of Table 13 showed that a significant ($p < .05$) interaction between the effects of treatments and grades existed. From an examination of treatment means by grade, the overall trend appeared to be that first-grade mean scores per treatment were considerably lower (which in this instance translates into saying that they tended to more often perceive the teacher as being fair after viewing unfair teacher behavior) than were either third or fifth-grade means. It was also observed from a study of the treatment by grade means that there was the same directional difference between third and fifth-grade means as between first and third-grade means, but that this difference was only slight. (See Table B in Appendix I.)

Null Hypothesis 5. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)," a fairness questionnaire, by students in a higher grade and by students in a lower grade.

Null Hypothesis 5 was rejected on the basis of a highly significant F-ratio ($p < .01$). The data were subsequently
tested using a modified Tukey HSD procedure. On this basis grade 1 was found to be highly significant \((p < .01)\) in difference from grades 3 and 5. Grades 3 and 5 were not found to be significantly different from each other.

Null Hypothesis 6. There is no difference, after responses to "The Teacher" are accounted for, between responses to "The Teacher (b)," a fairness questionnaire, by same aged males and females.

Null Hypothesis 6 was not rejected. In other words, the perception of fairness, as framed in this investigation, was not influenced by the fact that a student was male or female. (See Table D in Appendix J.)

Null Hypothesis 7. There is no difference between responses to two administrations of "The Teacher (b)" by the same group of students when administered once after viewing only a vignette portraying fair teacher behavior and administered a second time after viewing a vignette portraying unfair teacher behavior.

Null Hypothesis 7 was rejected on the basis of a highly significant \((p < .01)\) t-value. From an examination of the means of responses coming after the fair vignette and after the unfair vignette, students tended to correctly label fair and unfair teacher behaviors.

Conclusions and Discussion

1. Students' perceptions and assessments of teacher empathy for students is not heavily based on the observation that the teacher is verbally positive.

This finding was not anticipated. At the outset it was hypothesized that Treatment 3, which included the teacher
introduction, the small-group interaction, and the fair
resolution of a conflict, would be that combination of
behaviors which students would regard as portraying the
teacher as being most empathic toward students. Instead,
Treatment 4, which did not have the small-group interaction
vignette, was found to be the treatment significantly
($p < .05$) different from three of the other treatments—Treat­
ments 2, 5 and 6. Two of those treatments, Treatments 2 and
5, contained the small group interaction segment of the video­
tape. The only other treatment to contain that segment was
Treatment 3 and it was approaching significance in difference.

It seems fair to conclude that under usual circumstances
students place more stock in what they observe the teacher
doing than they do in the verbal behaviors they observe the
teacher engaged in. This finding supports the social
exchange theorists' premise as developed by Blau (1974),
Homans (1974) and Spady (1973, 1974) that future expectations
are based on past observed behaviors. Blau further pointed
out that fairness elicited social approval while unfairness
that was experienced as exploitative and oppressive evoked
social disapproval.

The finding also supports Gafner's (1976) findings that
(a) teacher warmth was perceived primarily through nonverbal
channels; (b) students could identify specific teacher
behaviors; (c) certain behaviors contributed to students'

perceptions of warmth; and (d) students were aware of affective states conveyed by teachers.

Another conclusion which suggests itself is that the perception of empathy is a function of the perception of fairness. In other words, the perception that the teacher is fair contributes to the perception that the teacher has empathy for students.

2. The younger the student, the more likely the teacher will be perceived as having empathy for students.

The data support this conclusion rather decisively. The grade effect was highly significant for all grades ($p < .01$). An examination of the means for grades reveal that as grades get higher, scores get lower. Consequently, first graders perceived the teacher as having more empathy for students than did third graders. Likewise, third graders perceived the teacher as having more empathy for students than did fifth graders. This trend was hypothesized at the outset. The implications are obvious. They include the premise that teachers of very young children are working with a population that trust them to be "good" people. Perhaps this is a relationship that is akin to, and evolves out of, children's respect for parents which Piaget (Pulaski, 1971) identified when he pointed out that children had great respect for rules which were established by father who was older and wiser than either God or his grandfather.
3. **Female assessments of teacher empathy for students** will tend to be higher than will be **male assessments of teacher empathy for students.**

This conclusion was supported from the analysis of data collected with "The Teacher," an empathy questionnaire. An examination of the means for "The Teacher" (see Table C in Appendix J) shows that perceptions of teacher empathy for the student was higher for females than it was for males. Pollack's (1968) view that boys in elementary school were not treated as fairly as girls could be said to be supported by this result particularly if one accepts the premise that the perception of teacher empathy is a function of the perception of teacher fairness.

4. **Students' assessments of teacher fairness are based upon all the empathic teacher behaviors that students have had the opportunity to observe and experience.**

This conclusion is supported from a careful examination of data as represented in Table 14. It is particularly interesting when the aforementioned results pertaining to the perceptions of the teacher's empathy for students are considered. The results of that analysis revealed that students' perceptions of teacher empathy for students minimized the importance of positive small-group interactions with the teacher. Instead, the observed teacher behaviors while resolving a conflict fairly were shown to be the important factor.
However, after the teacher was portrayed resolving a conflict unfairly, the data suggest that students based their assessments on all the data available to them. This conclusion seems reasonable when it is noted that Treatment 3 emerged as the treatment which was most different. There is, however, some lack of clarity in the data. An examination of Table 1 and Table 14 together shows that of the treatments found to be significantly different from Treatment 3, namely Treatments 1, 5 and 6, two of them do not have the small-group interaction vignette contained within them. Contrary to the earlier stated finding relating to empathy, treatments without the small-group interaction vignette were not as highly valued. On the other hand, the lack of clarity alluded to earlier, occurs when it is noted that Treatment 5, which was also found to be significantly different from Treatment 3, did have the interaction vignette. Further confounding is introduced when it is noted that Treatment 4 was not found to be significantly different from Treatment 3 and yet it contained no small-group interaction.

Nevertheless, on the whole, the results support and add to the already established research of: (a) Gates (1968), that positive attitudes on the part of the teacher were important, (b) Lawson (1970), that teacher praise and encouragement were valued by high school students, and (c) Dixon and Morse (1961), that teachers who were empathic were better teachers.
5. For very young children, the perception that they hold of the teacher's empathy for students affects the perception that they hold of the teacher's fairness.

The data lend support to this conclusion. However, it lends only qualified support to the original hypothesis that "Students with greater maturity will tend to more often perceive teacher fairness apart from their perceptions of teacher empathy than will students with lesser maturity."

An examination of Table 15 shows that the hypothesized direction was affirmed between grade 1 and grade 3, and between grade 1 and grade 5. The relationship found in this study between grade 3 and grade 5 did not affirm the stated hypothesis.

This fact suggests the possibility that the population chosen for this study contained an age range that was too broad. An examination of Table 15 confirms this assessment for, while it shows age as a factor, it does not convey adequate information to establish with certainty the developmental nature of this effect.

6. Perceptions of teacher fairness, regardless of the difference in levels of perceptions of teacher empathy for students, are the same for males and females.

This conclusion was based upon the failure to reject the null hypothesis fashioned to test the original hypothesis that "Females at a given age will tend to more often perceive teacher fairness based upon their perceptions of teacher
empathy than will males of the same age." The follow-through effect of sex difference in the perceptions of empathy on the perceptions of fairness is not prominent in the literature. The results of the present investigation, however, suggest that, while there was a highly significant sex effect in the perceptions of teacher empathy, it did not translate into a significant sex effect in the perceptions of teacher fairness.

7. **Students can distinguish between fair teacher behaviors and unfair teacher behaviors.**

When the data collected through the administration of Treatment 6 were analyzed, the conclusion that students can distinguish between fair and unfair teacher behaviors was tenable. With a "True" response to "The Teacher (b)" being scored as 1, a "Don't Know" response being scored as 2, and a "False" response being scored as a 3, the possible range of scores was from 7 to 21. An examination of Table 16 shows that for the 99 students to whom Treatment 6 was administered, the mean score was 8.84 after viewing a fair conflict resolution by the teacher and was 17.38 after viewing an unfair conflict resolution by the teacher. The very low mean, after viewing the fair conflict resolution, established the fact that most students could identify fair teacher behavior. The same can be said about the responses to the unfair conflict resolution vignette although not as conclusively as with the former. This observation, however, was not
considered to be a serious contradiction when consideration was given to the fact that first graders were more likely to be influenced by the earlier exposure to the fair conflict resolution.

Recommendations for Further Research

The findings in this investigation suggested some possible avenues of consideration for further research. The most obvious one was the replication, full or partial, of this investigation for verification of the findings. The use of a relatively young female teacher in the videotape suggests that experimentation with various other models of different ages and sex may be desirable and appropriate.

As noted in the discussion, the nature of the developmental aspects of the perception of fairness and its relationship to the perception of empathy did not become fully discernible in this investigation. Therefore, the need for further study with children in first through third grades appears appropriate as well as being potentially highly illuminating. Another interesting discovery in this investigation which seems to merit further study is the finding that higher female perceptions of teacher empathy for students did not translate into higher female perceptions of teacher fairness.
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ACKNOWLEDGMENTS

This investigator is especially indebted to two very special persons whose sacrifice, support and understanding contributed greatly to this undertaking—my wife, Catherine, and my daughter, Ly Ann.

The investigator is especially indebted to his friend and major professor, Dr. Dominick Pellegreno, for his interest, support, and guidance throughout the study.

Special and sincere appreciation is expressed to Dr. Gordon Hopper whose friendship, support and encouragement never failed.

Sincere thanks are extended Dr. Richard Warren who unceasingly offered invaluable assistance throughout the study.

Special appreciation is expressed to Dr. John Bath and Dr. Ray Bryan for their assistance in the planning and conducting of the study.

Sincere gratitude is expressed to my good friend and colleague, Dr. Bruce Rogers, who never tired of my asking for his opinions.

Sincere gratitude is also expressed to my good friend and colleague, Dr. Gordon Rhum, who read rough drafts of parts of this manuscript and offered many valuable suggestions.
Sincere appreciation is expressed to Dr. Robert Peck for the permission to use and modify SET II for this investigation.

To Norma Frost, my secretary and friend; to Robert Conrad, my video technician; to Jane Slykhuis, my videotaped teacher; to Becky Peters, my Experiment Administrator; to Doris Wilken, my typist; and to all my many friends at the Price Laboratory School and University of Northern Iowa who participated in this study in one way or another--many thanks.
APPENDIX A. "SCHOOLTIME SCRIPT OF THE VIDEOTAPED SEGMENTS
Hello! I'm Miss _________. I teach sixth grade. I've also taught first and third grades. This is my fifth year as a teacher and all my teaching has all been in one school. I believe that a teacher's job is important.

Students construct collages illustrating facets of their own personalities. Volunteers then share their collages with the group. The teacher will attempt to foster an atmosphere of openness, trust, and respect through which students will feel free to share facets of their personalities. Empathic reflections, unconditional acceptance, and sharing of teacher's positive feelings will be conspicuous.

Reference:
Transition 2
Activity 12

A student approaches the teacher. "Miss ________, (a 3rd party) knocked me down for no reason." The teacher responds that "I will look into the matter. " The
teacher then proceeds to where a group of children are engaged in an activity (playing a game, or possibly talking) and says to (3rd party), 
"I would like a word with you," or "I would like to see you for a minute." (comparable wording, depending upon what feels right to the teacher is permissible). (3rd party) is then confronted with the accusation by (1st party). (Suggested) "(1st party) has complained that you knocked him/her down for no reason. What do you have to say about that?" (3rd party) explains that "I didn't intend to knock (1st party) down. It was an accident. I didn't see (1st party) and ran into him/her accidentally; and, I said I was sorry."

Teacher asks "what do you think I should do about it?" (3rd party) responds, "Nothing. I've already said I was sorry. Teacher explains, "Since I didn't see what happened, I am taking your word this time that it was an accident. See that it doesn't happen again and I think, also, that you should let (1st party) know that it was an accident. (3rd party) turns and walks away.

---

Schooltime
Segment R
Teacher
Students 2-6
Conflict Resolution

Camera pans across students; stops and zooms in on two students, one of which is pestering the other. (Making faces, bothering items on the desk of the other students, etc.) The second student tells the offending student to stop. The teacher, not aware of the previous events, cautions (2nd student) and suggests that he/she get busy with his/her assignment. The camera shows a resumption of pestering activity by the offending student (snickering, faces, bothering the student's work on the desk, etc.). Finally, in exasperation, (2nd student) pushes (1st student).

Teacher observes the pushing behavior and irritatedly says to (2nd student), "(2nd student) go to the principal's office."

APPENDIX B. "THE TEACHER"
THE TEACHER*

Do you really notice how teachers act?

Please mark the following sentences about the teacher you have just seen on television. Tell how you feel each sentence describes this teacher by putting an X in one of the three places at the beginning of the sentence. If you feel the sentence is a good description of the teacher, place the X under T for true. If you feel the sentence is not a good description of the teacher place the X under F for false. If you feel you do not know the teacher well enough to make a judgment (be sure pupils know meaning of judgment) place the X under DN for don't know. PLEASE remember we are not talking about your teacher. We are talking only about the teacher we have just seen on television.

<table>
<thead>
<tr>
<th>TRUE:</th>
<th>FALSE:</th>
<th>DON'T KNOW</th>
</tr>
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<tbody>
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<td>F</td>
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</tr>
<tr>
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<td>( )</td>
</tr>
</tbody>
</table>

* A modified subset of items taken from the SET II by Ruth Haak, Douglas Kleiber and Robert Peck, The University of Texas at Austin.
APPENDIX C. CARDS FOR "THE TEACHER"
THIS TEACHER
WOULD HELP US A LOT.

THIS TEACHER
WOULD LIKE US KIDS.

WE CAN TELL
HOW THIS TEACHER WANTS
THINGS DONE.

THIS TEACHER
WOULD MAKE SCHOOL FUN.

THIS TEACHER LIKES
TO TEACH.

THIS TEACHER THINKS
THAT KIDS ARE GOOD.
APPENDIX D. QUESTIONNAIRE ENVELOPE
ENVELOPE FOR CARD FORM OF "THE TEACHER & "THE TEACHER (b)"

[Diagram of a trash can, a question mark, and a mail slot with "U.S. MAIL" and a star]
APPENDIX E. EMPATHY AND TEACHER FAIRNESS EXPERIMENT
EMPATHY AND TEACHER FAIRNESS EXPERIMENT

INTRODUCTION TO STUDENTS

(SAY) **Hello, I'm _____________. Today we are going to show you a videotape of a teacher doing _________ (two, or three, or four, whichever is the case) different things. After viewing part(s) of the videotape we will ask some questions about the teacher that is on this tape. We believe you will find this exercise to be fun, but if you feel that you would not like to take part that will be OK too.**

(SAY) _________ will operate the videotape player for us, and _________ will help you with the questions.

DIRECTIONS FOR ADMINISTERING "THE TEACHER" QUESTIONNAIRE

First and Third Grades

Distribute questionnaire packets.

(SAY) **Each of you have been given a yellow packet with three pockets. On one (1) pocket is a drawing of a wastebasket. On another pocket is a drawing of a mailbox. On the middle pocket is a question mark. When the questions or statements are read to you, you will be asked to place a certain card in one of the three (3) pockets. If you believe the question, or statement, is true for the teacher you will have seen on the videotape, you are to put the card in the mailbox pocket. If you believe the question, or statement, is not true for this teacher you are to put the card in the wastebasket pocket. If you find you cannot decide whether the question, or statement, is true or not true you should put the card in the question mark pocket. DO NOT REMOVE THE RUBBER BAND FROM THE CARDS UNTIL YOU ARE TOLD TO DO SO. REMEMBER, YOU CAN HELP A LOT IF YOU PAY CLOSE ATTENTION.**

Show the segment(s) corresponding to the scheduled treatment. After showing the appropriate segment(s), stop player.
After the last tan colored card,

(SAY) Now we are going to show you one other part of the videotape.

Show Segment R. After showing Segment R,

DIRECTIONS FOR ADMINISTERING "THE TEACHER (b)" QUESTIONNAIRE
First and Third Grades

(SAY) Now we will do the blue cards. (The Teacher (b) Questionnaire). You may remove the rubber band, but be careful to not get the cards out of the order that you found them in.

Remind pupils that we will use the pockets the same way as before. Repeat instructions briefly.

(SAY) This time you are asked to try real hard to put your cards in either the mailbox pocket or the wastebasket pocket.

(SAY) Look at the card with the tree on it, it says "This teacher is fair." Think about the teacher you have just seen on the videotape and put your card in one of the pockets.

Make certain pupils are proceeding properly. Then,

Continue with:

Look at the card with the valentine on it, it says...
Look at the card with the pencil on it, it says...
Look at the card with the drum on it, it says...
Look at the card with the man's hat on it, it says...
Look at the card with the flag on it, it says...
Look at the card with the beach ball on it, it says...

NOTE:

IN TREATMENT SIX (6), GIVE PLAIN CARDS AND PINK CARDS AFTER SHOWING SEGMENT P AND BLUE CARDS AFTER SHOWING SEGMENT R.

For fifth grade use questionnaires and directions printed thereon.
APPENDIX F. "THE TEACHER (b)"
THE TEACHER (b)

Please mark the following sentences about the teacher you have just seen on television. Tell how you feel each sentence describes this teacher by placing an X in one of the three spaces at the beginning of the sentence. If you feel the sentence is a good description of the teacher, place the X under T for true. If you feel the sentence is not a good description of the teacher, place the X under F for false. If you feel you can't tell whether or not the sentence is a good description of the teacher, place the X under DN for don't know. Mark items either T for true or F for false. Mark DN only when you can't mark T or F.

<table>
<thead>
<tr>
<th>TRUE:</th>
<th>FALSE:</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>F</td>
<td>DN</td>
</tr>
<tr>
<td>( )</td>
<td>( )</td>
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</tr>
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<td>( )</td>
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<td>( )</td>
</tr>
<tr>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>

This teacher is fair.

This teacher cares about children's feelings.

This teacher wants children to know she is fair.

This teacher is right in her actions.

This teacher solves problems fairly.

The kids like this teacher.

This teacher likes kids.
APPENDIX G. CARDS FOR "THE TEACHER (b)"
Sample: Cards for "The Teacher (b)"

This teacher is fair.

This teacher cares about children's feelings.

This teacher is right in her actions.

This teacher solves problems fairly.

The kids like this teacher.

This teacher likes kids.
APPENDIX H. SAMPLE SCHOOL SCHEDULE
The Effects of Perceived Empathy on Student Perception of Teacher Fairness.

School  Southdale  627 Orchard Drive - Mr. Donald Ackman, Prin

Date  April 10, 1980

<table>
<thead>
<tr>
<th>Time</th>
<th>Treatments</th>
<th>Grade</th>
<th>N</th>
<th>M</th>
<th>F</th>
<th>PTT*</th>
<th>Total</th>
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<td>3</td>
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<td></td>
</tr>
<tr>
<td>9:20</td>
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<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:45</td>
<td>3**</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
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<td></td>
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<tr>
<td>11:20</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1:15</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:45</td>
<td>3**</td>
<td>1</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*PTT = Previous Treatment Total
** On site assignment

Personnel:

Experiment Administrator  Mrs. Becky Peters

Video  Roger Piwowarski

Assistants  Beth Stickley (AM)

Claudia Schroeder (PM)

Norma Frost

Lee Brown
APPENDIX I. TREATMENT BY GRADE, INTERACTION MEANS FOR "THE TEACHER"

TREATMENT BY GRADE, INTERACTION MEANS FOR "THE TEACHER (b)"
Table A. Unadjusted and adjusted mean scores for responses to "The Teacher"

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unadjusted Means</th>
<th>Adjusted Means</th>
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<tbody>
<tr>
<td><strong>Treatment</strong></td>
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<td>23.47</td>
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<tr>
<td>2</td>
<td>22.74</td>
<td>22.91</td>
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<td>3</td>
<td>23.18</td>
<td>23.20</td>
</tr>
<tr>
<td>4</td>
<td>24.21</td>
<td>24.18</td>
</tr>
<tr>
<td>5</td>
<td>23.06</td>
<td>23.00</td>
</tr>
<tr>
<td>6</td>
<td>22.88</td>
<td>22.80</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
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<td></td>
</tr>
<tr>
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<td>22.84</td>
<td>22.85</td>
</tr>
<tr>
<td>Female</td>
<td>23.75</td>
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<tr>
<td><strong>Grade</strong></td>
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<td>5</td>
<td>22.21</td>
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</table>

*Note.* Means adjusted for effects of the independent variables.
Table B. Unadjusted and adjusted mean scores for responses to "The Teacher (b)"

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unadjusted Means</th>
<th>Adjusted Means</th>
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</thead>
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<tr>
<td>Treatment</td>
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<td>17.29</td>
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<td>2</td>
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<tr>
<td>Sex</td>
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</tr>
<tr>
<td>Female</td>
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<td>16.96</td>
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<td>Grade</td>
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<td>3</td>
<td>18.33</td>
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<td>5</td>
<td>18.58</td>
<td>18.55</td>
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</table>

*Note.* Means adjusted for effects of the independent variables and the covariate, "The Teacher."
APPENDIX J. MEAN SCORES FOR "THE TEACHER"

MEAN SCORES FOR "THE TEACHER (b)"
Table C. Unadjusted mean scores for "The Teacher" treatment by grade interactions

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Grade 1</th>
<th>Grade 3</th>
<th>Grade 5</th>
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<tbody>
<tr>
<td>1</td>
<td>24.71</td>
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<td>2</td>
<td>24.05</td>
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<td>22.88</td>
<td>23.37</td>
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<td>6</td>
<td>25.70</td>
<td>22.00</td>
<td>21.48</td>
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</table>

Note. True = 3.  
Don't Know = 2.  
False = 1.
Table D. Unadjusted mean scores for "The Teacher (b)" treatment by grade interactions

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Grade</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>14.71</td>
<td>19.08</td>
<td>18.00</td>
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<td>2</td>
<td>13.55</td>
<td>17.96</td>
<td>19.02</td>
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<tr>
<td>3</td>
<td>10.88</td>
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<td></td>
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<tr>
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<td>13.63</td>
<td>18.89</td>
<td>18.60</td>
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</tbody>
</table>

Note. True = 1. Don't know = 2. False = 3.
APPENDIX K. FREQUENCIES AND PERCENTAGES OF RESPONSES AND SCORES TO "THE TEACHER"

FREQUENCIES AND PERCENTAGES OF RESPONSES AND SCORES TO "THE TEACHER (b)"
Table E. Frequencies and percentages of responses to "The Teacher"

<table>
<thead>
<tr>
<th>Item</th>
<th>True #</th>
<th>%</th>
<th>Don't Know #</th>
<th>%</th>
<th>False #</th>
<th>%</th>
<th>Combined True &amp; False #</th>
<th>%</th>
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</thead>
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<td>69</td>
<td>92</td>
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<td>73</td>
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<td>443</td>
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</table>

Note. Because of rounding errors, percentages may add up to slightly less or slightly more than 100 percent.

n = 535.
Table F. Frequencies of scores from the nine items on "The Teacher"

<table>
<thead>
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<th>Score</th>
<th>Frequency</th>
<th>Cumulative Percentage</th>
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</thead>
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<td>2</td>
<td>0</td>
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<td>1</td>
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<tr>
<td>14</td>
<td>2</td>
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<td>15</td>
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<td>1</td>
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<td>16</td>
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<td>85</td>
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<tr>
<td>27</td>
<td>80</td>
<td>100</td>
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</tbody>
</table>

Note. True = 3. Don't Know = 2. False = 1. n = 535.
Table G. Frequencies and percentages of responses to "The Teacher (b)" after Segment R—all treatments

<table>
<thead>
<tr>
<th>Item</th>
<th>True</th>
<th>Don't Know</th>
<th>False</th>
<th>Combined True &amp; False</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
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<td>4</td>
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</table>

Note. Because of rounding errors, percentages may add up to slightly less or slightly more than 100 percent.

n = 535.
<table>
<thead>
<tr>
<th>Score</th>
<th>Frequency</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
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<td>8.6</td>
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<td>47</td>
<td>77.6</td>
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<tr>
<td>21</td>
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</tbody>
</table>

Note. True = 1. Don't Know = 2. False = 3. n = 535.
Table I. Frequencies and percentages of responses to "The Teacher (b)" before Segment R—Treatment 6

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<th>#</th>
<th>%</th>
<th>Don't Know</th>
<th>#</th>
<th>%</th>
<th>False</th>
<th>#</th>
<th>%</th>
<th>Combined True &amp; False</th>
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<th>%</th>
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Note. n = 535.