

ELEMENTARY SCHOOL AGE CHILDREN'S PERCEPTIONS
OF TEACHERS' NONVERBAL BEHAVIOR

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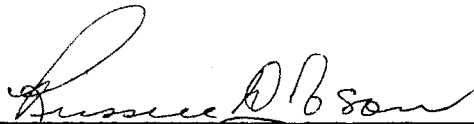
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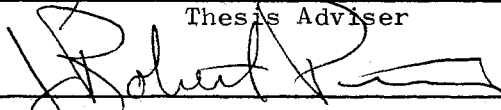
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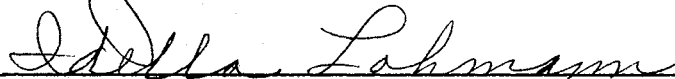
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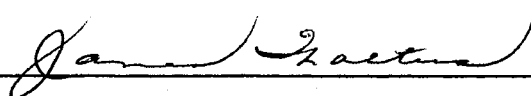
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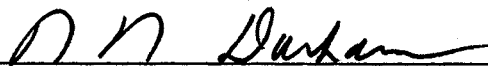


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CHAPTER I

THE RESEARCH PROBLEM

Introduction

The fullest possible flowering of human potentiality is the business of education. It is our reason for being.*

One of the most important variables influencing student learning is the quality of teacher-pupil interaction. Rosenthal (1968, 1973) reports that teachers communicate to preselected students in some way, perhaps nonverbally, that helps the child to learn. Although these studies did not isolate and examine specific relationship variables, it is clear that the quality of relationship between the child and teacher affects the child's learning. The authors of the 1962 ASCD yearbook, Perceiving, Behaving, Becoming, state:

Teachers who believe children can will try to teach them. Teachers who believe children are unable, give up trying or spend their days on a treadmill, hopelessly making motions they never expect will matter (p. 1).

The teacher-student interaction affects the student's self-perception. Children learn who they are and what they are from the ways in which they have been treated and taught by those who surround them in the process of their growing up (Combs, 1962; Snygg and Combs, 1949;

*Association of Supervision and Curriculum Development, Perceiving, Behaving, Becoming (Washington, D. C., 1962), p. 2.

Coleman, 1960). Thus, children's perceptions of others' actions influence their perceptions of themselves. Positive self-perception influences achievement (Jersild, 1952; Coopersmith, 1967; Davidson and Lang, 1960). Thus, the relationship between pupil and teacher critically influences learning.

Perceptions may vary from individual to individual. Allport's (1967) model of perception includes a filter that intercepts everything received; after passing through a perceptual filter, communication may be changed from original intent. Of the many messages communicated, one cannot know which are received by the other or whether the perceptual filter of the other distorts, blocks, blurs, and/or accepts messages conveyed. If this perceptual filter is influenced by experience or acculturation, then people of different cultures might perceive the same phenomenon differently.

Researchers are just beginning to investigate seriously the teacher-student communication process. Galloway (1970) states that educators are multi-sensory organisms who only occasionally talk. His research indicates that the teacher's nonverbal behavior seems to be integral in the formulation of student attitudes toward school.

A review of the literature indicates that nonverbal behavior varies between cultures. Birdwhistell (1970) observed significant differences in the frequency of smiling from one section of the United States to another. Birdwhistell suggests that a given sentence in a given context may result in different meanings to people of different cultures because the cultural group will use a nonverbal dialect. The nonverbal dialect may have much in common with other nonverbal dialects (much as verbal dialects do), but it will have some unique characteristics that

will subtly distinguish it as the system of one group and not the other. Exactly what these differences are remains a vast area of scientific study that, until now, has been primarily the domain of the novelist or film director seeking an illusion of reality (Longstreet, 1972).

Rationale for the Study

Grown-ups never understand anything by themselves,
. . . children [must] be always and forever explaining
things to them.*

To date the investigations concerning differences in nonverbal behavior and, with very few exceptions, the research concerning the nonverbal communication in the classroom has involved observed data. Student perceptions were then inferred by the experimenter on the basis of the observed behavior. The concept of student perceptions of nonverbal behavior as reported by students is relatively unresearched (Weiner, et al. 1972). The importance of understanding perceptions of communication is pointed out by Deese (1969) in the statement that understanding precedes interpretation; understanding what is being conveyed can lead to understanding why it is conveyed. Combs, Kelley, Maslow, and Rogers, in Perceiving, Behaving, Becoming (1962) emphasize this need for understanding between child and teacher:

The kind of sensitivity required for the facilitation and encouragement of adequacy in students is not solely a question of knowing subject matter or even a question of knowing 'about' students. Rather, what is required is a sensitivity to how things seem to the young people with whom the teacher is working and an ability to behave in ways that deeply and importantly affect those ways of perceiving. It is a matter of understanding students instead of understanding about students (p. 114).

* Antoine de Saint Exupery, The Little Prince (New York, 1943), p. 4.

Citing research into cultural differences in nonverbal communication, Longstreet (1972) states:

Investigations into nonverbal forms of communication hold great promise for increasing interpersonal understanding. The public school, dedicated to a pluralistic society . . . and involved in interpersonal relations, stands to benefit immeasurably from such proposed undertakings (p. 175).

These statements by Combs, Kelley, Maslow, Rogers, and Longstreet set obvious research patterns for education in nonverbal communication.

It is clear from the literature that the child-teacher interaction is one of the most important variables influencing student learning. If, as the literature indicates, nonverbal behavior is a major source of communication in the critical child-teacher interaction; and if there are cultural differences in nonverbal behavior; and if there are cultural differences in perception; then it would seem that there might be differences in children's perceptions of teachers' nonverbal behavior. The research study at hand was designed to assess children's perceptions of the nonverbal behaviors of teachers, in order to gain insight into the child-teacher interaction.

Purpose of the Study

The purpose of the study was threefold:

- (1) To explore the area of children's perceptions of nonverbal behavior of teachers as reported by the children themselves;
- (2) To explore the areas of subcultural differences, age differences, and sex differences in the perceptions of nonverbal behavior;

- (3) To design and test the Perceptions of Nonverbal Behavior Index (PNE), an instrument developed by the investigator to measure children's perceptions of selected nonverbal behavior of teachers.

Statement of the Problem

The central problem of the study was to determine if differences exist in students' perceptions of nonverbal behaviors of teachers.

The questions asked in the study were:

- (1) Are there differences between boys and girls in their perceptions of nonverbal behavior of teachers?
- (2) Are there differences among Indian children, Black children, and Caucasian children in their perceptions of nonverbal behavior of teachers?
- (3) Are there differences among six, eight, and ten year old children in their perceptions of nonverbal behavior of teachers?

Basic Hypotheses

The specific null hypotheses examined were the following:

Null Hypothesis I

There is no significant difference between elementary school age boys and girls in their perceptions of the nonverbal behavior of teachers.

Null Hypothesis II

There is no significant difference among Caucasian elementary school age children, Black elementary school age children, and Indian elementary school age children in their perceptions of the nonverbal behavior of teachers.

Null Hypothesis III

There is no significant difference among six year old children, eight year old children, and ten year old children in their perceptions of the nonverbal behavior of teachers.

Operational Definition of Terms

Nonverbal behavior is considered to be the physical movement that a person exhibits continuously, either consciously or unconsciously.

Nonverbal behavior of teachers are represented in the fifteen photographs of the PNB. These photographs are exemplary of teacher movements considered to be typical of elementary teachers by a panel of experts in education.

Nonverbal communication is considered to be the message(s) or meaning consciously or unconsciously sent by or received from nonverbal behavior.

Nonverbal dialect is considered to be the subtle difference in meaning from one subculture to another as communicated nonverbally. The general meaning of the nonverbal message may be the same for different subcultures but subtle meanings common only to one subculture may be attached to particular nonverbal behaviors making up a nonverbal dialect.

Culture is the set of attitudes, values, traditions, beliefs, behaviors unique and common to a group of people. Culture is delineated in the study by the geographical location of Oklahoma.

Subculture is the finer distinction of attitudes, values, traditions, beliefs, and behaviors unique and common to a smaller group of people within a single culture. Within a culture, there are usually many subcultures with distinctively differing sets of attitudes, values, traditions, beliefs, and behaviors. Subculture was delineated in the study by the three racial groups of Caucasian, Black, and Indian.

Perception is defined as the concept of an object, idea, or person that a particular individual holds.

Perception of nonverbal behavior of teachers is measured by the student making value preferences for the fifteen photographs of the PNB according to three value categories.

Value preferences are indicated when a student classifies a PNB photograph into one of three categories, positive, neutral, or negative. Value preferences on the PNB indicate perceptions of selected nonverbal behaviors of teachers.

Perceptual filter is a screen within each person through which perceptions enter into his experience set. This filter or screen may be shaped by experience or culture and may be learned or unlearned consciously or unconsciously.

Typical teacher model, typical student, and typical teacher behaviors are those which are commonly accepted as being representative. The panel of experts selected these topics.

Major Assumptions

It is only with the heart that man can see rightly,
what is essential is invisible to the eye.*

For the purposes of the research study, the following assumptions were applied:

- (1) Perceptions are based on values. These value preferences are indicated by choices.
- (2) Children's perceptions of selected nonverbal behaviors of teachers are measurable by the Perceptions of Nonverbal Behavior Index (PNB).
- (3) Persons of different cultural backgrounds may behave differently nonverbally.
- (4) Persons of different cultural backgrounds may perceive experiences differently.
- (5) Nonverbal behavior is a major source of communication in the child-teacher relationship.
- (6) The prevailing value system of American public schools is based upon middle class, white values.
- (7) The longer time that children of cultures other than white, middle class spend in American schools, the more acculturated to white, middle class values they become.
- (8) Children are willing and able to report their own perceptions.

*Antoine de Saint Exupery, The Little Prince (New York, 1943), p. 87.

Limitations

The following limitations apply to the study:

- (1) The sample was taken in a relatively small geographical area of the state including the central Oklahoma towns of Pawnee, Sapulpa, and Beggs.
- (2) The results of the study can be generalized only to the elementary school age children participating in the study.
- (3) The analysis of children's perceptions of nonverbal behavior of teachers was limited to the nonverbal behaviors depicted by the PNB.
- (4) Children of different subcultures, sexes, ages, and socioeconomic levels and with different features were expected to identify with the white, middle-class, dark-haired boy shown in the PNB photographs.
- (5) Children having different teachers and having experienced different numbers of teachers were expected to generalize with the middle class, white, dark-haired teacher shown in the PNB photographs.

Methodology and Data Analysis

The following procedures were employed for collection and analysis of the data:

- (1) A sample was sought which consisted of six year old, eight year old, and ten year old children who were Caucasian, Black, or Indian in schools in the central Oklahoma towns of Pawnee, Sapulpa, and Beggs.

- (2) Permission was obtained from the administrators of each school system to do the study.
- (3) The investigator administered the instrument to children in their own classroom groups.
- (4) The Perceptions of Nonverbal Behavior Index (PNB), developed by the investigator, was administered to assess the children's perceptions of selected nonverbal behaviors of teachers.
- (5) The statistical test used to determine the significance of the differences was the chi square.

Format for Succeeding Chapters

The report of the study consists of five chapters. The present introductory chapter described the theoretical foundations underlying and leading to the statement of the problem and hypotheses to be tested. Chapter II represents a review of selected literature and research. Chapter III is a presentation of the research methodology, procedures, and instrument used in the study. Chapter IV is a presentation of the statistical treatment and analysis of the data, while Chapter V includes a summarization of the study, conclusions drawn from the findings, suggestions for areas of further research, and theoretical considerations.

CHAPTER II

RELATED RESEARCH

Relevant literature related to the research study can be grouped into three categories: perception, nonverbal communication in the classroom, and subcultural differences in nonverbal behavior.

Perception

Behavior, perhaps nonverbal behavior, is the product of the perceptual field of the behavior at the moment of action. In other words, a person's behavior depends on his perceptions at any moment (Kelley, 1962). Perception is selective in that persons do not see everything in their environment. Perception of other's views of a person affects his self-concept, which in turn, influences achievement. Schneider (1968) states that each of us has a perceptual screen through which we perceive the behavior of others. We hear what we want to hear. People develop feelings from experiences; one learns that he is liked, wanted, acceptable, and successful from having been liked, wanted, accepted, and successful (Combs and Snygg, 1959). Childress and Dobson (1973) found that students' perceptions of school environment varied with teachers' views of human nature. Maslow (1954) found that self-actualizing people were not only conatively right, they were cognitively right as well. Rogers (1951) suggests that the self-concept is the major factor in influencing behavior. Research by Martire (1956),

Stevens (1956), Lynch (1968), and Williams and Cole (1968), as well as many others, indicates that the high achiever has a high self-concept.

Conversely, low self-concept is closely tied to low perceptions of others' feelings toward self and low achievement (Barber, 1961; Black, 1963; Deutsch, 1963; and Frink, 1962).

Nonverbal Communication in the Classroom

What you are speaks so loudly that I cannot hear
what you say.*

Research in nonverbal communication is vast, though relatively unorganized, and is found in such diverse fields as anthropology, sociology, psychology, psychiatry, business and medicine as well as education. Therefore, the studies in nonverbal communication included in this section were selected as those pertinent to the classroom setting.

As a result of the express emphasis in our culture on verbal fluency, teachers have been attentive to improving the verbal portion of the communicative process. However, other aspects of teacher communication are drawing more attention. Brooks (1971) estimates that in a normal conversation, the message communicated is 55 percent facial, 38 percent vocal, and only 7 percent verbal.

Families and schools both communicate information and attitudes to the child nonverbally (Longstreet, 1972; Dennis and Powell, 1972; Schuham and Freshley, 1971). Sommers (1969) found that authority is effectively communicated to students by teachers without a word being

*Robert E. Spiller and Alfred R. Ferguson, The Collected Works of Ralph Waldo Emerson (Massachusetts, 1971), p. 247.

uttered by the amount of personal space allowed students as opposed to teachers' personal space. A teacher's philosophy of human nature is reflected clearly by the teacher's nonverbal behavior, and the teacher's nonverbal behavior is perceived and responded to by the students in the classroom (Dobson, Hopkins and Elsom, 1973).

Recently, Birdwhistell (1970) has attempted to codify the language of nonverbal communication. He states:

There is a language of body expression and motion which is as ordered and structured as the language we speak . . . to form orderly sequences of message material which others trained in the same code can translate and respond to in kind (p. 7).

But Birdwhistell states that bodily expression, or kinesics, has not been researched sufficiently to develop a system of nonverbal communication.

Considerable research has been done with the voice. Sapir (1949) was one of the first in this area of nonverbal communication. He analyzed voice, voice dynamics (intonation, rhythm, continuity, and speed), pronunciation, vocabulary and style. Davitz and Davitz (1961), and Soskin and Kauffman (1961) have found that voice cues signal emotional feeling.

Students' nonverbal movement in the classroom has patterns which cue teachers on prediction of comprehension, according to Jecker, Maccoby, and Breitrose (1964). Miller (1961) reports that teacher movement in the classroom communicates to students. Strang (1965) suggests that acceptance of the student may be indicated by bodily position, facial expression, and gestures.

Mehrabian and Ferris (1967) found that students rated facial expression $3\frac{1}{2}$ times as important as vocal communication. Hodge (1971)

suggests that eye contact is generally perceived by students as positive interest; but a stare to one student may be normal eye contact to another. Reusch (1956) concludes that the real meaning of teacher-student eye contact must be tested out by teachers in specific settings.

The extensive research of Galloway (1971a, 1971b, 1970, 1968a, 1968b) in teacher nonverbal behavior indicates that teachers, consciously and unconsciously, send nonverbal messages which are stronger than verbal messages, and that these messages influence student attitudes about school.

The literature clearly reveals that nonverbal communication in the classroom is more powerful than verbal communication and is in process constantly. Therefore, as much data as possible should be gathered to help in improving the quality of teacher-pupil interaction.

Subcultural Differences in Nonverbal Behavior

That cultural differences exist in such areas as achievement, self-concept, and perception is well documented in the literature (e.g., Morine and Morine, 1970; Johnson, 1970; Roucek, 1965; Reboussin and Goldstein, 1972; and Bereiter and Engelmann, 1966). The work of Hall (1959, 1966, 1967) in proxemics, i.e., spatial variations in proximity, reveals that there are cultural rules which delineate acceptable standards of posture, distance, eye contact, etc., in any social group.

It seems that people of differing cultural backgrounds also have very different patterns of nonverbal behavior. Phillion and Galloway (1969), in investigating the language development weaknesses of Indian children, concluded that Indian children are taught nonverbally at home

and display a remarkable ability in visual discrimination and reading nonverbal directional cues. They state:

. . . the child seems to spend his early childhood in an environment where verbal teaching does not frequently take place and where language with which verbal teaching is carried out is not used; therefore, he may never learn how to be taught verbally, and when he is exposed to the typical verbal teaching of the classroom, he may behave much as if he were mentally retarded or devoid of language altogether (p. 556).

Wax and Thomas (1972) report very specific differences in appropriate and inappropriate nonverbal behavior in interpersonal relationships between Indians and whites. Observation is a most valued and highly developed skill for the Indian; however, it may not involve eye contact. The Indian tends to look away when he is being addressed as a sign of consideration--to stare into the speaker's face might embarrass him. But the same lack of eye contact in a less positive context is indicative of lack of respect and regard for the other person as beneath the notice of a highly observant man. But the white person, when addressed, looks at the speaker directly to show the same feelings of respect (Galloway, 1970; Fast, 1970; Nierenberg and Calero, 1971; Davitz, 1964). In the book, How to Read a Person Like a Book by Nierenberg and Calero (1971), lack of eye contact is reported as negative. If the eyes of the person are downcast, the indication is of shutting out the speaker; lowering the eyes in an argument signals defeat. And to the middle-class, white person eye contact signals interest (LeCompte and Rosenfeld, 1971).

Learning for the Indian child is highly nonverbal and information is gathered by observation instead of verbal questioning as the white child. Both instruction and learning may proceed on a subconscious level (Macgregor, 1946; Wax and Thomas, 1972). The Indian child is

taught very early not to interfere with or bother older people who are otherwise occupied.

. . . we have noticed that even little toddlers do not make the loud and vigorous attempts to monopolize their parents' attention which are characteristic of so many white infants. Since the human infant must be taught to demand the attention of its parents and since Indian parents simply do not respond to 'interfering' demands, it is possible that many Indian infants never learn some of the coercive and aggressive oral and verbal techniques available to the children in other cultures (p. 293).

Indian people do not give children verbal praise for acceptable behavior as white people do. Mead (1932) remarks that to Indians an enthusiastic and tireless government employee would be given no thanks, not out of ingratitude or hostility, but out of their own cultural lack of need for verbal reward. Wax and Thomas (1972) report having heard teachers and other professionals complain that their Indian students and clients never thanked them for their work and devotion. They report that Indian friends tell them that they do not praise or reward their children for doing what is normal and right; the "good" Indian child is simply behaving as a child of his people should behave decently.

Nonverbal behavior differences were found in other cultures besides Indian. Michael and Willis (1969) investigated three groups of children with exposure to two cultures, American and German, for differences in gestural behaviors. They found that the German children had a lower rate of gesturing than the American children.

Longstreet (1972) argues the critical need to understand nonverbal behavior differences between cultures:

Subconsciously, both the teacher and the students are perceiving meaning from the other's body movements and the use of space. Each is interpreting these through his own range of experiences. Since the cultural background and consequently the diakinesic system of students and teachers are likely to be quite different, misinterpretation becomes the

norm rather than the exception. The black student who bows his head and averts his eyes out of remorse may be thought insincere or defiant precisely because he is averting his eyes. The controlled, balanced, unemotional stance of the teacher trying to present all sides of a fiery controversy fairly may be interpreted as a sign of not caring about a subject, or even worse, as a lack of imagination. Ethnocentric preconceptions are especially powerful when the awareness of such preconceptions is at a minimum, as is still the case with nonverbal forms of communication (p. 177).

In his study of man's use of personal space to communicate, Hall (1967) found that "how a man codes distances is a function of which combinations of receptors he uses. These do not always seem to be the same from culture to culture and vary even within subcultures."

Wax and Thomas (1972) observe significant differences in the non-verbal behavior of white men and Indians who live in the United States:

If addressed directly, he (the Indian) will not look at the speaker, there may be a considerable delay before a reply, and this may be pitched so softly as to be below the hearing threshold of the white interlocutor; he may even look deliberately away and give no response at all.

In the same situation the white man will often become undiscourably loquacious. A silent neighbor will be peppered with small shop talk in hope that one of his rounds will trigger an exchange and a conversational engagement Ironically, both parties are trying hard to establish communication and good feeling. But, like Aesop's would-be friends, the crane and the fox, each employs devices that puzzle, alienate, and sometimes anger the other (p. 175).

Conclusion

As Hughes and Hughes (1952) have pointed out, when peoples come into troublesome contact with each, popular and scholarly attention is usually focused on only one of them. Thus the relationship between Indians and whites, or between Blacks and whites, is commonly called the Black problem or the Indian problem. Such emphasis calls attention to the fact that the unit of racial or ethnic relations is no single

people, but the situation of contact of the different peoples. Thus, the problem of human relations is not necessarily the fault or problem of one group or another but may be due simply to misconceptions or more correctly misperceptions. Anderson and Safar (1967) state:

We know that it is difficult for all peoples to span cultural discontinuities, and yet we make little if any effort to prepare administrative personnel or teachers and guidance staff to assist the child in this transition from one cultural context to another. This transition must have serious psychological consequences for the child, and probably plays a major role in influencing his later perceptions of other social institutions as he is introduced to them (p. 230).

The review of the literature indicates that cultural differences in perception exist and that cultural differences in nonverbal behavior exist. Nonverbal communication has been shown to be a major source of communication in the critical child-teacher relationship. Therefore, if nonverbal communication is a major source of communication in the classroom; if there are cultural differences in nonverbal behavior; and if there are cultural differences in perception; then, it would seem that there might be differences in children's perceptions of teachers' nonverbal behavior. The research study was attended to gathering information that would be helpful in increasing understandings in human relationships between cultures in the elementary classroom.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

This chapter is a report of the overall plan for the execution of the research including selection and description of the subjects, instrumentation, and analysis of the data.

Description of the Subjects

Subjects were selected from elementary students enrolled in public elementary schools located in the rural, central Oklahoma towns of Pawnee, Sapulpa, and Beggs. The subjects were chosen on the basis of the willingness of the school administrators and teachers to participate in the study. Involved in the research study were 435 six, eight, and ten year old boys and 440 six, eight, and ten year old girls. There were 171 Indian children, 151 Black children and 552 Caucasian children. Central Oklahoma rural community schools were chosen in an attempt to keep the cultural influence constant. All schools involved were ESEA Title I schools. An attempt to select Indian children with one tribal background was abandoned because there were not enough subjects available from one tribal background to validate the study.

Instrumentation

The instrument used to measure children's perceptions of nonverbal

behavior of teachers was the Perceptions of Nonverbal Behavior Index (PNB) developed by the investigator. The test is composed of a set of 15 three-inch square photograph cards and a response sheet with pockets for sorting. Each child received a set of photographs and a response sheet.

The photographs depict selected typical elementary teacher non-verbal behaviors between a teacher and a student (see the Appendix). Selection of the pictures was based on Sheflin's (1964) description of approximately twenty-six American nonverbal behaviors, Galloway's (1970) observations of nonverbal behaviors in the classroom, observations of classroom behavior by the investigator, and consultation with a panel of experts in elementary education. The response sheet is an eight-inch by ten-inch card with three library card envelopes for sorting into three categories by the student. The category labels on the envelopes were the following:

I would like best to be in these pictures.

I don't know whether or not I would like to be in these pictures.

I would not like to be in these pictures.

To insure that the PNB was not based on reading ability, verbal instructions were given to all students. The directions given to the students were the following:

You have a set of pictures of a teacher and a child. Pretend that you are the student in the pictures. Look at all the pictures, then choose the ones you would like best to be in. Put those in the first envelope. Choose the pictures that you don't care whether or not you are in. Put those in the middle envelope. Choose the pictures you definitely would not like to be in. Put those in the last envelope. Each envelope must have at least three pictures in it.

Students were told that the activity would help teachers know what students thought about the way they acted toward them.

In an attempt to design a test to assess responses to nonverbal behaviors, the subject was directed to manipulate the photographs as opposed to responding verbally in an interview or on paper. Photographs were used in the PNB as opposed to drawings because children tend to read photographs visually more easily than more sophisticated line drawings (Debes, 1974). The photographs were printed on cardstock in three-inch squares for ease in handling. Size of the photographs was kept small because children tend to read visually small pictures as opposed to large pictures (Debes, 1974). Responses to the photographs would seem to vary with the sex, age, race, socioeconomic level, and features of the model; therefore, typical Oklahoma models were selected in an attempt to keep the stimulus constant.

A copy of the PNB is included in the Appendix. A description of the nonverbal behavior depicted in each photograph of the PNB is listed as Table I.

Administration of the Instrument

Administration of the PNB occurred in regular class periods for all subjects. Those children who were not six, eight, or ten years old or who were of races other than Caucasian, Black, or Indian were tested in the regular class and then eliminated from the study.

The investigator allowed the children to look at all pictures for a few minutes before giving directions to categorize the pictures. All students were given the same directions verbally. Administration of the test was done by the investigator. Time required for

TABLE I
 DESCRIPTIONS OF THE FIFTEEN PHOTOGRAPHS OF THE PERCEPTIONS
OF NONVERBAL BEHAVIOR SCALE (PNB)

<u>PNB Photograph</u>	<u>Description</u>
1	<p><u>Teacher Behind Child</u></p> <p>This picture portrays teacher standing behind child with no eye contact. The teacher has a hand on the child's shoulder. Both are looking down at something. The subject should focus on the position of the teacher behind the child and the touch.</p>
2	<p><u>No Eye Contact</u></p> <p>This picture portrays child and teacher sitting across from each other with no eye contact. The teacher is looking at a paper and the child is looking at a book. Arms are on the arms of the chair. The subject should focus on the lack of eye contact and the relative levelness of their positions.</p>
3	<p><u>Desk Between - Distance</u></p> <p>This picture portrays the child and teacher across from each other with a desk in between the two. The facial expression is neutral with eye contact, there is a great distance between the two, and both are learning away from each other. The subject should focus on the distance between the two, the desk between the two, the learning away, and the eye contact.</p>
4	<p><u>Eye Contact - Looking Down</u></p> <p>This picture portrays child and teacher face to face with the teacher a great distance above the child. There is eye contact and the teacher's facial expression is neutral. The subject should focus on the distance the teacher is above the child and the crossed arms.</p>
5	<p><u>Frown</u></p> <p>This picture portrays child and teacher standing face to face with eye contact. The teacher's facial expression is negative with wrinkled brow, there is no touching, arms are crossed.</p>

TABLE I (Continued)

PNB Photograph	Description
5 (Continued)	The subject should focus on the negative expression and eye contact with crossed arms.
6	<p data-bbox="529 492 661 523"><u>Pointing</u></p> <p data-bbox="529 558 1286 813">This picture portrays child and teacher across from each other with the teacher a great distance above the child. There is eye contact and the teacher's facial expression is neutral. The teacher is pointing a finger at the child. The subject should focus on the distance the teacher is above the child and the pointed finger.</p>
7	<p data-bbox="529 850 775 880"><u>Reading - Touch</u></p> <p data-bbox="529 915 1300 1099">This picture portrays child and teacher sitting side by side holding a book together. The teacher has her arm around the child's shoulder. Both are looking at the book. The subject should focus on the closeness, the touch, and the attention to the object between them.</p>
8	<p data-bbox="529 1136 839 1167"><u>Touch - Hand on Hip</u></p> <p data-bbox="529 1201 1286 1426">This picture portrays child and teacher across from each other with eye contact. The teacher has a neutral expression on her face, has one hand on the child's shoulder, and has the other hand on her hip. The subject should focus on the eye contact, the touch, and the hand on the teacher's hip.</p>
9	<p data-bbox="529 1463 839 1494"><u>Reading - Closeness</u></p> <p data-bbox="529 1528 1286 1682">This picture portrays child and teacher sitting side by side holding a book together. Both are looking at the book. The subject should focus on the closeness and attention to the object between them.</p>
10	<p data-bbox="529 1719 936 1749"><u>Eye Contact - Front Touch</u></p> <p data-bbox="529 1784 1286 1935">This picture portrays child and teacher standing across from each other with eye contact. The teacher has a neutral expression on her face and has her hand on the child's shoulder. The subject should focus on the touch and eye contact.</p>

TABLE I (Continued)

<u>PNB</u> Photograph	Description
11	<p><u>Eye Contact</u></p> <p>This picture portrays child and teacher standing face to face with eye contact. The teacher's facial expression is neutral, arms are down, and there is no touch. The subject should focus on eye contact.</p>
12	<p><u>Eye Contact - Side Touch</u></p> <p>This picture portrays child and teacher standing side by side with eye contact. The teacher has her arm around the child's shoulder. The subject should focus on the closeness, the touch, and the eye contact.</p>
13	<p><u>Helping - Desk Between</u></p> <p>This picture portrays child and teacher sitting with the teacher's desk in between the two. The teacher is looking at the child with a neutral expression. The child is looking at the paper. Both are leaning toward each other with arms extended on the desk. The subject should focus on the desk being between the two and leaning forward.</p>
14	<p><u>Level Eye Contact</u></p> <p>This picture portrays the child and teacher sitting across from each other with eye contact. The teacher's facial expression is neutral. Arms are on the arms of the chair. The subject should focus on the eye contact and the relative levelness of their positions.</p>
15	<p><u>Smile</u></p> <p>This picture portrays child and teacher standing across from each other with eye contact. The teacher is smiling and arms are down at sides. The subject should focus on the smile and eye contact.</p>

administration of the test did not exceed ten minutes per class.

Testing took place during March and April of 1974.

Reliability

Test-retest reliability was checked by retesting one first grade class of eighteen students, one third grade class of twenty-nine students, and one fifth grade class of twenty-nine students in Pawnee Elementary School one week after the first testing. Selection of these classes was made based on willingness of the teachers to participate.

A simple percentage of agreement was obtained by using the following calculation:

$$\frac{2 \times N \text{ of agreement}}{\text{Total N}}$$

where:

Total N = number of responses to first testing + number
of responses to second testing.

A percentage of agreement was calculated for each of the 15 PNB photographs, then the percentage of agreement figures were combined by age groups and by total group to obtain a group percentage of agreement. Percentage of agreement for the first grade was 73.7; percentage of agreement for the third grade was 76.2; percentage of agreement for the fifth grade was 85.3. The combined total percentage of agreement was 78.6. Percentages of agreement for each individual photograph are listed in Table II.

The PNB is considered to be reliable. It was noted from the data in Table II that reliability increased as age increased.

TABLE II
 PERCENTAGES OF AGREEMENT OF TEST-RETEST RESPONSES
 TO THE PNB PHOTOGRAPHS

Photograph	First Grade	Third Grade	Fifth Grade
1	78	86	83
2	72	83	97
3	72	83	79
4	72	79	93
5	67	76	93
6	83	86	90
7	78	86	90
8	72	72	76
9	72	90	93
10	72	72	72
11	72	79	93
12	83	76	76
13	67	79	76
14	67	69	76
15	<u>78</u>	<u>97</u>	<u>93</u>
Average	73.7	76.2	78.6

Validity

Validity of the instrument was judged by a panel of experts in elementary education. The panel of experts judged the pictures to be exemplary of teacher nonverbal behavior typical of Oklahoma elementary teachers. The judges indicated that the most typical Oklahoma elementary teacher was a white, young-to-middle age female with medium build and dark hair. The most typical Oklahoma elementary student was judged to be a Caucasian boy with moderate length dark hair, approximately ten years old dressed in middle-class clothing. Models fitting these descriptions were selected to depict the nonverbal behaviors for the PNB.

Analydid of the Data

The following research questions formed the bases for the hypotheses investigated in the study:

- (1) Are there differences between boys and girls in their perceptions of nonverbal behavior of teachers?
- (2) Are there differences among children of different sub-cultures in their perceptions of nonverbal behavior of teachers?
- (3) Are there differences among children of different ages in their perceptions of nonverbal behavior of teachers?

The following null hypotheses related from the research questions:

Null Hypothesis I

There is no significant difference between elementary school

age boys and girls in their perceptions of the nonverbal behavior of teachers.

Null Hypothesis II

There is no significant difference among Caucasian elementary school age children, Black elementary school age children, and Indian elementary school age children in their perceptions of the nonverbal behavior of teachers.

Null Hypothesis III

There is no significant difference among six year old children, eight year old children, and ten year old children in their perceptions of the nonverbal behavior of teachers.

A chi-square test was performed for each null hypothesis on each of the 15 photograph items in the Perceptions of Nonverbal Behavior Index. In the final report of the study, conclusions drawn are based on the significance of differences found between boys and girls; among Caucasian, Black, and Indian children; and among six, eight, and ten year old children.

CHAPTER IV

ANALYSIS AND TREATMENT OF DATA

This chapter presents tabulated results of data obtained from research procedures described in Chapter III. This chapter is organized to include a statement of each hypothesis in the null form, the presentation of statistical treatment, and the results obtained.

Data Analysis

Most statistical studies have a .05 or .01 level of confidence to establish significance of data. However, due to the nature of the study, a .10 level of confidence was selected to establish significant differences. The reason for establishing a lower level of confidence than the traditional .05 was that the study was intended to be an exploratory one. In selecting the .10 level of confidence, more differences can be found to be significant, thus increasing the directions and possibilities for future studies. A .05 level of confidence would help in obtaining more conclusive data; however, since the objective of the study was to explore possibilities, it seemed advantageous to include more data for further exploration even though all of the data may not be highly conclusive.

The patterns of categorization of the 15 PNB photographs seemed to be consistently the same throughout the entire sampling of children. However, statistical analysis of the categorizations by the three major

hypotheses revealed significant differences.

Differences Between Boys and Girls

Null Hypothesis I: There is no significant difference between elementary school age boys and girls in their perceptions of the nonverbal behavior of teachers.

The data in Table III represents the analysis of the differences between elementary school age boys and girls in their responses to the 15 PNB photographs. Reported are chi square values, degrees of freedom, and critical values for each of the PNB photographs. A chi square value of 4.60 or greater was needed for significance at the .10 level with two degrees of freedom. The data in Table III indicates that there are differences between boys' and girls' perceptions of nonverbal behavior of teachers for responses to 4 of the 15 PNB items. Values equal to or greater than 4.60 were found for responses to photographs 5 (Frown), 8 (Touch-Hand on Hip), 12 (Eye Contact-Side Touch), and 13 (Helping-Desk Between). Therefore, the null hypothesis that there is no difference between boys and girls in their perceptions of nonverbal behavior of teachers was rejected for 4 of the 15 PNB items.

Because the numbers of boys and girls were not equal, converting numbers into percentages seemed to reveal patterns more effectively. Therefore, the data in Table IV represents percentages of the differences between boys' and girls' perceptions of selected nonverbal behavior of teachers significant at the .10 level or above. The data in Table IV indicates that 82 percent of the girls considered PNB photograph 5 (Frown) to be negative while only 77 percent of the boys considered the frown negative. Eighteen percent of the boys considered the

TABLE III

CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN BOYS'
AND GIRLS' PERCEPTIONS OF THE NONVERBAL
BEHAVIOR OF TEACHERS

PNB Photograph	Sex	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
1	M	147	187	101	2	.38	.90
	F	157	186	97			
2	M	195	191	49	2	.58	.80
	F	197	200	43			
3	M	89	196	150	2	1.36	.70
	F	77	201	162			
4	M	22	93	320	2	.42	.90
	F	21	87	332			
5	M	23	78	334	2	5.07	.10*
	F	23	55	362			
6	M	30	67	338	2	2.86	.30
	F	24	54	362			
7	M	278	124	33	2	4.58	.20
	F	311	101	28			
8	M	50	181	204	2	4.64	.10*
	F	39	164	237			
9	M	248	138	49	2	3.95	.20
	F	245	160	35			
10	M	124	197	114	2	.12	.95
	F	130	196	114			
11	M	51	191	193	2	3.49	.20
	F	35	203	201			
12	M	188	171	76	2	5.06	.10*
	F	203	183	53			
13	M	182	176	77	2	7.38	.05*
	F	148	215	76			
14	M	62	225	118	2	.87	.70
	F	70	260	109			
15	M	366	50	19	2	2.12	.50
	F	383	38	17			

*.10 or higher level of significance.

frown neutral while only 13 percent of the girls considered it to be neutral. While the general pattern of categorization of the behavior was negative, more girls than boys considered the frown to be negative.

TABLE IV
PERCENTAGES REFLECTING SIGNIFICANT DIFFERENCES BETWEEN
BOYS' AND GIRLS' PERCEPTIONS OF THE
NONVERBAL BEHAVIOR OF TEACHERS

<u>PNB</u> Photograph	Description	Sex	Percentages			Level of Significance as Calculated by χ^2 *
			Pos.	Neutral	Neg.	
5	(Frown)	M	5	18	77	.10
		F	5	13	82	
8	(Touch-Hand on Hip)	M	11	42	47	.10
		F	9	37	54	
12	(Eye Contact- Side Touch)	M	43	39	17	.10
		F	46	42	12	
13	(Helping-Desk Between)	M	42	40	18	.05
		F	34	49	17	

*Chi square values were based on frequencies reported in Table III.

PNB photograph 8 (Touch-Hand on Hip) was considered to be neutral by 42 percent and negative by 47 percent of the boys, while the behavior was considered to be neutral by 37 percent and negative by 54 percent of the girls. While the general categorization of the behavior was negative, more girls than boys reported that the teacher's touch with a hand on her hip was a negative behavior.

PNB photograph 12 (Eye Contact-Side Touch) was considered to be negative by 17 percent of the boys; however, the behavior was considered to be negative by only 12 percent of the girls. While the general pattern of categorization of the behavior was positive or neutral, more boys than girls disliked the close, physical touch. More girls liked the close physical touch.

PNB photograph 13 (Helping-Desk Between) was considered to be positive by 42 percent and neutral by 40 percent of the boys while the behavior was considered to be positive by 34 percent and neutral by 49 percent of the girls. While the general categorization was either positive or neutral, more boys than girls liked the teacher helping with a desk between teacher and child.

It was noted from the data in Table IV that fewer boys than girls disliked negative teacher behaviors; more boys than girls disliked close, physical touch of the teacher; and more boys than girls liked the teacher helping from behind the desk.

Because significant differences did exist between boys and girls in their perceptions of select nonverbal behaviors of teachers, the ways in which these differences existed were reported. The data in Tables V through IX present analyses of the PNB photographs for which there were significant differences at the .10 level of confidence or above.

The data in Table V represents the analysis of the significant differences between eight year old boys and girls in their perceptions of selected nonverbal behaviors of teachers. PNB photograph 11 (Eye Contact) was considered to be negative by more of the eight year old boys than girls and neutral by more of the eight year old girls than boys.

TABLE V

CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN EIGHT
YEAR OLD BOYS' AND GIRLS' PERCEPTIONS OF THE
NONVERBAL BEHAVIOR OF TEACHERS

<u>PNB</u> Photograph	Sex	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
11	M	20	63	78	2	7.74	.05
	F	8	78	64			

Table VI represents the analysis of the significant difference between ten year old boys and girls in their perceptions of the non-verbal behavior of teachers. PNB photograph 8 (Touch-Hand on Hip) was considered to be neutral by more of the ten year old boys but negative by more of the ten year old girls. PNB photograph 13 (Helping-Desk Between) was considered to be positive by more of the ten year old boys but neutral by more of the ten year old girls.

It was noted from the data in Table VI that more older boys than girls tended to like the teacher helping from behind a desk, while fewer older boys than girls felt negative about the teacher with her hand on her hip.

It was noted from the data in Tables V and VI that the eight year old boys and girls were different on different PNB items than the ten year old boys and girls. There were no significant differences reported between the six year old boys and girls. It was noted also that while six year old boys and girls had no significant differences on the PNB items, the eight year old boys and girls had significant differences on

one of the PNB items, and the ten year old boys and girls had significant differences on two of the 15 PNB items.

TABLE VI

CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN TEN
YEAR OLD BOYS' AND GIRLS' PERCEPTIONS OF
THE NONVERBAL BEHAVIOR OF TEACHERS

<u>PNB</u> Photograph	Sex	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
8	M	16	71	66	2	11.55	.01
	F	9	54	102			
13	M	69	62	22	2	7.17	.05
	F	53	91	21			

The data in Table VII represents the analysis of the significant differences between Caucasian boys and girls in their perceptions of selected nonverbal behaviors of teachers. PNB photograph 7 (Reading-Touch) was generally considered to be positive by both boys and girls, but more girls than boys considered the behavior to be positive. More boys classified the behavior as neutral or negative. PNB photograph 12 (Eye Contact-Side Touch) was considered to be positive or neutral by approximately equal numbers of boys and girls; however, more boys than girls considered the photo to be negative.

TABLE VII

CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN CAUCASIAN
BOYS' AND GIRLS' PERCEPTIONS OF THE
NONVERBAL BEHAVIOR OF TEACHERS

<u>PNB</u> Photograph	Sex	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
7	M	181	82	21	2	5.37	.10
	F	196	57	16			
12	M	113	114	57	2	7.09	.05
	F	124	112	32			

The data in Table VIII represents the analysis of the significant differences between Black boys and girls in their perceptions of the nonverbal behavior of teachers. PNB photograph 6 (Pointing) was considered to be negative by more of the girls than boys, while more boys than girls considered the behavior to be neutral. PNB photograph 13 (Helping-Desk Between) was considered to be positive by more of the Black boys and neutral by more of the Black girls.

The data in Table IX represents the analysis of the significant difference between Indian boys and girls in their perceptions of the nonverbal behavior of teachers. PNB photo 5 (Frown) was considered to be negative by far more of the girls than boys. More boys than girls considered the frown to be neutral. PNB photograph 9 (Reading-Closeness) was considered to be positive by boys and girls alike; however, more girls than boys considered the behavior to be neutral, while more boys than girls considered the behavior to be negative.

TABLE VIII

CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN BLACK
BOYS' AND GIRLS' PERCEPTIONS OF THE NONVERBAL
BEHAVIOR OF TEACHERS

<u>PNB</u> Photograph	Sex	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
6	M	7	23	49	2	5.18	.10
	F	8	10	54			
13	M	38	23	18	2	10.98	.01
	F	17	37	18			

TABLE IX

CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN INDIAN
BOYS' AND GIRLS' PERCEPTIONS OF THE NONVERBAL
BEHAVIOR OF TEACHERS

<u>PNB</u> Photograph	Sex	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
5	M	5	16	51	2	5.32	.10
	F	5	10	84			
8	M	10	36	26	2	5.45	.10
	F	6	42	51			
9	M	37	23	12	2	8.34	.02
	F	53	42	4			

It was noted from the data in Tables VII, VIII, and IX that the PNB photographs on which the Caucasian boys and girls differed were not the same PNB photographs on which the Black boys and girls differed significantly; nor were the PNB photographs on which the Indian boys and girls differed the same PNB photographs on which either the Caucasian or Black boys and girls differed. It was also noted that Indian boys and girls reported more differences than Caucasian or Black boys and girls.

Differences Among Caucasian, Black, and
Indian Children

Null Hypothesis II: There is no significant difference among Caucasian elementary school age children, Black elementary school age children, and Indian elementary school age children in their perceptions of the nonverbal behavior of teachers.

The data in Table X represents the analysis of the differences among Caucasian, Black, and Indian elementary school age children in their responses to the 15 PNB photographs of the nonverbal behavior of teachers. Reported are the chi square values corresponding to degrees of freedom and critical values for each of the PNB items. A chi square value of 7.78 or greater was needed for significance at the .10 level of confidence with 4 degrees of freedom.

The data in Table X indicates that there are differences among Caucasian, Black, and Indian children for responses to 7 of the 15 PNB photographs. Values equal to or greater than 7.78 were found for responses to photographs 6 (Pointing), 8 (Touch-Hand on Hip), 9 (Reading-Closeness), 11 (Eye Contact), 13 (Helping-Desk Between), 14 (Level Eye

TABLE X

CHI SQUARE VALUES REFLECTING DIFFERENCES AMONG
CAUCASIAN, BLACK, AND INDIAN CHILDREN
IN THEIR PERCEPTIONS OF THE
NONVERBAL BEHAVIOR OF TEACHERS

PNB Photograph	Sub- culture	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
1	C	193	223	136	4	10.71	.05*
	B	54	60	37			
	I	57	89	25			
2	C	260	240	52	4	11.23	.05*
	B	61	64	26			
	I	71	86	14			
3	C	98	254	200	4	6.63	.20
	B	36	57	58			
	I	32	86	53			
4	C	30	106	416	4	6.79	.20
	B	10	36	105			
	I	3	38	130			
5	C	26	76	450	4	5.65	.30
	B	10	31	110			
	I	10	26	135			
6	C	29	65	458	4	16.21	.01*
	B	15	33	103			
	I	10	23	138			
7	C	376	139	37	4	2.10	.80
	B	98	44	9			
	I	114	42	15			
8	C	52	193	307	4	18.74	.001*
	B	21	73	57			
	I	16	78	77			
9	C	329	175	48	4	8.26	.10*
	B	73	58	20			
	I	90	65	16			
10	C	154	255	143	4	2.13	.80
	B	50	64	37			
	I	50	73	48			
11	C	45	241	265	4	12.02	.02*
	B	24	73	54			
	I	17	80	74			
12	C	236	226	89	4	3.97	.50
	B	75	56	20			
	I	79	72	20			
13	C	219	239	93	4	11.03	.05*
	B	55	60	36			
	I	55	92	24			
14	C	82	329	140	4	10.36	.05*
	B	17	82	52			
	I	33	103	35			
15	C	485	43	23	4	8.93	.10*
	B	121	23	7			

*.10 Level of significance or above.

Contact), and 15 (Smile). Therefore, the null hypothesis that there is no difference among Caucasian, Black, and Indian children in their perceptions of the nonverbal behavior of teachers was rejected for 7 of the 15 PNB responses.

Because the number of Caucasian, Black, and Indian children were not equal, converting numbers into percentages seemed to reveal patterns more effectively. Therefore, the data in Table XI represents percentages of the differences among Caucasian, Black, and Indian children in their perceptions of the nonverbal behavior of teachers significant at the .10 level or above.

The data in Table XI indicates that for PNB photograph 6 (Pointing) 83 percent of the Caucasian and 81 percent of the Indian children perceived the behavior to be negative, while only 68 percent of the Black children perceived the behavior to be negative. Twelve percent of the Caucasian children and 13 percent of the Indian children perceived the behavior to be neutral while 22 percent of the Black children perceived the behavior to be neutral. While the general feeling about the behavior was negative, more Black than Caucasian or Indian children considered the teacher pointing at the child to be positive; more Black children considered the behavior to be neutral; and fewer Black children considered the behavior to be negative.

PNB photograph 8 (Touch-Hand on Hip) was considered to be positive by 9 percent of the Caucasian and 9 percent of the Indian children; the behavior was considered to be positive by 14 percent of the Black children. Forty-eight percent of the Black and 46 percent of the Indian children considered the behavior to be neutral, while only 35 percent of the Caucasian considered the behavior to be neutral. Fifty-six percent

TABLE XI
 PERCENTAGES REFLECTING SIGNIFICANT DIFFERENCES AMONG
 CAUCASIAN, BLACK, AND INDIAN CHILDREN IN THEIR
 PERCEPTIONS OF THE NONVERBAL
 BEHAVIOR OF TEACHERS

PNB Photograph	Description	Sub- culture	Percentages			Level of Significance as Calculated by χ^2
			Pos.	Neutral	Neg.	
6	(Pointing)	C	5	12	83	.01
		B	10	22	68	
		I	6	13	81	
8	(Touch-Hand on Hip)	C	9	35	56	.001
		B	14	48	38	
		I	9	46	45	
9	(Reading- Closeness)	C	60	31	9	.10
		B	48	39	13	
		I	53	38	9	
11	(Eye Contact)	C	7	44	49	.02
		B	16	48	36	
		I	10	47	43	
13	(Helping-Desk Between)	C	40	43	17	.05
		B	36	40	24	
		I	32	54	14	
14	(Level Eye Contact)	C	15	60	25	.05
		B	11	55	34	
		I	19	60	21	
15	(Smile)	C	88	8	4	.10
		B	80	15	5	
		I	84	12	4	

*Chi square values were based on frequencies reported in Table X.

of the Caucasian, 45 percent of the Indian, and 38 percent of the Black children considered the teacher touching with her hand on her hip to be a negative behavior. While the general feeling about the behavior was neutral or negative, more Black than Caucasian or Indian children considered the behavior to be positive, more Black than Caucasian or Indian children considered the behavior to be neutral, and fewer Black than Caucasian or Indian children considered the behavior to be negative. Caucasian children considered the behavior to be negative; Black children considered the behavior to be neutral; and Indian children were divided between neutral and negative.

PNB photograph 9 (Reading Closeness) was considered to be positive by 60 percent of the Caucasian, 53 percent of the Indian, and 48 percent of the Black children; the behavior was considered to be neutral by 39 percent of the Black, 38 percent of the Indian, and 31 percent of the Caucasian children; and the behavior was considered to be negative by 13 percent of the Black, and 9 percent of the Caucasian and Indian children. While the general feeling about the behavior was positive, more Caucasian perceived reading close to the teacher to be positive. More Black children considered the behavior to be negative.

PNB photograph 11 (Eye Contact) was considered to be positive by 7 percent of the Caucasian, 10 percent of the Indian, and 16 percent of the Black children. The eye contact was considered negative by 49 percent of the Caucasian, 43 percent of the Indian, and 36 percent of the Black children. While the behavior was considered to be approximately equally neutral or negative, more Black children than Caucasian and Indian children considered teacher eye contact to be positive, and fewer Black than Caucasian and Indian children considered the behavior

to be negative. More Caucasian children considered the behavior to be negative; Black and Indian children tended to consider the behavior to be neutral.

PNB photograph 13 (Helping-Desk Between) was considered to be positive by 40 percent of the Caucasian children, 36 percent of the Black children, and 32 percent of the Indian children. The behavior was considered to be negative by 14 percent of the Indian, 17 percent of the Caucasian, and 24 percent of the Black children. While the general feeling about the behavior was equally positive and neutral, more Indian children considered the behavior to be neutral, while the Caucasian and Black children tended to be more evenly divided between positive and neutral.

PNB photograph 14 (Level Eye Contact) was considered to be positive by 19 percent of the Indian, 15 percent of the Caucasian, and only 11 percent of the Black children. Sixty percent of the Caucasian children and 60 percent of the Indian children considered the behavior to be neutral while 54 percent of the Black children considered the behavior to be neutral. Thirty-four percent of the Black, 25 percent of the Caucasian, and 21 percent of the Indian children considered the behavior to be negative. While the overall general feeling about the level eye contact was neutral, more of the Black children considered the behavior to be negative than did the Caucasian or Indian children.

PNB photograph 15 (Smile) was considered to be positive by 88 percent of the Caucasian, 84 percent of the Indian, and 80 percent of the Black children. The smile was considered to be negative by 14 percent of the Caucasian, 5 percent of the Black, and 4 percent of the Indian children. While the teacher smiling was in general chosen as positive

behavior, more Black and Indian than Caucasian children considered the behavior to be neutral. It was noted that the smile, which was obviously positive, was rated neutral and even negative by a considerable number of children.

It was noted from the data in Tables X and XI that, while the general categorizations by all the children seemed to be similar with few exceptions, the Black children tended to be slightly more dispersed across all three categories rather than be centered around a single choice.

From the data in Table X, it was noted that PNB photographs 7 (Reading-Touch), 9 (Reading-Closeness), 12 (Eye Contact-Side Touch), and 15 (Smile) were considered to be generally positive by the children. PNB photographs 1 (Teacher Behind Child), 8 (Touch-Hand on Hip), 13 (Helping-Desk Between), and 14 (Level Eye Contact) were considered generally to be neutral. PNB photographs 4 (Eye Contact-Looking Down), 5 (Frown), and 6 (Pointing) were generally considered to be negative by the children. Caucasian children considered PNB photograph 2 (No Eye Contact) to be positive while Black and Indian children considered it to be neutral. Caucasian children considered PNB photograph 10 (Eye Contact-Front Touch) and 11 (Eye Contact) to be generally negative while Black children and Indian children considered them to be neutral. Black children considered PNB photograph 3 (Desk Between-Distance) generally to be negative while Caucasian and Indian children considered it to be neutral. No cultural groups differed in perceptions on the PNB as much as positive to negative.

The data in Table XII presents a tabulation of the general value classification of each PNB item into the three categories by Caucasian,

TABLE XII
 GENERAL CLASSIFICATIONS OF THE PNB PHOTOGRAPHS
 BY CAUCASIAN, BLACK, AND INDIAN CHILDREN

PNB Photograph	Subculture	Classification		
		Positive	Neutral	Negative
1	C		x	
	B		x	
	C		x	
2	C	x		
	B		x	
	I		x	
3	C		x	
	B			x
	I		x	
4	C			x
	B			x
	I			x
5	C			x
	B			x
	I			x
6	C			x
	B			x
	I			x
7	C	x		
	B	x		
	I	x		
8	C		x	
	B		x	
	I		x	
9	C	x		
	B	x		
	I	x		
10	C			x
	B		x	
	I		x	
11	C			x
	B		x	
	I		x	
12	C	x		
	B	x		
	I	x		
13	C		x	
	B		x	
	I		x	
14	C		x	
	B		x	
	I		x	
15	C	x		
	B	x		
	I	x		

Black, and Indian children.

Because significant differences did exist among Caucasian, Black, and Indian children in their perceptions of selected nonverbal behaviors of teachers, the ways in which these differences existed were reported. The data in Tables XIII and XIV present analyses of the PNB items for which there were differences significant at the .10 level of confidence or more.

The data in Table XIII represents the analysis of the significant differences among Caucasian, Black, and Indian boys in their perceptions of the PNB photographs. The data indicates that boys differed by race on four of the PNB items: 1 (Teacher Behind Child), 6 (Pointing), 8 (Touch-Hand on Hip), and 14 (Level Eye Contact).

It was noted that on PNB photograph 1 (Teacher Behind Child) the pattern was similar for Caucasian, Black, and Indian boys with one exception; while the Caucasian and Black boys were approximately equally distributed between the positive and neutral categories, more Indian boys centered around the neutral category.

PNB photograph 6 (Pointing) was considered negative by more of all of the children, but proportionately more of the Caucasian boys considered the behavior to be negative than did the Black or Indian boys, respectively. PNB photograph 8 (Touch-Hand on Hip) was considered to be negative by more of the Caucasian boys but neutral by more of the Black boys and Indian boys. PNB photograph 14 (Level Eye Contact) was considered to be neutral by more of all the boys; however, fewer of the Black boys considered the behavior to be neutral and more of the Indian boys were distributed between positive and negative.

TABLE XIII

CHI SQUARE VALUES REFLECTING DIFFERENCES AMONG CAUCASIAN,
BLACK, AND INDIAN BOYS IN THEIR PERCEPTIONS
OF THE NONVERBAL BEHAVIOR OF TEACHERS

<u>PNB</u> Photograph	Sub- culture	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
1	C	105	109	70	4	9.84	.05
	B	24	36	19			
	I	18	42	12			
6	C	18	34	232	4	15.59	.01
	B	7	23	49			
	I	5	10	57			
8	C	31	103	150	4	12.26	.02
	B	9	42	28			
	I	10	36	26			
14	C	40	166	78	4	9.04	.10
	B	7	44	28			
	I	15	45	12			

It was noted from the data in Table XIII that on the PNB items which differed by race, the Caucasian boys tended to be more centrally located around a single category while the Black boys and particularly the Indian boys tended to be more dispersed among two or three categories.

The data in Table XIV represents the analysis of the significant differences among Caucasian girls, Black girls, and Indian girls in their perceptions of the PNB photographs. The data in the table indicates that girls differed by race on five of the PNB photographs:

1 (Teacher Behind Child), 8 (Touch-Hand on Hip), 11 (Eye Contact),
13 (Helping-Desk Between), and 15 (Smile).

TABLE XIV

CHI SQUARE VALUES REFLECTING SIGNIFICANT DIFFERENCES
AMONG CAUCASIAN, BLACK, AND INDIAN GIRLS IN
THEIR PERCEPTIONS OF THE NONVERBAL
BEHAVIOR OF TEACHERS

PNB Photograph	Sub- culture	Observed Frequencies			df	χ^2	Significance
		Positive	Neutral	Negative			
1	C	88	114	66	4	8.36	.10
	B	30	24	18			
	I	39	47	13			
8	C	21	90	136	4	12.13	.01
	B	12	31	29			
	I	6	42	51			
11	C	16	119	132	4	11.71	.02
	B	11	39	22			
	I	8	45	46			
13	C	100	121	46	4	9.94	.05
	B	17	37	18			
	I	30	57	12			
15	C	241	15	11	4	8.79	.10
	B	58	10	4			
	I	84	12	2			

Photograph 1 (Teacher Behind Child) was considered to be neutral by more of the Caucasian and Indian girls but was considered to be positive by more of the Black girls. PNB photograph 8 (Touch-Hand on

Hip) was considered to be negative by more of the Caucasian girls and Indian girls but neutral by more of the Black girls. PNB photograph 11 (Eye Contact) was considered to be positive by more of the Caucasian and Indian girls but negative by more of the Black girls. PNB photograph 13 (Helping-Desk Between) was considered to be positive or neutral by more of the Caucasian and Indian girls but was considered to be neutral by more of the Black girls. PNB photograph 15 (Smile) was considered to be positive by all the girls, but proportionately more Caucasian and fewer Black girls considered the behavior to be positive.

It was noted from the data presented in Table XIV that on the PNB photographs which showed significant differences among girls by culture, Caucasian girls and Indian girls tended to have similar patterns, while the Black girls tended to have different patterns.

The data in Table XV represents the analysis of the significant differences among six year old Caucasian, Black, and Indian children in their perceptions of the 15 PNB photographs. The data in the table indicates that six year old children differ by culture on 2 of the 15 PNB items: 1 (Teacher Behind Child) and 11 (Eye Contact).

The data in Table XVI represents the analysis of the significant differences among eight year old Caucasian, Black, and Indian children in their perceptions of the PNB photographs. The data in the table indicates that eight year old children differ significantly by culture at the .10 level of confidence on 2 of the 15 PNB items and at the .01 level of confidence on one more of the PNB items. Differences were found on photographs 2 (No Eye Contact), 8 (Touch-Hand on Hip), and 13 (Helping-Desk Between).

TABLE XV

CHI SQUARE VALUES REFLECTING SIGNIFICANT DIFFERENCES AMONG
SIX YEAR OLD CAUCASIAN, BLACK, AND INDIAN
CHILDREN IN THEIR PERCEPTIONS OF THE
NONVERBAL BEHAVIOR OF TEACHERS

PNB Photograph	Sub- culture	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
1	C	45	57	49	4	8.31	.10
	B	14	26	11			
	I	13	24	6			
11	C	23	76	52	4	8.84	.10
	B	14	20	17			
	I	7	14	22			

TABLE XVI

CHI SQUARE VALUES REFLECTING SIGNIFICANT DIFFERENCES AMONG
EIGHT YEAR OLD CAUCASIAN, BLACK, AND INDIAN
CHILDREN IN THEIR PERCEPTIONS OF THE
NONVERBAL BEHAVIOR OF TEACHERS

PNB Photograph	Sub- culture	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
2	C	109	79	13	4	15.20	.01
	B	20	26	11			
	I	25	27	2			
8	C	11	71	119	4	8.28	.10
	B	6	29	22			
	I	3	23	28			
13	C	77	86	37	4	8.16	.10
	B	22	19	16			
	I	16	31	7			

The data in Table XVII represents the analysis of the significant differences among ten year old Caucasian, Black, and Indian children in their perceptions of the PNB items. The data in the table indicates that ten year old children differ significantly by culture at the .05 level of confidence on one PNB item, at the .02 level of confidence on two PNB items, and at the .01 level of confidence on one more PNB item. Differences were found in choices for PNB photographs 1 (Teacher Behind Child), 2 (No Eye Contact), 9 (Reading-Closeness), and 12 (Eye Contact-Side Touch).

TABLE XVII

CHI SQUARE VALUES REFLECTING SIGNIFICANT DIFFERENCES AMONG
TEN YEAR OLD CAUCASIAN, BLACK, AND INDIAN
CHILDREN IN THEIR PERCEPTIONS OF THE
NONVERBAL BEHAVIOR OF TEACHERS

<u>PNB</u> Photograph	Sub- culture	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
1	C	87	78	35	4	11.83	.02
	B	19	9	15			
	I	30	34	10			
2	C	99	88	13	4	12.48	.02
	B	17	16	10			
	I	31	36	7			
9	C	141	53	6	4	17.93	.01
	B	23	19	1			
	I	36	30	8			
12	C	90	80	30	4	11.12	.05
	B	24	16	3			
	I	48	22	4			

It was noted from the data in Tables XV, XVI, and XVII that differences among Caucasian, Black, and Indian children increase in number and by level of confidence as age increases.

Differences Among Six, Eight, and Ten Year

Old Children

Null Hypothesis III: There is no significant difference among six year old children, eight year old children, and ten year old children in their perceptions of the nonverbal behavior of teachers.

The data in Table XVIII represents the analysis of the differences among six year old children, eight year old children, and ten year old children in their responses to the 15 PNB photographs. A chi square value of 7.78 or greater was needed for significance at the .10 level with 4 degrees of freedom. The data in Table XVIII indicates that there were significant differences in responses to 14 of the 15 PNB items. Values equal to or greater than 7.78 were found on photographs 1 (Teacher Behind Child), 2 (No Eye Contact), 3 (Desk Between-Distance), 4 (Eye Contact-Looking Down), 5 (Frown), 6 (Pointing), 7(Reading-Touch), 8 (Touch-Hand on Hip), 9 (Reading-Closeness), 10 (Eye Contact-Front Touch), 11 (Eye Contact), 12 (Eye Contact-Side Touch), 14 (Level Eye Contact), and 15 (Smile). Only responses to photograph 13 (Helping-Desk Between) was significant at a level lower than .10. Nine of the 14 significantly different items were highly significant at the .001 level. The data clearly indicate that there are significant differences among six, eight, and ten year old children in their responses to the PNB photographs of nonverbal behavior of teachers. Therefore, the hypothesis that there is no difference among six, eight, and ten year

TABLE XVIII
 CHI SQUARE VALUES REFLECTING DIFFERENCES AMONG
 SIX, EIGHT, AND TEN YEAR OLD CHILDREN
 IN THEIR PERCEPTIONS OF THE NON-
 VERBAL BEHAVIOR OF TEACHERS

PNB Photograph	Age	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
1	6	71	107	66	4	16.03	.01*
	8	96	144	72			
	10	136	122	60			
2	6	90	118	36	4	12.08	.02*
	8	154	132	26			
	10	147	141	30			
3	6	71	94	79	4	42.81	.001*
	8	69	140	103			
	10	26	162	130			
4	6	24	67	153	4	47.25	.001*
	8	16	71	225			
	10	3	42	273			
5	6	26	47	171	4	31.50	.001*
	8	14	50	248			
	10	6	36	276			
6	6	29	52	163	4	47.78	.001*
	8	30	40	252			
	10	5	29	284			
7	6	137	83	24	4	23.81	.001*
	8	212	78	22			
	10	240	63	15			
8	6	44	97	103	4	25.32	.001*
	8	20	123	169			
	10	25	125	168			
9	6	115	88	41	4	28.21	.001*
	8	176	108	28			
	10	201	102	15			
10	6	84	98	62	4	9.24	.10*
	8	83	136	93			
	10	87	158	73			
11	6	44	110	90	4	32.23	.001*
	8	28	141	142			
	10	14	143	161			
12	6	98	102	44	4	10.12	.05*
	8	130	133	48			
	10	163	118	37			
13	6	92	102	50	4	6.12	.20
	8	115	136	60			
	10	122	153	43			
14	6	50	131	63	4	16.88	.01*
	8	47	171	93			
	10	35	212	72			
15	6	185	44	15	4	37.91	.001*
	8	267	27	17			
	10	296	17	4			

*.10 or higher level of significance.

old children in their perceptions of nonverbal behavior of teachers is rejected.

Because the numbers of six, eight, and ten year old children were not equal, converting numbers of observed frequencies into percentages seemed to reveal patterns more effectively. Therefore, the data in Table XIX represents percentages of the responses of six, eight, and ten year old children in their perceptions to the PNB items.

The data in Table XIX indicates that 29 percent of the six, 31 percent of the eight, and 42 percent of the ten year old children liked PNB photograph 1 (Teacher Behind Child). Conversely, 19 percent of the ten year old, 25 percent of the eight year old, and 27 percent of the six year old children disliked the behavior. Forty-four percent of the six, 46 percent of the eight, and only 38 percent of the ten year old children felt neutral about the behavior. More of the six and eight year old children felt neutral about the behavior, while the ten year old children definitely liked the behavior.

PNB photograph 2 (No Eye Contact) was considered to be positive by 37 percent of the six, 49 percent of the eight, and 46 percent of the ten year old children. While the general feelings about the behavior were positive and neutral, more six year old children felt neutral while more eight and ten year old children felt positive about the behavior.

PNB photograph 3 (Desk Between-Distance) was considered to be positive by 29 percent, neutral by 39 percent, and negative by 32 percent of the six year old children. The behavior was considered to be positive by 49 percent, neutral by 45 percent, and negative by 33 percent of the eight year old children. The behavior was considered to be

TABLE XIX
 PERCENTAGES REFLECTING SIGNIFICANT DIFFERENCES
 AMONG SIX, EIGHT, AND TEN YEAR OLD
 CHILDREN IN THEIR PERCEPTIONS OF THE
 NONVERBAL BEHAVIOR OF TEACHERS

PNB Photograph	Description	Age	Percentages			Level of Significance as ₂ Calculated by χ^2
			Pos.	Neutral	Neg.	
1	(Teacher Behind Child)	6	29	44	27	.01
		8	31	46	23	
		10	42	38	19	
2	(No Eye Contact)	6	37	38	15	.02
		8	49	42	8	
		10	46	44	10	
3	(Desk Between- Distance)	6	29	39	32	.001
		8	22	45	33	
		10	8	51	41	
4	(Eye Contact- Looking Down)	6	10	27	63	.001
		8	5	23	72	
		10	1	13	86	
5	(Frown)	6	11	19	70	.001
		8	4	16	80	
		10	2	11	87	
6	(Pointing)	6	12	21	67	.001
		8	6	13	81	
		10	2	9	89	
7	(Reading-Touch)	6	56	34	10	.001
		8	68	25	7	
		10	75	20	5	
8	(Touch-Hand on Hip)	6	13	40	42	.001
		8	6	40	54	
		10	8	39	53	
9	(Reading- Closeness)	6	47	36	17	.001
		8	56	35	9	
		10	63	32	5	
10	(Eye Contact- Front Touch)	6	34	40	26	.10
		8	26	44	30	
		10	27	50	23	
11	(Eye Contact)	6	18	45	37	.001
		8	9	45	46	
		10	4	45	51	
12	(Eye Contact- Touch)	6	40	42	18	.05
		8	42	43	15	
		10	51	37	12	
14	(Level Eye Contact)	6	20	54	26	.01
		8	15	55	30	
		10	11	67	22	
15	(Smile)	6	76	18	6	.001
		8	86	9	5	
		10	93	6	1	

positive by only 8 percent, neutral by 51 percent, and negative by 41 percent of the ten year old children. While the six and eight year old children tended to consider the behavior approximately equally positive, neutral, and negative, the ten year old children considered it neutral and negative, respectively. Very few of the ten year old children considered the teacher behind the desk to be a positive behavior.

PNB photograph 4 (Eye Contact-Looking Down) was considered to be positive by 10 percent, neutral by 27 percent, and negative by 63 percent of the six year old children. The behavior was considered to be positive by 5 percent, neutral by 23 percent, and negative by 72 percent of the eight year old children. The behavior was considered to be positive by 1 percent, neutral by 13 percent, and negative by 86 percent of the ten year old children. While the general classification of the behavior of the teacher looking down at the child was negative, it is clearly evident that more of the ten year old children considered the behavior to be negative.

PNB photograph 5 (Frown) was considered to be positive by 11 percent, neutral by 19 percent, and negative by 70 percent of the six year old children. The behavior was considered to be positive by 4 percent, neutral by 16 percent, and negative by 80 percent of the eight year old children. The behavior was considered to be positive by 1 percent, neutral by 11 percent and negative by 87 percent of the ten year old children. Although the general feeling about the teacher frowning was negative by all age groups, more of the ten year old children considered the frown to be negative. Very few of the ten year olds considered the frown to be positive.

PNB photograph 6 (Pointing) was considered to be positive by 12

percent, neutral by 21 percent, and negative by 67 percent of the six year old children. The behavior was considered to be positive by 6 percent, neutral by 13 percent, and negative by 81 percent of the eight year old children. The behavior was considered to be positive by only 2 percent, neutral by 9 percent, and negative by 89 percent of the ten year old children. Although the general feeling about the behavior was negative, again more ten year olds than eight or six year olds in that order felt that the behavior was negative.

PNB photo 7 (Reading-Touch) was considered to be positive by 56 percent, neutral by 34 percent, and negative by 10 percent of the six year old children. The behavior was considered to be positive by 68 percent, neutral by 25 percent, and negative by 7 percent of the eight year old children. The photograph was considered to be positive by 75 percent, neutral by 20 percent, and negative by 5 percent of the ten year old children. While the behavior was felt generally to be positive, more ten year old children felt that the behavior was positive, and more six year olds felt that the behavior was negative.

PNB photograph 8 (Touch-Hand on Hip) was considered to be positive by 18 percent, neutral by 40 percent, and negative by 42 percent of the six year old children. The behavior was considered to be positive by 6 percent, neutral by 40 percent, and negative by 54 percent of the eight year old children. The behavior was considered to be positive by 8 percent, neutral by 39 percent, and negative by 53 percent of the ten year old children. While the behavior was considered to be neutral or negative by most of the children, more of the six year old and fewer of the ten year old children considered the behavior to be positive.

PNB photograph 9 (Reading-Closeness) was considered to be positive

by 47 percent, neutral by 36 percent, and negative by 17 percent of the six year old children. The behavior was considered to be positive by 56 percent, neutral by 35 percent, and negative by 9 percent of the eight year old children. The behavior was considered to be positive by 63 percent, neutral by 32 percent, and negative by 5 percent of the ten year old children. While most of the children considered the behavior to be positive, more six year old and fewer ten year old children considered the behavior to be negative.

PNB photograph 10 (Eye Contact-Front Touch) was considered to be positive by 34 percent, neutral by 40 percent, and negative by 26 percent of the six year old children. The behavior was considered to be positive by 26 percent, neutral by 44 percent and negative by 30 percent of the eight year old children. The behavior was considered to be positive by 27 percent, neutral by 50 percent, and negative by 23 percent of the ten year old children. Most of the children considered the behavior to be neutral; however, more ten year old and fewer six year old children considered the behavior to be neutral. The six year old children were more equally distributed in their choices, the eight year old children were more centered around the neutral category, and the ten year old children were most centered around the neutral category.

PNB photograph 11 (Eye Contact) was considered to be positive by 18 percent, neutral by 45 percent, and negative by 37 percent of the six year old children. The behavior was considered to be positive by 9 percent, neutral by 45 percent, and negative by 46 percent of the eight year old children. The behavior was considered to be positive by 4 percent, neutral by 45 percent, and negative by 51 percent of the ten year old children. While most of ten year old children

considered the behavior negative, most of the six year old children felt that the behavior was neutral. The eight year old children felt that the behavior was equally neutral and negative.

PNB photograph 12 (Eye Contact-Side Touch) was considered to be positive by 40 percent, neutral by 42 percent, and negative by 18 percent of the six year old children. The behavior was considered to be positive by 42 percent, neutral by 43 percent, and negative by 15 percent of the eight year old children. The behavior was considered to be positive by 51 percent, neutral by 37 percent, and negative by 12 percent of the ten year old children. Clearly the ten year old children were more centered around the positive choice than the eight year old or six year old children, respectively.

PNB photograph 14 (Level Eye Contact) was considered to be positive by 20 percent, neutral by 54 percent, and negative by 26 percent of the six year old children. The behavior was considered to be positive by 15 percent, neutral by 55 percent, and negative by 30 percent of the eight year old children. The behavior was considered to be positive by 11 percent, neutral by 67 percent and negative by 22 percent of the ten year old children. Again the ten year old children were centered around one choice, neutral, for the behavior while the eight year old and six year old children were more spread across the three choices.

PNB photograph 15 (Smile) was considered to be positive by 76 percent, neutral by 18 percent, and negative by 6 percent of the six year old children. The smile was considered to be positive by 86 percent, neutral by 9 percent, and negative by 5 percent of the eight year old children. The smile was considered to be positive by 93 percent, neutral by 6 percent, and negative by 1 percent of the ten year old

children. The ten year old children were more compactly centered around the positive choice, while the eight and six year old children were slightly more dispersed among the three choices.

From the data in Tables XVIII and XIX, it was noted that six year old children's responses tended to be more evenly dispersed among the three categories, eight year old children's responses were less dispersed and more centered around one choice, while ten year old children's responses tended to be centered around one choice. Even though the patterns of responses were similar, the choice patterns of the older children were more clearly defined than the younger children.

Because significant differences did exist among six, eight, and ten year old children in their perceptions of the PNB items, the ways in which these differences existed were reported. The data in Tables XX, XXI, and XXII present analyses of the PNB items for which there were reported significant differences.

The data in Table XX represents the analysis of the significant differences among six, eight, and ten year old Caucasian children in their perceptions of the PNB photographs. The Caucasian children differed by age groups in their perceptions on PNB photographs 1 (Teacher Behind Child), 2 (No Eye Contact), 3 (Desk Between-Distance), 4 (Eye Contact-Looking Down), 5 (Frown), 6 (Pointing), 7 (Reading-Touch), 8 (Touch-Hand on Hip), 9 (Reading-Closeness), 11 (Eye Contact), 14 (Level Eye Contact), and 15 (Smile); 12 of the 15 PNB items.

It was noted from the data in Table XX that for all 12 of the PNB items on which the Caucasian differed by age, the pattern was similar: (1) general choices tended to be alike; that is, six, eight, and ten year old children tended to like or dislike a particular item; (2)

TABLE XX

CHI SQUARE VALUES REFLECTING SIGNIFICANT DIFFERENCES AMONG SIX, EIGHT, AND TEN YEAR OLD CAUCASIAN CHILDREN IN THEIR PERCEPTIONS OF THE NONVERBAL BEHAVIOR OF TEACHERS

PNB Photograph	Age	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
1	6	44	57	49	4	15.73	.01
	8	61	88	52			
	10	87	79	35			
2	6	51	73	26	4	23.30	.001
	8	109	79	13			
	10	99	89	13			
3	6	42	58	50	4	25.23	.001
	8	40	88	73			
	10	16	107	78			
4	6	16	40	94	4	33.48	.001
	8	12	43	146			
	10	2	23	176			
5	6	15	24	111	4	21.89	.001
	8	9	33	159			
	10	2	19	180			
6	6	17	30	103	4	38.04	.001
	8	11	21	169			
	10	1	14	186			
7	6	84	53	13	4	17.45	.01
	8	141	44	16			
	10	152	41	8			
8	6	28	55	67	4	23.31	.001
	8	11	71	119			
	10	13	68	120			
9	6	69	56	25	4	30.69	.001
	8	118	66	17			
	10	142	53	6			
11	6	23	76	51	4	27.56	.001
	8	13	90	97			
	10	9	75	117			
14	6	30	82	38	4	10.70	.05
	8	31	111	58			
	10	21	136	114			
15	6	119	22	9	4	19.65	.001
	8	176	13	11			
	10	189	9	3			

however, six year old children tended to be generally more dispersed among the three choices, eight year old children tended to be less dispersed, and ten year old children seemed to be the most clearly centered around a choice, appearing to have a more clearly defined choice for the age group.

The data in Table XXI represents the analysis of the significant differences among six, eight, and ten year old Black children in their perceptions of the PNB items. The Black children differed by age on PNB photographs 1 (Teacher Behind Child), 3 (Desk Between-Distance), and 11 (Eye Contact). PNB photograph 1 (Teacher Behind Child) was considered to be neutral by more six year old children, neutral or positive by more eight year old children, and positive by more ten year old children. PNB photograph 3 (Desk Between-Distance) was considered to be approximately equally positive, neutral, or negative by the six year old children; neutral by more of the eight year old children; and negative by more ten year old children. PNB photograph 11 (Eye Contact) was considered to be approximately equally positive, neutral, or negative by the six year old children; neutral or negative by the eight year old children; and neutral by more of the ten year old children.

TABLE XXI

CHI SQUARE VALUES REFLECTING SIGNIFICANT DIFFERENCES AMONG
SIX, EIGHT, AND TEN YEAR OLD BLACK CHILDREN
IN THEIR PERCEPTIONS OF THE NONVERBAL
BEHAVIOR OF TEACHERS

PNB Photograph	Age	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
1	6	14	26	11	4	10.25	.05
	8	21	25	11			
	10	19	9	15			
3	6	17	18	16	4	11.09	.05
	8	15	24	18			
	10	4	15	24			
11	6	14	20	17	4	10.82	.05
	8	7	26	24			
	10	3	27	13			

The data in Table XXII represents the analysis of the significant differences among six, eight, and ten year old Indian children in their perceptions of the PNB photographs. The Indian children differed by age significantly on PNB photographs 3 (Desk Between-Distance), 11 (Eye Contact), and 12 (Eye Contact-Side Touch). PNB photograph 3 (Desk Between-Distance) was considered to be approximately equally positive, neutral, or negative by the six year old children; neutral by more eight year old children; and neutral by even more ten year old children. PNB photograph 11 (Eye Contact) was considered to be negative by more six year old, neutral or negative by more eight year old, and neutral by more ten year old children.

TABLE XXII

CHI SQUARE VALUES REFLECTING SIGNIFICANT DIFFERENCES AMONG
SIX, EIGHT, AND TEN YEAR OLD INDIAN CHILDREN IN
THEIR PERCEPTIONS OF THE NONVERBAL
BEHAVIOR OF TEACHERS

<u>PNE</u> Photograph	Age	Observed Frequencies			df	χ^2	Level of Significance
		Positive	Neutral	Negative			
3	6	12	18	13	4	11.20	.05
	8	14	28	12			
	10	6	40	28			
11	6	7	14	22	4	10.86	.05
	8	8	25	21			
	10	2	41	31			
12	6	14	21	8	4	19.43	.001
	8	17	29	8			
	10	48	22	4			

From the data presented in Tables XX, XXI, and XXII, it was noted that for PNE photograph 11 (Eye Contact) more six year old Caucasian children responded neutrally, more six year old Black children responded neutrally, while more six year old Indian children responded negatively. Eight year old Caucasian children responded neutrally and negatively; eight year old Black children responded neutrally and negatively; while eight year old Indian children responded negatively. Ten year old Caucasian children responded negatively; ten year old Black children responded neutrally; while ten year old Indian children responded neutrally.

It was also noted from the data in the tables that Caucasian children differed by age on 12 PNE items while Black and Indian children

differed by age on only 3 of the PNB items.

The pattern noted from the tables for the six year old children was more evenly dispersed among the three choices, while the eight year old children were less dispersed, and the ten year old children were more centered around a single choice.

Summary

This chapter presented tabulated results of the data obtained in the study. A statement of each null hypothesis was followed by a presentation of statistical treatment of the data and the results obtained.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND CONSIDERATIONS

Summary of the Study

This study was designed to explore differences in children's perceptions of nonverbal behaviors of teachers, as well as to design and test the Perceptions of Nonverbal Behavior Index (PNB), an instrument developed by the investigator to allow children to report their own perceptions of selected nonverbal behaviors of teachers. Differences in the perceptions of nonverbal behaviors of teachers were studied with a sample of 875 six, eight, and ten year old Caucasian, Black and Indian children from central Oklahoma elementary schools in Pawnee, Sapulpa, and Beggs.

The data collection took place during March and April of 1974. The instrument used was the Perception of Nonverbal Behavior Index, developed by the investigator. To examine for differences, the chi square was the statistical technique used. The .10 or beyond level of confidence was selected for significance in the statistical analysis.

Test-retest reliability of the PNB was checked by retesting one first grade, one third grade, and one fifth grade in Pawnee. An overall percentage of agreement was calculated to be 78.6 percent. Reliability was noted to increase with age increase of the children. Content validity of the PNB was judged by a panel of experts.

Analysis of the data from the investigation revealed (1) differences between boys and girls in their perceptions of teachers' nonverbal behaviors, (2) differences among Caucasian, Black, and Indian children in their perceptions of teachers' nonverbal behaviors, and (3) differences among six, eight, and ten year old children in their perceptions of teachers' nonverbal behaviors.

Findings and Conclusions

Due to the complexity of the findings of the study, findings and conclusions made by the investigator were reported together for clarity. Findings followed by conclusions from the statistical analyses of the data were:

(1) Null Hypothesis I, that there was no difference between boys and girls in their perceptions of the nonverbal behavior of teachers, was rejected for 4 of the 15 PNB items.

Boys and girls do perceive selected nonverbal behaviors of teachers differently.

(2) Null Hypothesis II, that there was no difference among Caucasian, Black, and Indian children in their perceptions of the nonverbal behavior of teachers, was rejected for 7 of the 15 PNB items.

There were differences found among Caucasian, Black, and Indian children for over half of the PNB items. Caucasian, Black, and Indian children do perceive selected nonverbal behaviors of teachers differently.

(3) Null Hypothesis III, that there was no difference among six, eight and ten year old children in their perceptions of the nonverbal behavior of teachers, was rejected for 14 of the 15 PNB items.

There were differences found among six, eight, and ten year old children on most of the PNB items. Six, eight, and ten year old children do perceive selected nonverbal behaviors of teachers differently.

General Findings and Conclusions

Significant findings not stated in the formal hypotheses but appearing in the analyses of the data were the following:

(1) There were more differences found among children in their perceptions of the nonverbal behavior of teachers when different ages were considered than when different subcultural backgrounds or different sexes were considered.

Children appear to be more different in their perceptions of the nonverbal behavior of teachers as they grow older. This may be due to more experience with and thus more accurate reading of teachers' nonverbal behaviors, or it may be due to more personal awareness in the responses to the PNB.

Perceptions did not differ so greatly by culture or by sex. This may indicate that children remain identified with the same culture or sex group, but they do not remain identified with the same age group.

(2) There were more differences found among children in their perceptions of the nonverbal behavior of teachers when different subcultural backgrounds were considered than when different sexes were considered.

This may indicate that there are more differences in perception among subcultures than between sexes.

(3) The general overall pattern of value classifications of the PNB items was similar for all children. The differences found were in

proportions of children making a particular choice and in level of confidence reported for the differences.

This may indicate that the PNB is a good indicator of general perceptions of selected nonverbal behaviors of teachers. Modifications to the instrument or to the methodology may be indicated in order to find finer distinctions.

(4) Most children generally categorized PNB photographs 7 (Reading-Touch), 9 (Reading-Closeness), 12 (Eye Contact-Side Touch), and 15 (Smile) as positive; photographs 1 (Teacher Behind Child), 8 (Touch-Hand on Hip), 13 (Helping-Desk Between), and 14 (Level Eye Contact) as neutral; and photographs 4 (Eye Contact-Looking Down), 5 (Frown), and 6 (Pointing) as negative with differences occurring only in proportion of agreement.

These data may reveal general patterns of perception held in common by varied groups of children. These patterns could be helpful to teachers in experimenting with various nonverbal behaviors.

(5) PNB photographs 2 (No Eye Contact), 3 (Desk Between-Distance), 10 (Eye Contact-Front Touch), and 11 (Eye Contact) revealed general disagreement by culture as to the value classification of the photograph.

This may indicate that PNB photographs on which there is general disagreement may be more subtly discriminating items than the remaining PNB items. Distinctive cultural patterns of perception may be revealed by exploring these items more fully.

Findings and Conclusions Related to

Boys and Girls

Significant differences found between boys and girls in their perceptions of the nonverbal behavior of teachers were the following:

(1) While general patterns for boys and girls were similar, differences existed in the proportions of boys and girls who made a particular choice. Girls tended to be centered around a choice in a greater proportion than did boys.

Girls seemed to have more clearly defined choice patterns in their perceptions of the nonverbal behavior of teachers than did boys.

(2) Fewer boys than girls disliked negative nonverbal teacher behaviors; more boys than girls disliked close, physical touch of the teacher; and more boys than girls liked the teacher helping from behind the desk.

Boys' choices seemed to indicate more tolerance for distant or negative behaviors than girls.

(3) There were more differences reported by the PNB between ten year old boys and girls than between eight and six year old boys and girls, respectively.

This finding may indicate that boys perceive increasingly differently from girls as they grow older. This may be due to value systems becoming more distinct between boys and girls as they grow older.

(4) Differences reported by the PNB between ten year old boys and girls were reported at a higher level of significance than eight and six year old boys and girls, respectively.

This finding also may indicate that boys perceive increasingly differently from girls as they grow older. This may be due to value

systems becoming more distinct between boys and girls as they grow older. Findings (3) and (4) may also indicate that older boys and girls have more personal awareness in responding to the PNB.

(5) The PNB items which revealed significant differences among Caucasian, Black, and Indian boys were not the same PNB items which revealed significant differences among Caucasian, Black, and Indian girls.

This finding may indicate that perceptions of selected nonverbal behaviors of teachers may be different between sexes for different cultures. This may be due to cultures having different value systems for boys and girls.

(6) There were more differences found between Indian boys and girls than between Caucasian or Black boys and girls.

This finding may indicate that perceptions of nonverbal behaviors of teachers between boys and girls are more different for Indian children than for Caucasian and Black children. This may indicate that value systems between the sexes are more distinct in Indian cultures.

Findings and Conclusions Related to Subcultures

Significant differences found among Caucasian, Black, and Indian children in their perceptions of selected nonverbal behaviors of teachers were the following:

(1) The PNB reported more differences among ten year old children of different subcultural backgrounds than among eight and six year old children, respectively.

This finding may indicate that children of different cultures may perceive teachers' nonverbal behaviors increasingly differently as they

grow older. This may be an indication that value systems of different cultures are perceived to become more distinctive by children as they grow older. This would support literature which reports that young children do not perceive racial differences as clearly as older children.

(2) The differences reported by the PNB among ten year old children of different subcultural backgrounds were reported at higher levels of confidence than eight and six year old children.

This finding may indicate that children of different subcultures may perceive nonverbal behaviors of teachers increasingly differently as they grow older.

(3) The choices of Black children on the PNB tended to be more dispersed among the three value classifications than the Indian or Caucasian children, respectively.

This finding may indicate that the perceptions of selected nonverbal behaviors of teachers may be more varied and less centered around a single choice for Black children than Caucasian or Indian children. This may be an indication that Black children as a group have a less clearly defined value system than do Indian or Caucasian children.

(4) Different PNB items revealed differences between Caucasian boys and girls than between Black and Indian boys and girls.

This finding may indicate that perceptions of selected nonverbal behaviors of teachers may differ between sexes among different subcultures. This may support the idea that perceptions of nonverbal behavior may be different for boys and girls among different subcultures. This may also indicate that value systems for boys and girls

are different among different subcultures.

(5) Caucasian boys tended to be grouped around one category while Black and particularly Indian boys tended to be more dispersed.

It was concluded that Caucasian boys were more cohesive as a group with perhaps more clearly defined values than the Indian or Black boys. This might be due to an acculturation factor: Black and Indian boys might be acculturated into a white, middle-class culture around which the school is based in varying degrees. It may be that some Black and Indian boys would perceive according to specific values related to their cultural background, while others might perceive according to values more related to the white, middle-class schools in which they spend time.

(6) Caucasian and Indian girls had similar patterns of choices, while Black girls had different patterns.

Black girls perceived the teachers' nonverbal behaviors differently than Caucasian or Indian girls. This might indicate different perceptions related to different sex role definitions in the Black culture than Caucasian or Indian cultures. Another indication may be that group identity might be stronger for Black girls than for Caucasian or Indian girls. Another indication might be that the sample involved in this study was made up of a single Black subculture, and multiple Caucasian and Indian subcultures.

(7) Caucasian six year old children consider eye contact (PNE photograph 11) to be neutral while older Caucasian children consider eye contact increasingly negative with age. Black and Indian six year old children consider eye contact to be negative and consider it increasingly more neutral with age. Caucasian children have different

perceptions of eye contact with teachers than Black and Indian children when they enter school. Then patterns begin to reverse as more time is spent in school experience. This may be due to the wide use of eye contact by teachers in the elementary school.

Findings and Conclusions Related to Ages

Significant differences found among six, eight, and ten year old children in their perceptions of nonverbal behavior of teachers were the following:

(1) Six year old children were more dispersed among the three value classifications in their choices on the PNB than eight or ten year old children, respectively; ten year old children were more tightly centered around one choice.

Younger children have more varied perceptions perhaps based on more varied values, while older children tend to be grouped around a single set of perceptions perhaps based on a more homogeneous set of values. This finding may indicate more acculturation into the school culture as school experience increases. It might also indicate peer subcultures among children approaching adolescence: peer pressure or group cohesiveness might be stronger among older children among younger children.

(2) Overall, ten year old children showed more sex differences and cultural differences in perception of selected PNB items than younger children. This might indicate a pattern where younger children enter school with broad differences in nonverbal perception among and within cultural groups, then begin to differentiate between and identify with specific cultural groups or subgroups. This would support

literature which reports that younger children have less awareness of racial differences than older children.

(3) Caucasian six, eight, and ten year old children were different on more PNB items than Black or Indian children.

It seems that Caucasian children change their nonverbal perceptions with age more than Black and Indian children. This might indicate that the Black and Indian children's perceptions are based on cultural values more clearly defined than Caucasian cultural values. This would indicate more subcultures existing within the Caucasian group of children. The finding might also indicate that role definitions change more with age for Caucasian children than for Indian and Black children; Caucasian children may change their perceptions more than Black or Indian children.

Findings and Conclusions Related to the PNB

Based on the analysis of the data and experience with the PNB in this study, findings and conclusions concerning the PNB were the following:

(1) Children were able to respond to the 15 PNB items more easily and quickly with age. Six year old children tended to have difficulty dealing with a group of 15 photographs and were more able to consider the photographs one at a time or in small groupings. This finding supports Debes (1974) in his statement that children can read visually small areas better than large ones.

The data reported by the PNB for six year old children was more dispersed among the three value classifications than eight and ten year old children, respectively. While this finding might indicate

differences in the children, it might also indicate that the PNB caused the responses to fall into this pattern.

(2) The PNB was designed to reveal differences as reported by the children themselves. The PNB did indicate differences in children's perceptions of selected nonverbal behaviors of teachers. Children seemed enthusiastic about working with the PNB.

(3) The PNB items revealed general patterns of perceptions of the nonverbal behaviors of teachers more than it revealed specifically discriminating patterns of perception differences. This might indicate that in order to be more discriminatory, the PNB items might be more subtly distinctive rather than obvious in nonverbal behaviors portrayed. This finding might also indicate that there are only a few selected differences among children in their nonverbal perceptions; general patterns might, in fact, be the same among subcultures or between sexes.

(4) Analysis of the data collected by administering the PNB revealed many directions for further research.

(5) Test-retest reliability for the PNB was established at 78.6 percent of agreement. The instrument was more reliable with older children than with younger children. The test-retest reliability was 73.7 percent for six year old children, 76.2 percent for the eight year old children, and 85.3 percent for the ten year old children.

Recommendations for Further Study

This research study is but a first step toward determining children's differences in perception of nonverbal behaviors of teachers. The results of this study indicate that children differ in many ways in their perceptions of the nonverbal behaviors of teachers. Such

numerous and complex findings would indicate that further research should be done to support and augment specific findings revealed by this study. Further research to augment the present findings should include:

(1) Separate parts of the study should be replicated. This study was designed to explore a relatively unresearched area. The findings of this study were so numerous and complex that further research studies would reveal data more clearly if the studies were more narrowly delineated.

(2) The study should be done with other populations of the same makeup, of other subcultural groups, or urban groups, and of other geographical groups.

(3) The study should be done with more specifically defined cultural groups than those involved in the present study.

(4) The PNB should be used with many groups of children and refined with use.

(5) It is interesting to note that parts of the PNB revealed differences with different combinations of children. Specific items of the PNB should be tested and the data analyzed item by item.

(6) Younger children tended to be overwhelmed at the number of items on the PNB. The instrument should be shortened to include only those items which were most discriminating and re-administered to a similar population.

(7) The PNB should be used with older children and adolescents as well as adults.

(8) Perceptual differences are linked with many variables as discussed in Chapter II. Correlational studies should be designed to investigate the relationships between children's perceptions of the

nonverbal behavior of teachers and other personal or academic variables.

(9) Correlational studies should be undertaken to investigate the relationship between teachers' perceptions of their own nonverbal behaviors and students' perceptions of their nonverbal behaviors.

(10) Other instruments should be designed or the PNB should be refined and expanded to yield more accurate reporting of perceptions by children. No instruments were found to assess children's perceptions of the nonverbal behaviors of teachers as reported by the children themselves.

(11) The PNB photographs depicted a single teacher model and a single child model. PNB forms depicting different models to correspond with the sample characteristics should be developed and tested. A PNB form with an abstract teacher and child representation should be developed and tested.

(12) Differences in perception were found to be more numerous and more highly significant with older children than younger children. Longitudinal studies should be undertaken to consider changes in perceptions of nonverbal behavior by children.

(13) With every group of children tested, at least a few children categorized the very obviously positive photographs into the negative category. Investigations should be made with these individual children to gain more insight into their choices. The PNB might be valuable for enhancing communication in counseling or therapy with children.

(14) As the body of knowledge concerning children's perceptions of the nonverbal behavior of teachers grows, research designs should be formulated which allow for the possibility of establishing cause and effect relationships.

Theoretical Considerations

The initial conceptualization of this study was quite simple; two or three questions were asked about children's perceptions of the non-verbal behavior of teachers. However, as the actual study developed, it became more complex with almost a mushrooming effect. Instead of pointing to answers, the results of this study lead to further questions: Exactly how are children different in their perceptions of the nonverbal behaviors of teachers? Why are children different in their perceptions? What effect does this have on the child-teacher relationship? What effect does this have on the child? How will these findings be used by educators in decisions made for school systems? What implications do these findings have for teacher education programs? What implications do these findings have for the classroom teacher? Are the children actually perceiving differently or are they simply perceiving accurately? Do ~~teachers actually send different nonverbal messages to~~ different children? Are differences in perception based on differences on values? If so, what happens when multicultural children with multiple sets of values are placed on a school organized around a single set of values?

The findings of the study established that children perceive the nonverbal behavior of teachers differently, and that a child's age, subculture, or sex may be factors influencing his perceptions. How will these findings be used? What effect will this knowledge have on decisions made by educators?

The finding that children perceive nonverbal behaviors differently might lead to the assumption that differences in perception are based on differences in values. If this assumption is true, then the

question raised is of moral importance as well as educational importance. Earlier in this study the assumption was posited that public schools are organized around a white, middle-class value system. If this assumption is true, then what happens to children holding one set of values when they are forced to exist in a system which imposes a different set of values? This is the overriding question raised by the findings of this study. Certainly this question will lead to conclusions by educators which will influence the development and use of curriculum materials designed around processes that respect and enhance children's differences rather than minimize and negate the differences. Decisions must be made which will influence teacher education programs to include more personal awareness and human relations training for enhancing child-teacher interactions.

In considering ways then to deal with differences in children's perceptions and values, another question is raised. What is the children's perceptions measured by the PNB were influenced by accurate perceptions in the classroom? What if teachers actually do send different messages nonverbally to different children? This question raises an additional dilemma for educators. When undesirable messages are perceived by a child from a teacher, the only method children have as protection is tuning out mentally or dropping out of the relationship physically by dropping out of school. Then younger children do not often have the option of dropping out of school. Changing the relationship is not an option in the schools as they exist. Children are not allowed to shift to teachers with whom they feel most comfortable. The dignity of humanness makes implicit the freedom to choose one's own

relationships. However, public schools are not organizationally capable of coping with such a freedom.

In designing the study, it was noted that the data which exists concerning differences in children's perceptions of the nonverbal behaviors of teachers is inferential data; even more information was found in the form of opinionated "folk tales." Most of the studies investigating perceptions of nonverbal behavior were done by investigators observing children's responses to nonverbal behaviors and inferring meanings from those observations. The children themselves had not been asked to report their own perceptions. An instrument designed to allow children to report their own perceptions could not be found. It was a challenge to develop such an instrument.

In using the PNB, which was developed specifically to allow children to report their own feelings, it was noted that children reacted positively. They seemed sincere and honest in their responses; they were able to follow directions correctly and efficiently; and they seemed enthusiastic about and involved in the process used with the PNB. Furthermore, the children seemed sincerely interested in the study and its purposes. Therefore, it was concluded that children are able and willing to report their own feelings and ideas.

It seems a demeaning act to study children yet never directly consult them about their own ideas and behaviors. And further, it seems arrogant, assuming, and unscientific for investigators to think they are able to infer the personal meanings and perceptions of other human beings accurately from observations of overt behaviors.

This study has been but a first step in investigating children's differences in perceptions of the nonverbal behaviors of teachers, as

well as a first step in allowing children to provide investigators with valuable and useful information concerning them. Hopefully, this step will lead to more investigations allowing new insights into child-teacher interactions.

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APPENDIX

PERCEPTIONS OF NONVERBAL BEHAVIOR INDEX

(PNB) AND RESPONSE SHEET



1



2



3



4



5



6



7



8



9



10



11



12



13



14



15

I would like best to be in
this picture.

I don't know whether or
not I would like to be in
this picture.

I would not like to be in
this picture.

(Identification)

VITA ^y

Linda Chartier Norton

Candidate for the Degree of

Doctor of Education

Thesis: ELEMENTARY SCHOOL AGE CHILDREN'S PERCEPTIONS OF TEACHERS'
NONVERBAL BEHAVIOR

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