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# How Young Children Perceive Their Teachers: A Developmental Study

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# HOW YOUNG CHILDREN PERCEIVE THEIR TEACHERS:

# A DEVELOPMENTAL STUDY

by

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ABSTRACT

HOW YOUNG CHILDREN PERCEIVE THEIR TEACHERS:
A DEVELOPMENTAL STUDY

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This is a developmental study of how young children perceive their teachers. The primary aims of the study are: 1) to provide a developmental picture of elementary school children's perceptions of their teachers, and 2) to determine the accuracy of teachers' awareness of the perceptions of the children. Instrumental to these primary aims are two subordinate objectives: 1) to construct a scale of reactions to teacher characteristics/behaviors that are understandable for young children and yet meaningful to adults, and 2) to test the utility of the scale for obtaining measures of affect. Within each of two schools, approximately 15 students were randomly selected from each of four, i.e., kindergarten (K), second (2), fourth (4), and sixth (6), grades. Thirty-two teachers of grades K, 2, 4, and 6 were subjects for the second part of this study. A rating scale was adapted for use by young children in which they indicated how they would feel in response to various characteristics by pointing to faces which varied from smiling to frowning. The teachers were asked to respond as to how they thought each situation would be responded to by the average boy and by the average girl in the grade that he/she taught. Group administration, using paper-and-pencil questionnaires, were employed with teachers. Through a factor analysis of the students' responses, categories (12 factors) were derived to define the underlying dimensions of perceived teacher characteristics and behaviors, instrumental to the primary aim stated above. We sought to determine how the children at the

different grade levels reacted on each of these factorial dimensions, and whether the sex of the child made a difference. An ANOVA and Newman-Keuls Test were performed for these purposes. Another ANOVA was performed to compare students' and teachers' responses to the questionnaire items. Findings suggested that concrete, observable teacher behaviors were readily perceived by young children. On some factor dimensions, developmental trends and sex differences were indicated. The teacher X student comparison may be used to provide feedback important to teachers, reflecting similarities and differences between teachers' beliefs regarding how they affect students and the students' actual reports of their reactions to teacher characteristics and behaviors in the several factorial domains.

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## Introduction

In the last decade there has been an increase in the demand for accountability in education. In line with this trend, many studies of teachers' performance have been conducted. Various categories of teacher characteristics and behaviors have been included in these studies. Most typically each category has been presented as a bipolar continuum. The main categories have been: 1) human qualities as a person, 2) physical appearance, grooming, etc., 3) quality and performance in maintaining discipline, 4) participation in pupils' activities, games, non-academic interests, 5) performance of teaching skills, and 6) teacher-pupil relations. The first five categories were labelled by Jersild (1940). With the addition of the sixth category, these categories cover the nominal classes into which fall the teacher characteristics covered by the literature. Most of these studies were done with junior high and high school level students. Few attempt to say anything regarding changes in how teachers are perceived as children get older.

Though numerous articles have asked either students or teachers about their perceptions of teacher behavior/characteristics, none of the recent ones appear to have compared the perceptions of the two groups to determine the teachers' accuracy of awareness of the students' perceptions. In earlier research on perception of teachers, Jenkins and Lippitt (1951) examined the interpersonal perceptions of teachers, students (13 and 14 year olds), and parents. With regard to the teacher-student relationship, they reported that the control and power of the teachers were recognized by both groups. Also, while teachers were found to be concerned about personal, friendly relations with students, the students did not seem to

be aware of this interest of the teachers.

Person Perception

Until the last decade, the development of person perception had been studied infrequently. Werner's organismic theory was the basis for several earlier studies (Gollin, 1958; Signell, 1966; Scarlett, Press, & Crockett, 1971). Werner (1948) held that development is a process of transition from global, undifferentiated states to states of greater specification, differentiation, and hierarchic integration. Similarly, a developmental shift from egocentrism to perspectivism has been posited (Langer, 1970; Werner, 1948). More recent studies of person perception have not been centered on any one theory (Livesley & Bromley, 1973). In more concrete terms they state that both the number of categories and the use of inferential, abstract, covert categories have been found to increase with age.

With regard to the differential interaction with adults of the same or opposite sex, Livesley and Bromley (1973) reported that children produced longer descriptions and used more personality statements in describing people of the same sex, as compared to people of the opposite sex. These findings could have implications for this study since women teachers predominate in this country, particularly at the elementary school level.

Student Gender X Teacher Interaction

A majority of the research on interpersonal perceptions within the classroom has addressed the student gender X teacher interaction. Evidence has suggested that different teacher responses to deviant behavior were made to boys and girls in the classroom (Serbin, O'Leary, Kent & Tonick, 1973). Boys were reported to be more likely to commit an aggressive or destructive act in nursery school classrooms, and there was a

greater probability of the teacher's responding to it if the actor were a boy. The nature of the response differed for the two sexes: girls were softly reprimanded while boys received a loud reprimand, restraint, or explicit directions on the desired behavior. Moreover, the teachers were not aware of responding differentially to boys and girls, or of providing different amounts of positive or instructional attention to either sex.

In terms of social norms, it has been proposed that the behavior of boys in the classroom is unacceptable to teachers, who generally attempt to perpetuate middle-class standards of what is "good" behavior. Girls, on the other hand, were thought to display behavior more in conformity to the teacher's standards. Meyer and Thompson (1956) found that boys received more disapproval from teachers and both boys and girls nominated more boys for disapproval.

Various explanations can be offered to explain the different behavior of boys and girls in the classroom. The general empirical finding has been that boys show clear-cut preferences for masculine activities, toys, and objects by the age of three or four; they show earlier and sharper awareness of sex-appropriate behavior and interests than do girls (Mussen, 1969). Hence, there is the suggestion that they are more aggressive and active than girls because of differences in socialization processes to which they are exposed. Sex-role expectations and conventions appear to be more clear-cut for the boys. However, Bee (1974) points out that the males of most mammalian species are more aggressive then the females despite differences in life settings. Furthermore, human girls and female monkeys have both been found to employ submissive behaviors to establish and maintain a hierarchy of relationships (Angermeier,

Phelps, Murray, & Howanstine, 1968; McCandless, Bilous, & Bennett, 1961).

Irrespective of the possible explanations (contingencies, socialization/norms, innate/biological) for the differences in behavior of boy or girl students in the area of behavioral control, it is generally accepted that boys are much more likely to be criticized by teachers than are girls (Brophy & Good, 1970; Meyer & Thompson, 1956). Boys more often report a dislike of school (Dion, Berscheid, and Walster, 1972) as a result, while girls react more favorably toward their teachers than do boys (Leeds & Cook, 1947).

Recent evidence suggests that behavioral control is perceived by the child as interrelated to his/her definition of success or failure in the classroom (Dweck & Bush, 1976; Dweck, Davidson, Nelson, & Enna, 1978).

Dweck and Goetz (1978) concluded that the different causal perceptions of boys and girls in the classroom were the result of differences in teachers' behavior toward them. They found that teachers more often provided boys than girls with negative feedback regarding non-intellectual aspects of their work and with feedback emphasizing effort in achievement situations. They more often provided girls with negative feedback regarding the intellectual quality of their work, and they more often provided boys than girls with positive feedback contingent on the intellectual quality of their work.

This repertoire of differential feedback from teachers helps to determine boys' positive feedback noncontingent on the intellectual quality of their work. Girls are more likely to attribute failure to lack of ability and less likely to attribute failure to motivational factors than boys (Dweck & Repucci, 1973). Since the negative feedback of teachers toward boys refers to intellectually irrelevant aspects of

their performance, it is viewed by them as reflecting teachers' attitudes toward them and not as an objective evaluation of their academic performance. Also, teachers commonly attribute boys' failure to lack of motivation. Therefore, boys learn to attribute failures to this and not to their abilities. On the other hand, since teachers generally have a positive attitude toward girls, they learn to attribute failures as related to their abilities. Teachers' negative feedback is primarily directed toward the intellectual quality of girls work and not motivation (Bar-Tal, 1979).

Also of relevance to the present study of teacher-pupil interaction is the sex-linked developmental difference in peer- and self-orientation. It appears that girls gain the approval of both adults and peers by conforming to one standard of behavior, whereas boys are forced to choose between behavior approved by peers or that approved by adults. Evidence indicates that boys become increasingly likely over time to choose in favor of the peer (Dweck & Bush, 1976). Boys have been found to be more peer-oriented at the 5th grade than girls. Self-oriented girls have more influence on their classmates than peer-oriented ones, with the reverse true for boys (Hollander & Marcia, 1970). Thus, the child's relationship to his/her peer group probably influences his/her perception of the teacher. Furthermore, it appears that older elementary school children (4th and 5th grades) are more anxiously affected in evaluative situations with same sex adults than were younger elementary school children (1st and 2nd grades)(Hill & Moely, 1969).

In summary, it seems impossible to describe the student-teacher relationship in simple cause-effect terms. Rather, a host of questions come to the fore. Do different behaviors of boys and girls in the

classroom cause teachers to react to them differently; or does previous teaching experience and/or sex stereotypes cause the differential behaviors towards boys and girls? Can the changes in children's perceptions of their teachers across grades be understood by looking at these issues? Are teachers aware of the developmental changes influencing children's perceptions of them?

Need for the Study

The educational literature is filled with surveys of what junior high and high school students like and dislike in teachers. One such study by Tiedeman (1942) provides insight into changes in perception of teachers over grades seven, eight, and nine. The domineering teacher was found to be liked least by ninth grade pupils, while the seventh and eighth graders were less disturbed by this teacher behavior. The seventh graders had the greatest dislike for a teacher who punishes, frightens, or threatens them to secure discipline, while the eighth graders were most hostile toward a teacher who ridicules, nags them, or is sarcastic. However, this study, like many others, did not consider young children's perceptions and did not use an objective measure of their likes and dislikes. This is a primary interest of the present study.

Another area of interest in the present study is the growing awareness of the importance of affect to the development of the "total person." The Social Science Research Council Committee on Social and Affective Development asserts that emotions are "perhaps the weakest link in our understanding of child development" (Read, 1980, p. 34). They plan to study the role of emotions in socialization and the nature and growth of children's early emotional experiences. Within the field of education, the importance of teachers' understanding of students' perceptions to the

total learning experience is not a new issue (Combs, 1962; Gage, 1972).

> Many studies on "accuracy in perceiving other persons" have been based on the simple procedure of asking one person to fill out a questionnaire as he thought a second person would fill it out. If the second person then filled out the questionnaire, the first person's "predictions" could be scored for their accuracy against the actual responses of the second person. The greater the accuracy, the greater the first person's "understanding" of the second. And the greater his "understanding," the more effective the first person should be in his relationships with the second. Teachers who are more accurate in predicting students' responses should be more effective in relationships with their students. (Gage, 1972, p. 178)

Teachers have been found to change in the direction of what students report as the characteristics of "ideal" teachers as a result of getting feedback. Furthermore, high proportions at the elementary, secondary, and higher levels of education have volunteered to let themselves be rated by students and receive confidential reports of the ratings (Gage, 1972). Our interest in this part of the study is primarily to compare student and teacher perceptions, in the manner reported by Gage, and to provide feedback to teachers in general.

Purpose

The primary aims are: 1) to provide a developmental picture of elementary school children's perceptions of their teachers, and 2) to determine the accuracy of teachers' awareness of the perceptions of the children. Instrumental to these primary aims are two subordinate objectives: 1) to construct a scale of reactions to teacher characteristics/

behaviors that are understandable for young children and yet meaningful to adults, and 2) to test the utility of the scale for obtaining measures of affect.

Technical Development

The "Faces" scale (Kunin, 1955), which graphically depicts moods ranging from happy through neutral to sad, presents itself as an instrument that can meet the need for measures to establish dimensions of young children's perceptions of their teachers. The first use of the "Faces" scale was in a study of employee attitudes by Kunin (1955). When compared with other graphic rating measures and the Job Description Index (JDI), the "Faces" ratings were found to be easiest to administer, produced the best distribution characteristics, and demonstrated the most validity (Smith, Kendall, & Hulin, 1969). Variations of the "Faces" scale have included male, female, and circle-type drawn faces. The original derivation of these scales included a set of eleven faces (Kunin, 1950).

In a developmental framework, the "Faces" can be used to indicate the teacher characteristics and behaviors that evoke positive or negative reactions by children at different age or grade levels. Such findings can be used to provide teachers with important feedback, enhancing clarity of awareness of the extent and nature of their impact upon students. If, as part of a research study, one also administers parallel scales and questions to teachers to obtain their estimates of scale value that would be assigned in each instance by the "typical" student, then a comparison of teacher expectations with the actual values assigned by students becomes another potentially revealing analysis. These were the primary technical and analytic foundations upon which the present study was built.

The incorporation of the "Faces" scale in such a study could also provide evidence as to the ability of young children to use a rating scale to make subjective judgments. Also, it can provide further understanding of whether young children employ the same judgment strategies attributed to adults or apply unique approaches of their own. Peevers and Secord (1973), in a study of the attribution of descriptive concepts to persons, found evidence for developmental change in the direction of more sharp differentiation of person conceptions with age.

> What emerges first is the establishment of relations between young children in terms of feelings, feelings that are highly egocentric and having little cognitive content, and along with these, broad, global impressions and role-category knowledge of peers . . . This sequence of conceptual development would be consistent with the ideas of both Jean Piaget and George Herbert Mead. (Peevers & Secord, 1973, p. 127)

On the other hand, Butzin and Anderson (1973), in a study of the judged attractiveness of toys, and Hendrick, Frantz, and Hoving (1975), in a study of impression formation, found evidence for no such differentiation with age.

Technical Questions Confronted

In order to adapt the "Faces" scale to the present purposes, it was necessary to resolve a number of issues with respect to its use by children and subsequently its use by teachers. With regard to its use by children, the following questions were confronted: 1) how many "faces" and how to depict them, and 2) how to integrate the "Faces" scale and questionnaire items for the present purposes. With regard to its use by teachers, a major question confronted was what testing format

and procedure should be used.

The "Faces" scale was originally derived for use by adults (Kunin, 1950; 1955). Several studies with adults have indicated that a set of seven rather than eleven that Kunin used would be adequate for the young children in the present sample. Secondly, the depiction of the "Faces" was an issue of concern. The two developmental studies (Butzin & Anderson, 1973; Hendrick et al., 1975) which used a version of the "Faces" scale, approached the depiction of the faces in a simpler, less exacting manner than Kunin, who used more realistic sketches. The circle form of the "Faces" was used--with the eyes, nose, and mouth simply drawn as in the popular smiley faces. The diameter of the face was reported in both studies and, in one study, the width and height of the mouths were reported (Butzin & Anderson, 1973). It was decided that some techniques from both of the development-related studies would be utilized to construct the "Faces."

A second area of concern was the formulation of a questionnaire, 1) whose items could be meaningfully applied to the "Faces" scale, and 2) which was understandable to elementary school children. This is in part a question of format and in part a question of content. Evidence exists (Borke, 1971; 1973), which suggests that young children's social sensitivity increases with age, and challenges the position that young children are egocentric and unable to understand another person's viewpoint, as Piaget (1967) had proposed. Borke's "Interpersonal Awareness Test"--consisting of a series of short stories and a set of faces from which to choose the appropriate child's face for each story--provides a task within the response capabilities of very young children. It requires behavioral rather than verbal responses. The story format was of interest

for the present study. That the child empathize or identify with the child in the story was desired. The "Faces" could be used to quantify the child's reported emotion to each questionnaire item, which would represent a particular teacher behavior or characteristic.

In the field of education, scales have been constructed and open-ended questionnaires have asked students to list characteristics or write essays regarding "teacher evaluation." Generally, in reporting the findings, authors give what they judge to be the categories of behavior and characteristics represented, such as, teacher personality, teaching skills, and teacher-pupil relations. It was of interest here to derive questionnaire items understandable to the children. This made a pilot investigation a necessity.

Lastly, with regard to the story format, it was decided that the children would be asked to report how he/she would feel if "a teacher" acted in a certain way. The interest of the study was in what teacher behaviors and characteristics the students associated with feeling "good" or "bad" and how this compared with the teachers' perception of their effect upon students.

With regard to its use by teachers, the following question was confronted in adapting the "Faces" scale for the present purposes. Boynton (Note 1) stated that adults reportedly experience some degree of insult when asked to evaluate their jobs using the non-verbal "Faces" scale. It was therefore speculated that they might be insulted by being asked to use the faces constructed for the children. Thus, a paper-and-pencil type questionnaire was used to test them in a group.

In conclusion, adapting the faces for use by the children required the confrontation of several issues. How many faces to use and how to

depict them were elementary questions. Others involved integrating the "Faces" scale and questionnaire items for the present purposes, with regard to format and content. Items needed to be behavioral, concrete, and meaningful in relation to the rating scale format. There were fewer concerns in adapting the "Faces" for use by the teachers.

## Method

### Pilot Investigation

Before the use of the "Faces" scale was introduced, demonstration of the child's ability to understand the literal content of each item was important. Ten children (4 males and 6 females 5 years of age), attending the ODU Child Study Center and another Day Care Center in the Norfolk area during the Summer of 1979, were selected to serve as subjects in the pilot investigation. They were students who were to enter kindergarten in the Fall. An instrument was constructed through refinement of a list of teacher characteristics and behaviors derived from the literature on teacher evaluation. Initially, the list of items consisted of 12 items in each of six categories: 1) human qualities as a person, 2) physical appearance, grooming, etc., 3) quality and performance in maintaining discipline, 4) participation in pupils' activities, games, non-academic interests, 5) performance of teaching skills, and 6) teacher-pupil relations. The total list of 72 items were randomly ordered for the pretest administration.

If kindergarteners could understand the items, it was assumed that the second-, fourth-, and sixth-graders could also. The tape recorded interview sessions were studied to determine the level of comprehension of each of the items. The experimenter told the child that they were going to play a game. The child was told to think of teachers which he/she had had, and then to pick out some "of the best" teachers and some teachers who were "not so good." Then the child was given some of the items of teacher behavior/characteristics, and oral probes were used to see if he/she understood each one. Finally, if not already indicated,

the child was asked whether he/she would like or dislike such a teacher.

The experimenter told the child that he/she would be given 10 statements and then they would stop for a break, during which time the child could either talk to the experimenter about anything he/she wanted and/or get out of his/her seat. After 1 or 2 minutes, 10 more items were presented, and so on until the child showed signs of being tired or losing interest. (The kindergartener could usually respond to about 20-25 items before expressing tiredness without any warm-up or rest intervals.) Where one subject ended in the item list became the starting point for the next subject, so that all items in the list were equally well covered. Feedback from the children led to modifications along the way in terms of rewording the items for better understanding.

The feedback from the day care children led to another step in the construction of the instrument. The item list was made shorter to accommodate the limited attention span of the younger children and to make the items given to all subjects equivalent. This made possible the study of the discriminability of items within each of the hypothesized categories of teacher behavior/characteristics. Also, the need for some basic rules for sentence construction became apparent. They included: 1) make the items describe specific and tangible teacher behavior/characteristics, 2) eliminate double-barreled items (those referring to two aspects or dimensions of behavior), 3) avoid absolute modifiers and simplify modifiers, and 4) make active as opposed to passive statements.

Data Collection from School Children and Teachers

Subjects. From each of two schools in the Chesapeake, Virginia, Public School System, approximately 15 students were randomly selected from one classroom in the kindergarten (K), second (2), fourth (4), and

sixth (6) grades. Approximately half of the groups of 15 were male and half female. These subjects were chosen from those returning a Parental Consent Form (see Appendix A). The classrooms were selected to insure a representative range in ability (based on reading scores) within that grade level. Subjects were screened so that those not in age-appropriate grades (repeaters) and "special" students were not used.

More specifically, across both schools, at grade K, 34 students were selected (18 boys, 16 girls). The mean age was 5.00 years and the SD = 0.348. At grade 2, 32 students were selected (16 boys, 16 girls). The mean age was 7.09 years and the SD = 0.466. At grade 4, 31 students were selected (16 boys, 15 girls). The mean age was 9.29 years and the SD = 0.461. At grade 6, 34 students were selected (17 boys, 17 girls). The mean age was 11.35 years and the SD = 0.646. Two K-level students (one from each school) were eliminated from the study because they were unable to use the "Faces" scale meaningfully.

All 36 of the teachers of grades K, 2, 4, and 6 classes at the two schools, were asked to be subjects for the second part of the study. Across both schools, at grades K, 2, 4, and 6, there were 3, 10, 10, and 9 teachers respectively who participated. All were females except one.

Materials. Different materials were constructed for the children and adults. For the children, the "Faces" rating scale was constructed based upon the descriptions given by Hendrick et al. (1975) and Butzin and Anderson (1973). Seven circular faces, each 5 inches in diameter, were cut from squares of yellow felt, and the features were cut from black felt. Each face was glued to a 7-inch square of white posterboard. The eyes and nose were represented as dots and were equal in size and position for all faces. Since Butzin and Anderson reported exact measurements for

the width and height of the seven mouths, their basic measurements were followed in constructing the scale. Since this study's 5-inch face was slightly larger than theirs in diameter, the sizes of the mouth were increased proportionately. Thus, the width of all mouths was 2 5/16 inches and the smiles and frowns were graded in degree by varying the height of the mouth 7/16, 14/16, and 1 4/16. Three mouths have upward curving smiles and three have downward curving frowns. The mouth in the middle of the series is represented by a straight, horizontal line (see Appendix A). Each of the 36 questionnaire items was typed on an index card and number coded to facilitate scoring.

In order to construct the teacher testing materials, the number coded items were fed into a computer program to generate questionnaires, each consisting of the 36 items randomly ordered. Each questionnaire had a different random order of items. Through xerographic reductions, the 5-inch diameter faces were made to fit side-by-side across a page. One set of the faces was attached to each print-out of 36 items (questionnaire). Also, a computer generated answer sheet was attached to each questionnaire (see Appendix A).

Procedure--Student Testing. Warm-Up: The kindergarten and second grade children were told that they were going to play a game. For the children in the higher grade levels, the warm-up technique was modified such that it did not appear too childish for them. They were told that the experimenter was genuinely interested in what they thought about characteristics/behaviors of a teacher, and they they might be able to provide information to improve teaching. All children were introduced to the "Faces" rating scale by telling them that these were the faces of Freddy or Frieda (to match the sex of the subject). The decision to

have the imaginary person's sex match that of the child was based on the findings of Feshbach and Roe (1968), who found that first graders were more accurate in identifying feelings of a pictured character when the character's sex was the same as their own. The 5-inch diameter, constructed faces were then laid out side-by-side in front of the subject. They were asked how Freddy or Frieda felt in each picture. If their response did not indicate that they understood the gradation of the series, the experimenter went through the series making paired comparisons and asking which was the happier or sadder face. A couple of examples, non-teacher related, were then given, e.g., "Show me how (Freddy, Frieda) would feel if it were Christmas day. Point to the face."

The child was instructed that he/she would be told some stories about (Freddy, Frieda) and (his/her) teacher. He/she was told that (Freddy, Frieda) was in his grade, and he/she was to indicate how (Freddy, Frieda) felt in each story. After 18 of the 36 items were presented orally, a 1 or 2 minute rest interval was provided. During this time, the experimenter talked with the child on any of several non-related topics, e.g., Thanksgiving, Christmas, the weather, music, or books. Each item was rated on a 1- to 7-point scale according to the face chosen by the child, i.e., saddest-1, happiest-7. The card deck was shuffled between subjects in order to randomize the order of the items, in agreement with the randomization procedure used in the construction of the paper-and-pencil questionnaire.

Procedure--Teacher Testing. Using the computer generated paper-and-pencil questionnaires, it was possible to bring the teachers together for group administrations of the rating scale. They were informed of the purpose of this study by giving each a copy of the Parental Consent Form,

which had been sent home to the parents of the students. After an explanation of the "Faces" scale and answer sheet, they were asked to respond with how they thought each of the 36 items would be responded to by the average boy and girl in the grade he/she taught. They were asked to indicate a separate response for a typical male and a typical female student, which could be the same or different for each of the items.

## Results and Discussion

One of the primary aims in this research was to provide a developmental picture of elementary school children's perceptions of their teachers. With the faces representing an interval scale of 1 to 7, each item in the survey received a numerical assignment in response to the instruction to: "Tell me how (Freddy, Frieda) feels in each story." (See Appendix B for overall means and standard deviations of items and intercorrelations of items subsequently used in the factor analysis.) Through a factor analysis of the students' responses, the categories were derived to define the underlying dimensions of perceived teacher characteristics and behaviors, instrumental to the primary aim stated above.

After the factors had been defined, it was of interest to determine how the children at the different grades responded on each of these factors and whether the sex of the child made a difference. An ANOVA of the students' responses provided information concerning mean differences; a Newman-Keuls Test showed where mean differences between grades occurred. Also, at each grade within each sex for all factors to obtain a developmental picture of the students' perceptions, and to determine where concensus on perception of teacher behavior and characteristics occurred, pairwise comparisons of the variances were made.

A third analysis was instrumental in determining teachers' accuracy of awareness of students' perceptions. An ANOVA was performed with principal focus upon the comparison of students' and teachers' responses to the questionnaire items. The teachers had been instructed to respond as they thought the "typical" student would in the grade that they taught. Whether differences existed between the teachers' estimates 1) of the

boys' and girls' responses and 2) by grade level were a second aspect of this analysis.

Factors Perceived by Students

The principal-axes method, with orthogonal rotation of the axes, was used. Twelve factors emerged having eigenvalues (cf. Timm, 1975, Pp. 79-86) greater than 1. They accounted for 64.1% of the variance. The highest loadings on each factor were used, primarily the three highest, in "naming" the factor (F). For each factor, the variable number (V), the factor loadings, the item contents, and the percentage of variance accounted for is listed in Table 1.

A brief interpretation for each of the factors follows:

The loadings suggest the teacher characteristic of . . .

F1--"student-centeredness," or one who helps, shares, cares, and supports.

F2--"attractive demeanor," or one whose appearance and behavior is perceived as attractive.

F3--"unattractive demeanor," or one whose appearance and behavior is perceived as unattractive.

F4--"display of assurance," or one who appears confident in exercising control and demonstrating skill.

F5--"formality of style," or one who maintains a formal relationship with students.

F6--"self-centeredness," or one who is concerned with his/her own relative priority of needs, values, and attitudes (as contrasted to giving attention to students' needs).

F7--"meanness of disposition," or one who is perceived as displaying "mean" behaviors in interacting with students.

Table 1

Factors of Teacher Behavior Perceived by the Child

| Variable # | Factor Loading | Questionnaire Item |
|---|---|---|
| | | F1--"Student-Centered"--14.8% of variance |
| V 20 | .751 | ...if (his, her) teacher went to animal or puppet shows with the class |
| V 21 | .716 | ...if the teacher made everybody feel happy |
| V 6 | .710 | ...if (his, her) teacher helped kids to learn math |
| | | F2--"Attractive Demeanor"--8.8% of variance |
| V 33 | .753 | ...if (his, her) teacher were pretty or handsome |
| V 15 | .750 | ...if (his, her) teacher wore a nice suit |
| V 23 | .488 | If (his, her) teacher sat in (his, her) desk the right way... |
| | | F3--"Unattractive Demeanor"--6.2% of variance |
| V 8 | .698 | If the class had a party and the teacher took more cookies than anyone else... |
| V 3 | .659 | If the teacher wore sloppy clothes... |
| V 11 | .562 | If the teacher looked ugly... |
| | | F4--"Display of Assurance"--4.9% of variance |
| V 12 | .717 | If (his, her) teacher waited patiently until everyone finished... |
| V 16 | .623 | ...if the teacher knew lots of things |
| V 13 | -.511 | If the school had a show and the teacher did not go... |

Table 1 (Continued)

| | | |
|---|---|---|
| | F5--"Formality of Style"--4.4% of variance | |
| V 19 | .730 | ...if the teacher made the class be quiet |
| V 1 | .483 | If (his, her) teacher did not take the class places... |
| V 28 | -.394 | If the teacher told some funny stories... |
| | F6--"Self-Centered"--4.2% of variance | |
| V 17 | .683 | ...if (his, her) teacher were sick |
| V 2 | .643 | ...if (his, her) teacher complained |
| V 31 | .553 | If the teacher talked fast... |
| | F7--"Meanness of Disposition"--3.9% of variance | |
| V 34 | .695 | ...if (his, her) teacher made ugly faces at (him, her) |
| V 18 | -.500 | ...if the teacher remembered everybody's birthday |
| V 29 | .410 | ...if (his, her) teacher yelled at (him, her) |
| | F8--"Playing Favorites"--3.7% of variance | |
| V 24 | .763 | If the teacher had pets or favorite students... |
| V 25 | .485 | ...if (his, her) teacher picked on kids |
| V 9 | .420 | ...if (he, she) tripped on (his, her) shoestring and the teacher laughed |
| | F9--"Demeans Students"--3.7% of variance | |
| V 10 | .818 | If (Freddy, Frieda) were running around the classroom and the teacher grabbed (him, her) and shook (him, her)... |
| V 9 | .544 | ...if (he, she) tripped on (his, her) shoestring and the teacher laughed |

Table 1 (Continued)

| | | |
|---|---|---|
| V 14 | .326 | If the teacher did not want to take the class outside and (he, she) were slow and lazy... |
| | | F10--"Not Fostering Artistic Expression"--3.3% of variance |
| V 35 | .798 | If the teacher did not draw or paint with (him, her).. |
| V 5 | -.560 | If (his, her) teacher showed the class how to dance... |
| V 13 | .494 | If the school had a show and the teacher did not go... |
| | | F11--"Task-Master"--3.2% of variance |
| V 36 | .735 | ...if the teacher gave (him, her) hard questions |
| V 29 | .361 | ...if (his, her) teacher yelled at (him, her) |
| V 26 | .283 | ...if (his, her) teacher let (him, her) go to the restroom by (him-, her-)self |
| | | F12--"Consideration"--3.1% of variance |
| V 30 | .785 | If the teacher spoke softly... |
| V 22 | -.389 | ...if the teacher did not care what the class did at play period |
| V 25 | -.375 | ...if (his, her) teacher picked on kids |

F8--"playing favorites," or one who shows partiality or favoritism toward some students and is prejudiced toward others.

F9--"demeaning students," or one who reacts so as to degrade students or put them in their place, and asserts his/her own superiority.

F10--"not fostering artistic expression," or one who does not promote student interest or growth through the arts.

F11--"task-master," or one who is determined to impose discipline, control, and rigid standards.

F12--"consideration" for students, or one who is thoughtful, kind, and prudent.

As stated previously, the primary aims of this research were: 1) to determine a developmental picture of elementary school children's perceptions of their teachers, and 2) to assess the accuracy of the teachers' estimates of the perceptions of the children. The derivation of the factors described above fulfilled in part the first aim.

A more detailed picture of the children's perceptions became possible through performing an ANOVA with grade and sex as variables. Tests to show explicitly at which grades children's perceptions were different were performed; a Newman-Keuls Test showed differences by comparison of means, and F-ratios showed differences by comparison of variances.

Student Data--Analysis of Factor Scores

Comparison of means. For each factor, scores were derived for each student by multiplying the factor coefficients by the individual's raw score on each item, and summing across items. This resulted in a factor score for each subject on each of the twelve factors. Using the factor scores as the dependent measures, a 4 X 2 analysis of variance was performed on each factor with grade (K, 2, 4, and 6) and sex (male, female)

as variables. Table 2 and Appendix C (2) present the summaries of those analyses that revealed significant differences. See Appendix C (1) for those analyses that revealed no significant differences.

The "Student-Centered" factor (F1) showed a significant grade difference. Students in grades 2, 4, and 6 reported feeling happier than did the kindergarteners when a teacher showed student-centered behavior. The Newman-Keuls Test showed the means for grade K students to be significantly different from the means for grades 2, 4, and 6, $F(3,127) = 11.544$, $p < .05$ (see figures illustrating these results in Appendix D (1)).

For the "Meanness of Disposition" (F7) score, significant grade and sex differences were found. The younger students' attitudes toward teachers were more adversely affected by perceived "meanness." The Newman-Keuls Test showed a significant difference in means only between grade K and grade 6, $F(3, 127) = 3.289$, $p < .05$. Boys reported that they were more negatively affected by this teacher characteristic than did girls.

"Playing Favorites" (F8) scores showed significant grade differences. This behavior had more negative affect at the higher grade levels. A Newman-Keuls Test indicated that the means for grade K students were significantly different from those for grades 2, 4, and 6, $F(1, 127) = 9.347$, $p < .05$.

"Not Fostering Artistic Expression" (F10) showed significant grade differences. The children at the lower grades were more adversely affected by this teacher behavior. A Newman-Keuls Test showed the means for grades K and 2 to be significantly different from grade 6, $F(3, 127) = 5.205$, $p < .05$.

For the "Consideration" (F12) score, significant sex differences

Table 2

Student ANOVA for the Derived Factors of Teacher Behavior Showing Significant Differences

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | | "Student-Centered" (F1) | | |
| Grade(G) | 46.037 | 3 | 15.346 | 11.149* |
| Sex(S) | .934 | 1 | .934 | .678 |
| G X S | 2.993 | 3 | .998 | .725 |
| Error | 169.296 | 123 | 1.376 | |
| | | "Meanness of Disposition" (F7) | | |
| Grade | 15.040 | 3 | 5.013 | 3.402* |
| Sex | 16.892 | 1 | 16.892 | 11.462* |
| G X S | 4.122 | 3 | 1.374 | .932 |
| Error | 181.281 | 123 | 1.474 | |
| | | "Playing Favorites" (F8) | | |
| Gradé | 65.016 | 3 | 21.672 | 9.470* |
| Sex | 1.954 | 1 | 1.954 | .854 |
| G X S | 6.569 | 3 | 2.190 | .957 |
| Error | 281.498 | 123 | 2.289 | |

Table 2 (Continued)

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | "Not Fostering Artistic Expression" (F10) | | | |
| Grade | 35.058 | 3 | 11.686 | 5.276* |
| Sex | 2.573 | 1 | 2.573 | 1.162 |
| G X S | 10.385 | 3 | 3.462 | 1.563 |
| Error | 272.414 | 123 | 2.215 | |
| | "Consideration" (F12) | | | |
| Grade | 10.229 | 3 | 3.410 | 1.184 |
| Sex | 11.921 | 1 | 11.921 | 4.138* |
| G X S | 13.634 | 3 | 4.545 | 1.578 |
| Error | 354.336 | 123 | 2.881 | |

*$p < .05$.

were found. Girls reported that they were more positively affected by this behavior than did boys.

The factor scores for "Attractive Demeanor" (F2), "Unattractive Demeanor" (F3), "Display of Assurance" (F4), "Formality of Style" (F5), "Self-Centered" (F6), "Demeans Students" (F9), and "Task-Master" (F11) showed no significant grade or sex differences.

In summary, 1) four of the twelve derived factors showed significant grade differences and 2) two of the twelve factors showed a significant sex differences. The relatively small number of significant differences may have been due to the way in which the twelve factors of teacher behavior were derived: The responses of all students in the study were put into the factor analysis to determine the factors as perceived by the students. If, instead, a separate factor analysis had been possible for each grade level, different factors might have emerged at each level. The scope of the present study was limited in this respect. It seemed that the more strongly affective factors were the ones showing significant differences. To summarize the developmental picture by grade level, kindergarteners were less negatively affected by "student-centeredness" and "playing favorites," and more negatively affected (made to feel sadder) by "meanness of disposition" and "not fostering artistic expression." Conversely, the second graders felt happier with "student-centered" behavior and sadder with "playing favorites" than the kindergarteners. This trend was maintained through grade 6 for these two factors. The second graders, like the kindergarteners, reported feeling sadder with a teacher "not fostering artistic expression." The fourth graders reported feelings similar to those of the second graders for "meanness of disposition." For the sixth graders "meanness of disposition"

was least negatively affective and "not fostering artistic expression" was less negatively affective than at grades K and 2.

Comparison of variances. Since the primary aim of the present study was to provide a developmental picture of elementary school children's perceptions of their teachers, it was of interest to examine the variances. It was thought such processes as socialization, the development of peer consensus, and perceptual discrimination might become apparent as influencial developmental phenomena. Within each factor, all possible pairwise comparisons of the variances were computed separately for males and females at grades K, 2, 4, and 6 (see Appendix C (3) for variances and Appendix C (4) for F's; also see Appendix D (1) for figures.) This served to provide a picture of the ranges of differences among individuals within each grade in their response. Thus, a larger variance indicated a greater degree of intragroup inconsistency and a smaller variance indicated a greater degree of intragroup consistency.

"Student-Centered" (F1) showed significant differences in the variances between grades K and 4, K and 6, 2 and 4, and 2 and 6 for boys. This factor indicated significant differences in the variances between grades K and 2, K and 4, K and 6, 2 and 6, and 4 and 6 for girls. For boys, the greatest transition (decrease) in variance of adjacent grades was between grades 2 and 4; whereas with girls, it was between grades K and 2. This suggests that girls become sensitive to teachers' behavior at an earlier age than do boys. Are they taught by adults at home and elsewhere that girls are expected to be more helpful than boys?

"Attractive Demeanor" (F2) showed significant differences between variances at K and 4 and K and 6 for boys and K and 2, K and 4, and K and 6 for girls. The greatest transition (decrease) in the variance of

perception of a teacher's attractive demeanor occurred between grades 2 and 4 for boys; with girls it was between grades K and 2. Also, the variance among girls decreases across grades to a much smaller amount than for boys at grade 6. Perhaps, through gender-related differences in processes of socialization and/or the development of peer group consensus, boys do not become responsive to a teacher's attractive demeanor as early as do girls, but develop some such sensitivity at an older age.

"Unattractive Demeanor" (F3) showed significant differences for boys in the variances between grades K and 4 only. For girls, this factor showed significant differences in the variances between grades K and 2, K and 4, and K and 6. Notable was the greater degree of consensus (smaller variance) of the girls' perceptions of a teacher's unattractive demeanor at the higher grade levels (4 and 6). Perhaps girls at those grade levels evaluate more critically than boys their typically female teachers on this factor. Generally, as compared with F2, there was more consensus (less variability) on that factor than on this one. Perhaps this is because F3 is a negatively toned factor and students are less sure of how they would be affected by such a factor. In other words, "attractive demeanor" might be viewed as a "plus" in the child's perception of the teacher, while "unattractive demeanor" results in a wider range of feelings about the teacher.

"Display of Assurance" (F4) revealed significant differences through pairwise comparisons between grades K and 2, K and 4, and K and 6 for boys, and grades K and 4, K and 6, and 2 and 6 for girls. Notable was the extremely large variance for the boy kindergarteners' responses as compared to the girl kindergarteners. Variances generally decreased across grades in a similar manner for both sexes, except for the difference noted above, suggesting that the pattern of increased consensus

and/or discrimination with age was similar for both sexes. Perhaps the boys at grade K are less ready than the girls due to prior socialization experiences, to unambiguously interpret or accept a typically female teacher's display of assurance and therefore report a wider range of feelings in reaction to it.

"Formality of Style" (F5) showed significant differences in the variances between grades K and 4, K and 6, 2 and 4, and 2 and 6 for boys, and K and 4, K and 6, 2 and 4, and 2 and 6 for girls. Variances decreased across grades. The greatest decrease in variance of adjacent grades was between grades 2 and 4 for boys and girls. The pattern of significant differences was similar for boys and girls. The lack of apparent sex differences may suggest that this teacher behavior/characteristic is more role defined and less a function of personal interactions than those for which differences in student response by sex are prominent.

Comparisons of the variances for "Self-Centered" (F6) resulted in significant differences between K and 6 and 4 and 6 for boys, and K and 2, K and 4, K and 6, and 2 and 4 for girls. In general, variances decreased across grades. But, looking in more detail, the variances for the boys decreased at grade 2, increased again at grade 4, and finally decreased at grade 6. This finding was difficult to interpret. In contrast, the girls reported a wider range of responses than the boys to a self-centered teacher at grade K, which decreased at grades 2 and 4 and then increased slightly at grade 6.

"Meanness of Disposition" (F7) showed significant differences in variances between grades K and 2, K and 4, K and 6, and 2 and 4 for boys, and K and 2, K and 4, K and 6, and 2 and 6 for girls. Boys showed a sharp decline in variance between grades K and 4, while girls showed a

a more gradual decline and smaller range in variance than the boys over the four grades. Perhaps the behavior of the younger boys (K thru 4) requires that the teacher display more "mean" behavior towards them. Boys have been found to display more behavior problems than personality problems during middle childhood. The vice versa is true for girls (Peterson, 1961). Thus, they express a wider range of feelings (variance) within the lower grades than the girls regarding this teacher behavior.

"Playing Favorites" (F8) resulted in significant differences between grades K and 4, K and 6, 2 and 4, and 2 and 6 for boys, and grades K and 4 and 2 and 4 for girls. Notable was the slight increase in variability of responses for boys and girls at grade 2 and then a sharp decrease at grade 4. Perhaps as students experience more negative affect at grade 2, resulting from a teacher's playing favorites, they also experience some uncertainty about how they feel about this teacher behavior. By grade 4, they have resolved their feelings and agree that such a teacher makes them feel unhappy.

"Demeans Students" (F9) showed no significant differences in the variances between grades for boys. Significant differences between grades K and 2, K and 4, and K and 6 occurred for girls. The variance for girls was initially larger than that for the boys at grade K. It decreased to smaller than that for the boys at grade 2 and was maintained at that relative position through grade 6. Perhaps girls learn through exposure to the school setting at grade K and outside of school as well, that teachers (and other adults) more frequently demean boy students than girl students because they are expected to more frequently provoke such behavior. The wide range of feelings reported at grade K rapidly diminish (by grade 2) while the boys report a range of feelings

(a moderate amount of variance) at all grades, since they are more frequently the recipients of such teacher behavior.

"Not Fostering Artistic Expression" (F10) revealed significant differences in the variances between grades K and 2 for boys and grades K and 4, K and 6, 2 and 4, and 2 and 6 for girls. Boys showed a sharp decline in variances between K and 2 and then a slight increase at grades 4 and 6. Girls showed a large variance at grades K and 2 and then a sharp decline at grade 4, maintained at grade 6. Girls as a group may have experienced a wider range of feelings than boys at grades K and 2 because the teacher was expected to promote artistic expression more so at the lower levels than the higher ones (4 and 6). At the higher grade levels, the teaching of art is generally relegated to a specialist (outside the homeroom class). In contrast, generally, boys are not expected, within the home or elsewhere, to value artistic expression. Thus, findings for them are difficult to interpret.

"Task-Master" (F11) showed significant differences in the variances between grades K and 2, K and 6, 2 and 4, and 4 and 6 for boys. For girls the differences between grades K and 2, K and 4, and K and 6 were significant. For girls, the variances generally decreased across grades, with sharp decline between grades K and 2. For boys, the variance decreased from grades K to 2, increased from 2 to 4, and decreased again at grade 6. Girls as a group appear to have a more clearly defined perception of this teacher behavior than do boys. Perhaps they accept it as part of the teacher role (and educational system), especially when manifested by women, while boys reject this "power of position" factor and therefore experience a wider range of feelings. It is known that boys become more peer-oriented around the fourth grade while girls remain more self-oriented.

Boys are more likely than girls to reject the educational system, which is in conflict with their peer culture.

"Consideration" (F12) revealed significant differences in the variances between grades K and 6, 2 and 4, and 2 and 6 for boys. Girls showed no significant differences between grades. Comparatively, the boy variances were much larger than the girl variances at grades K and 2 and then decreased to be similar to the girl variances at grades 4 and 6. Perhaps boys report a wider range of feelings about this teacher behavior because they are less aware of how to interpret such behavior. They may not be socialized to be sensitive to such interpersonal behavior, or developmentally, they may become aware of it at a later age than do girls. Or, they may be less frequently the recipients of such teacher behavior than girls at the lower grade levels.

In summary, comparison of the variances provided some insights into the processes which may have been operating within the grades K through 6. Some general findings were: 1) a large decline in the variance of student responses between grades K and 2; 2) the ultimately more focused (decreased variability of) perceptions of girls by grade 6 as compared to boys; and 3) less clearly interpretable trends for boys across grades. The explanations for these findings have included: 1) the process of socialization a) into the school system and b) with regard to sex role stereotypes; 2) the development of a dominant peer group influence in middle childhood for boys; and 3) the process of age-related development, i.e., conceptual, perceptual, cognitive, affective.

More specifically, girls were found to differentiate by grade 2 on the basis of: student-centeredness, attractiveness, unattractiveness, meanness of disposition, demeans students, and task-master. They were

found to differentiate by grade 4 on the basis of: display of assurance, playing favorites, formality of style and not fostering artistic expression. Boys were found to differentiate by grade 2 on the basis of display of assurance. They were found to differentiate by grade 4 on the basis of: student-centeredness, attractiveness, unattractiveness, formality of style, meanness of disposition, playing favorites, and consideration. In general, the girls differentiated at a younger age than the boys on the basis of the derived teacher behavior characteristics. Maybe girls engage in more communication about teacher behaviors than boys do, in considerable part because the teachers are female, and thus establish a shared normative standard (i.e., more common consensus).

Girls and boys both fail to show clear developmental changes in differentiation on the basis of self-centeredness. Boys also fail to show developmental changes on the basis of demeans students, not fostering artistic expression, and task-master. Girls additionally fail to show developmental trends on the basis of consideration. These findings suggested that: 1) the development process of differentiation on the basis of these factors had occurred prior to grade K or would occur after grade 6; or 2) these factors would not reflect a developmental change at any time because they are not "developmental" phenomena in terms of perceptual discrimination/differentiation.

Comparison of Students and Teachers

The previous analyses functioned to provide a developmental picture of elementary school children's perceptions of their teachers. The second primary aim of the present study was to determine the accuracy of teachers' awareness of the perceptions of the children. To address the second aim, another analysis of variance was performed. It served to compare student

perceptions on each factor with what teachers considered to be typical.

A 2 X 2 X 4 analysis of variance using the factor scores was performed with 1) classroom role or designation (teacher, student), 2) sex (male, female), and 3) grade (K, 2, 4, 6) as the variables. As stated above, the principal focus of this analysis was the comparison of student perceptions and teacher estimates. Of secondary interest was the possible differential interaction of boys and girls with teachers. This would be reflected in different predictions by teachers of boys' and girls' perceptions. It has already been observed in the previous analyses that boys and girls perceived their teachers differently. Also, of secondary interest were grade differences 1) in how both students and teachers (as a group) perceived teachers' influence upon the student, and 2) showing where (grade level) convergence or divergence of perceptions of students as compared to teachers was manifested.

Students and teachers differed significantly in their perception of how a "student-centered" (F1) teacher would affect a student. (See Table 3 for factors which showed significant differences. See Appendix C (5) for those factors which did not show significant differences. See Appendix D (2) for figures.) Students reported that they were made to feel happier by this teacher behavior than teachers thought. The grade difference was concurrent with that found in the first ANOVA: A "student-centered" teacher was perceived to make the students at the higher grades feel happier than those at the lower grades (G).

Students reported that they felt happier than the teachers attributed when a teacher had an "attractive demeanor" (F2). At the higher grade levels, the difference between student and teacher attributions increased (D X G), suggesting that these teachers were less "in touch"

with the students' perceptions. Students and teachers as a group reported a teacher having an "attractive demeanor" to have a less positive effect upon students at the higher grades (G). Also, students reported feeling more unhappy with a teacher who had an "unattractive demeanor" (F3) than teachers thought.

An analysis of the students' responses revealed that they were made to feel happier by a teacher's "display of assurance" (F4) than the teachers thought. This finding was interesting in that it suggested that the students felt more positively than teachers thought toward a teacher who was confident in control and demonstration of skill.

On the other hand, students reported that they felt more unhappy than teachers attributed when a teacher exhibited "meanness of disposition" (F7). Students and teachers as a group reported that boys felt more unhappy than girls because of this teacher behavior (Sex). Thirdly, the difference between student and teacher attributions decreased at the higher grade levels (D X G).

Students reported that they felt less unhappy than teachers thought they would when a teacher "played favorites" (F8). Teachers who "played favorites" were perceived by both students and teachers as more negatively affective upon students at the higher grade levels (G).

Students perceived a teacher who "demeaned students" (F9) to make them more unhappy than teachers attributed. The difference between student and teacher perceptions increased at the higher grade levels (D X G). Thus, the teachers at the higher grades were less "in touch" with students' perceptions.

Students reported they were more negatively affected than teachers attributed when a teacher did "not foster artistic expression" (F10).

Table 3

Student and Teacher Comparison:

Factors Showing Significant Differences

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | | "Student-Centered" (F1) | | |
| Grade(G) | 14.904 | 3 | 4.968 | 4.451* |
| Sex(S) | .391 | 1 | .391 | .350 |
| Designation(D) (Teach. or Stud.) | 6.411 | 1 | 6.411 | 5.744* |
| GS | .835 | 3 | .278 | .249 |
| GD | 8.615 | 3 | 2.872 | 2.573 |
| SD | .151 | 1 | .151 | .136 |
| GSD | .962 | 3 | .321 | .287 |
| Error | 199.792 | 179 | 1.116 | |
| | | "Attractive Demeanor" (F2) | | |
| G | 11.003 | 3 | 3.668 | 3.109* |
| S | .172 | 1 | .172 | .146 |
| D | 24.935 | 1 | 24.935 | 21.139* |
| GS | .288 | 3 | .096 | .081 |
| GD | 13.225 | 3 | 4.408 | 3.737* |
| SD | .156 | 1 | .156 | .132 |
| GSD | .559 | 3 | .186 | .158 |
| Error | 211.141 | 179 | 1.180 | |

Table 3 (Continued)

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | | "Unattractive Demeanor" (F3) | | |
| G | 3.463 | 3 | 1.154 | .539 |
| S | .013 | 1 | .013 | .006 |
| D | 27.754 | 1 | 27.754 | 12.966* |
| GS | .711 | 3 | .237 | .111 |
| GD | 16.060 | 3 | 5.353 | 2.501 |
| SD | .025 | 1 | .025 | .012 |
| GSD | .529 | 3 | .176 | .082 |
| Error | 383.170 | 179 | 2.141 | |
| | | "Display of Assurance" (F4) | | |
| G | 1.039 | 3 | .346 | .209 |
| S | .095 | 1 | .095 | .057 |
| D | 11.819 | 1 | 11.819 | 7.128* |
| GS | 4.041 | 3 | 1.347 | .812 |
| GD | 9.531 | 3 | 3.177 | 1.916 |
| SD | .125 | 1 | .125 | .076 |
| GSD | 4.673 | 3 | 1.558 | .940 |
| Error | 296.793 | 179 | 1.658 | |

Table 3 (Continued)

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | | "Meanness of Disposition" (F7) | | |
| G | .768 | 3 | .256 | .200 |
| S | 5.376 | 1 | 5.376 | 4.204* |
| D | 10.704 | 1 | 10.704 | 8.371* |
| GS | 1.618 | 3 | .539 | .422 |
| GD | 13.875 | 3 | 4.625 | 3.617* |
| SD | 3.981 | 1 | 3.981 | 3.113 |
| GSD | 1.328 | 3 | .443 | .346 |
| Error | 228.889 | 179 | 1.279 | |
| | | "Playing Favorites" (F8) | | |
| G | 20.930 | 3 | 6.977 | 3.299* |
| S | .339 | 1 | .339 | .160 |
| D | 50.086 | 1 | 50.086 | 23.682* |
| GS | 1.579 | 3 | .526 | .249 |
| GD | 8.519 | 3 | 2.840 | 1.343 |
| SD | .784 | 1 | .784 | .370 |
| GSD | 1.584 | 3 | .528 | .250 |
| Error | 378.582 | 179 | 2.115 | |

Table 3 (Continued)

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | | "Demeans Students" (F9) | | |
| G | 6.059 | 3 | 2.020 | 1.600 |
| S | 1.325 | 1 | 1.325 | 1.050 |
| D | 40.454 | 1 | 40.454 | 32.044* |
| GS | 1.447 | 3 | .482 | .382 |
| GD | 12.828 | 3 | 4.276 | 3.387* |
| SD | .918 | 1 | .918 | .727 |
| GSD | 1.694 | 3 | .565 | .447 |
| Error | 225.982 | 179 | 1.262 | |
| | | "Not Fostering Artistic Expression" (F10) | | |
| G | 14.218 | 3 | 4.739 | 2.752* |
| S | .185 | 1 | .185 | .107 |
| D | 20.335 | 1 | 20.335 | 11.807* |
| GS | 2.667 | 3 | .889 | .516 |
| GD | 9.284 | 3 | 3.095 | 1.797 |
| SD | 1.572 | 1 | 1.572 | .913 |
| GSD | 5.131 | 3 | 1.710 | .993 |
| Error | 308.277 | 179 | 1.722 | |

*$p < .05$.

Such a teacher was perceived by both students and teachers as making them less unhappy at higher grades (G).

"Formality of style" (F5), "self-centeredness" (F6), "task-master" (F11), and "consideration" (F12) revealed no significant differences between student and teacher perceptions, between sexes, nor between grades.

Significant trends found in the Student ANOVA concurred with those found here, except for the sex difference found for "consideration" in the previous analysis that was not found here. The graph (Figure 16-F12) suggests that teachers were unaware of the sex differences reported by the students for this factor. It has been assumed that teachers who can predict the students' responses accurately understand their students better than those who cannot. Through a better understanding of students' perceptions, learning should be enhanced. Additionally, feedback from the students' responses given to the teachers has been shown to result in changes in the behaviors of teachers.

Generally, teachers' attributions of students' responses regressed toward the mean of the Faces scale with students reporting that they were more extremely (positively or negatively) affected by each factor of teacher behavior. Secondly, the teachers at the higher grade levels were generally more inaccurate in prediction of the students' responses.

In an attempt to explain the first general finding, perhaps the young children were more emotionally labile and therefore more extremely affected than their adult teachers. Or perhaps the teachers were unconsciously more defensive because they reacted as if their behavior was being evaluated. They, therefore, evaluated their behaviors as having more neutral affect (in the middle of the scale). Or, they may have

perceived themselves as teachers serving primarily a cognitive (learning) function and being less influential in the affective domain. A couple of "design" issues may also have accounted for these findings. They will be addressed in detail later.

The finding that teachers at the higher grade levels were more inaccurate in their estimates of how students were affected suggested that they may not be aware of some of the developmental changes in the child's perception of his/her teacher, and that they find it more difficult to accommodate to the less malleable older children. That there were no significant differences on four of the factors suggested that the teachers were aware of their affect upon the student in some cases. Note, however, that three of these four factors (F5, F6, F11) were less socially interpersonal (interactive) behaviors than the ones which were found to yield significant differences. Perhaps teachers at the higher grade levels thought affect was less important to their students' perceptions due to increased cognitive growth--reflective of traditional child development theory.

## General Discussion

### Overview

From the present study this picture of the kindergartener, a child at the school entry level, emerges. A radical alteration in life style and relationships takes place. For them, the meanings/values that the questions address are still ill-formed; experience is limited; peer and other social norms are ambiguous; and he/she is still highly self-centered (not socially oriented). Perhaps he/she reacts more directly to interpersonal stimuli within a narrow range. Broader perspective and several new socialization factors in the institutional context will become important later. Remember that the factors were derived by an analysis of responses of the student subjects in all grades covered. In reality, perhaps the younger children can only perceive their teacher in terms of two global factors, e.g. "good" and "bad." The children at the higher grades can perceive the teacher's behavior and characteristics with greater differentiation and more perspective. Through one factor analysis of all the students' responses, these questions could not be answered. Our numbers did not allow separate factorization by grade level which may have given a fuller developmental picture.

The S-R learning theorists, e.g. Gagné (1968), might suggest the kindergarteners may be less able to respond to the concrete situations simply because they are less experienced at "imagining" a situation given to them verbally or they are less capable of "decoding" a verbal message. "Expression" through artistic activity seems to be of greater concern to the younger children in this study and may become subordinate as specific cognitive content becomes dominant along with the ability to deal

with it in the curriculum later.

In contrast, Piaget's (1965, 1967) cognitive developmental theory, which stresses the maturation of intelligence in the child, proposes that the middle childhood years (7-11) are when the child develops and is able to utilize the operations of seriation (order) and inclusion (grouping). Since the Faces scale is a 7-point rating scale, it seems possible that the children who have "mastered these operations" would be able to use the scale more discriminately.

With regard to the four factors which showed significant grade differences--indicative of developmental changes--Kohlberg's (1969) cognitive stage theory of moral development seems pertinent. Kohlberg's theory addresses in particular the growth of the concept of social responsibility. He states that at the preschool age children are generally aware of the "good-bad" ethic in relation to others. In middle childhood, they become aware of the norm of reciprocity and causation in relationships with others, but are not yet aware of the rules of social order beyond their everyday experiences. Perhaps this is why the teacher's helping behavior, meanness, and fairness are factors showing differences across grades for this group of children. (Another explanation for the fourth factor--artistic expression--was given above.)

The factors which do not show significant differences in means suggests two points. The first is that children at these grade levels are aware of these aspects of teacher behavior and agree as to how they feel about them. Secondly, then, it may be concluded that these factors represent phenomena, the perception of which do not change during the age period studied. The author suggests that perceptual development for dealing with some of these factors occurs prior to the age period studied

and for others (dealing with assurance, formality, self-centeredness, sarcasm, and task-orientation) it occurs after the age period studied.

The above discussion has been addressing the developmental implications of this study by focusing upon mean differences across grades for students. The author sees the variance comparisons as providing the basis for another distinct set of implications. The variance comparisons suggest developmental changes with regard to 1) perceptual/person discrimination and 2) consensus/socialization. The general finding is that variances decrease from grade K to grade 6. This means that children in grade K generally agree less than children in grade 2 in their rating of how the 12 factors of teacher behavior effect their feelings, children in grade 2 generally agree less than those in grade 4, and so on.

That perceptual discrimination increases with age, especially in young children, may account for the decrease in variability of responses to the questionnaire items at higher grades. As children learn to extract certain information from a defined situation, they are better able to identify the stimulus (situation) and then to respond to it in terms of its consequences for them. Gibson (1970) states it best:

> Discrimination of objects by simple signs based on single physical characteristics of high vividness is primitive too. But fine-grain differentiation of multidimensional complex sets of objects is high in the evolutionary scheme and in development, a process where adaptation is achieved only through education. (p. 336)

Thus, Gibson is also a strong advocate of the positive influence of education upon this natural developmental phenomenon. This leads to the second explanation for the "variance" findings: increased awareness of group

consensus through the socialization process. Children at K level probably develop certain expectations for teacher behavior during their first year in a school setting. With each additional year of experience, they come to have a more focused view of what teachers should or should not do, through a clearer perception of the teacher's purpose and through a clearer perception/awareness of what their peer's think (group consensus).

The analyses performed revealed several interesting trends for the "sex" variable. That mean differences existed only for the "meanness of disposition" factor and the "consideration" factor suggests that, overall, boys and girls are similarly affected by most of the derived factors of teacher behavior.

Through comparisons of the variances between grades for boys as distinct from girls, it was observed generally that the girls' variance of responses on any one factor decreased with increase in grade more rapidly than did the boys in their response to the questionnaire items. As has been discussed previously, it is difficult to account for this difference in terms of any one phenomenon. It has been suggested that social or biological influences may induce girls to communicate more about appropriate teacher behavior, and/or that because teachers are typically female (all but one in this instance) the nature of interaction affecting their perceptions of teachers is different in nature or in rate of emergence. Livesley and Bromley (1973) reported that children produced longer descriptions and used more personality statements in describing people of the same sex. Also, it has been suggested that boys are more peer group conscious, at least at the fourth grade, and perhaps not as concerned with pleasing the teacher or trying to figure out "what makes her tick." Therefore, their responses agree less within grades than do

the girls. Lastly, perhaps different values, beginning at home, are instilled in boys as compared to girls (i.e., agression, activity, submission, cooperativeness, neatness) such that, for boys, going to school is in various ways a different experience. As a group, they are less sure of how they feel about certain teacher behaviors.

The student and teacher comparison yielded differences which may be accounted for in terms of 1) actual differences in the perceived effect of teacher behavior, or 2) differences accountable for by the age differences between the two groups and the corresponding difference in perceptual ability. For some factors, teachers more accurately predicted students' responses than for others.

More may be said about sex differences from this comparison. Teachers did not attribute the differences in affect, which were actually reported by boys and girls. In other words, they reported that boys and girls would be similarly effected by teacher behaviors/characteristics while boys as a group reported very different feelings from girls as a group. Perhaps teachers as a group would like to think that they have a similar effect upon boys and girls. Perhaps this follows from the unspoken premise that boys and girls should not be treated differently within the classroom. This may be the teacher's intention, but it appears that the teacher effect upon each sex is in reality very different.

Studies like the present one can enable the educator to better understand the age group with which he/she is working. More studies done for the purpose of uncovering some of the percepts of the child's feelings developmentally and with regard for gender differences would help to support or refute some of the findings of this study. They would also serve to answer methodological and design questions. Once it is determined

that the instrument and methodology are reliable, then the researcher could address specific explanations, e.g., developmental, cognitive, affective, and socialization.

The Faces scale has been found to be a useful instrument for testing young children in a manner which minimizes verbal ability prerequisites. It provides an interesting stimulus for the child. Knowledge has been gained about the number of items young children are capable of handling in such a testing situation. The Faces may be useful for testing in some other domain of educational assessment and/or evaluation.

Student Perceptions

The twelve factors of teacher behavior/characteristics derived from the factor analysis were informative with regard to how young children perceive their teachers. [The teacher's degree of student-centeredness or self-centeredness, attractive or unattractive demeanor, methods of control or power, meanness or considerateness, and fairness appear as the major issues perceived by the child.]

The observations of Leeds and Cook (1947) appear pertinent. They constructed a measuring instrument which would gauge the attitudes of teachers toward pupils and serve to differentiate those teachers who get along well with children from those who do not. Pupil reaction was used as the basic validating criteria. They found that the majority of teacher traits:

> [had] reference to the personality and disposition of the teacher and to the resulting affective and human relationships between teacher and pupil. Affective, personal, and human factors seem to provide the foundational material which determines whether or not a teacher is like or disliked by her pupils. (p. 158)

One may ask what priority of values can be inferred from the factors derived in the present study. The traits used by young children fall into a few groups: temperament, ability, humour, generosity (helping), and evaluations. These are the ones most readily expressed and recognized in overt behavior; thus, they make less demand on the child's capacity for psychological inference (Livesley & Bromley, 1973). With increased age, they become interested in more subtle personal qualities, e.g., self-centeredness, modesty, sociability, control over others, rationality, and interpersonal relationships. This trend appears to be supported in this study. The factors accounting for the largest amount of variance were the more concrete observable behaviors/characteristics (helping, appearance/demeanor) while those accounting for less variance were more subtle interpersonally (meanness of disposition, playing favorites, demeaning students).

However, among the factors accounting for the larger amounts of variance (i.e., F1 thru F6), fewer significant differences between grades and sexes were found. Only F1 (student-centered) showed significant grade and sex differences. These factors appeared to be more concrete, but also more external and environmentally defined than the other factors. As such, the student may have interpreted these behaviors as less directed at him/her evaluatively. F7 thru F12 were generally more personally referenced and it seems students are more likely to be affected by evaluation experience with the teacher on these factors (e.g. meanness of disposition, playing favorites, not fostering artistic expression, and consideration).

It was found that the students at the higher grades were more positively affected (made to feel happier) by a helping, caring, sharing, and

supportive teacher. Perhaps the older children were more aware of this kind of interpersonal behavior. "There is considerable evidence that altruism is positively correlated with age, at least during the latter half of the first decade of life" (Bryan, 1975, p. 163). More generally, a variety of prosocial behaviors, i.e., cooperativeness, friendliness, helping, kindness, generosity, emerge and are strengthened by the child's ability to take the role of the other (Aronfreed, 1968; Kohlberg, 1969; Murphy, 1937; Piaget, 1965).

Other explanations for this developmental trend have included changes toward more mature moral judgements, less egocentrism, greater empathy, and the learning of "the social responsibility norm" (Bryan, 1975). The "social responsibility norm" states that people learn the standard that they should help others who are dependent upon them (Berkowitz & Daniels, 1964; Krebs, 1970). Evidence has suggested that children learn and accept this norm at least by the third or fourth grade level. The present study of children's perceptions of their teachers appeared to support the learning of this "norm." The children, who are dependent upon their teachers as defined by the student-teacher relationship, viewed this aspect of teacher behavior as the most important and those in the higher grades (2, 4, and 6) felt happier when the teacher was a helpful person.

Pairwise comparison of the variances at each grade level for boys and girls showed the greatest decrease for boys was from grades 2 to 4; for girls, it was from grades K to 2. Are girls socialized at an earlier age to be made aware of helping behavior? Could this account for their earlier consensus than boys? Hartup (1960) observed children aged 3-5 and found no sex difference in giving praise or help, affection,

or reassurance and comfort to other children. Helpful behavior was part of a reciprocal system, however, even at this early age. An observational study of children aged 3-6 years in six cultures revealed a tendency for girls to show more help-giving behavior than boys, but was not consistent over the six cultures. However, in the age group 7-11 years (which would correspond roughly with the grades 2, 4, and 6), girls emerged as the more helpful sex (Whiting & Pope, 1973).

Girls experienced a greater number of positive interactions with nurturant and helpful adults while boys experienced more negative or rejecting interactions in their requests for help (Yarrow, Scott, and Waxler, 1973). Perhaps "boys who seek aid from others receive the help and then are punished for requesting it. This contradiction may be less frequent in the early experiences of girls" (Bryan, 1975, p. 166). Thus, helping may be more sex appropriate for girls and competition more acceptable for boys. This could account for the lack of consensus among the boys still present at grade 2; they were not made to feel happier by a student-centered teacher but were unsure (some happy and some sad) about this interaction.

The second and third factors emerging from the factor analysis (attractive demeanor and unattractive demeanor) were concerned with very concrete, observable person characteristics. This was consistent with the theory of the development of person perception. Contrary to some common stereotypes regarding the importance of appearance/manner to males as opposed to females, no differences between the sexes were reported. Both boys and girls were similarly affected by a teacher's attractive or unattractive demeanor. Notice, however, that the items comprising these factors are concerned with being neat and clean rather than stylish or

fashion conscious. In this age group, there was also no significant difference across grades in the perception of a teacher's attractive or unattractive demeanor. Perhaps these two factors are so concrete (external) and less interpersonal that they are clearly understood and easily evaluated by all at an early age.

Overall, there was much greater variance in the responses to F3 than to F2, particularly at grade K. Perhaps this was because of the negative quality of F3. The students might have been reluctant to express how they were affected by an unattractive teacher. Or, they may have been unsure how they felt about it. The girls reported with much greater consensus, (less variability) than the boys how they were affected by a teacher's attractive demeanor.

A teacher's display of assurance (F4) reportedly showed no grade or sex differences in how it affected the student feelings. Remarkable is the extremely large variance of feelings for the boys at grade K. Both boys and girls showed a greater consensus (decrease in variance) at the higher grades. Perhaps the K-level boys experience a greater variety of emotions in reaction to this aspect of teacher behavior because, e.g., a teacher who "waited patiently until everyone finished" (top loading) might imply a situation requiring inactivity and patience.

This seems contrary to the greater activity reported for boys than for girls at the preschool age (3-5 year olds) (Ehrensaft, 1977). This case study revealed that teachers initiated more contact with boys than girls and paid more attention to them than girls. Boys were, in turn, found to be more behaviorally active than girls--reacting to the greater amount of contact directed toward them. "When teachers rated boys as more 'energetic' or 'hyperactive,' they may have meant that boys made

larger or more forceful movements" (Maccoby & Jacklin, 1974, p. 190). Also related to the teacher's display of assurance--through "waiting patiently until everyone finished" and the implied "making everyone else wait too"--is the evidence that boys were more impulsive (less patient) during the preschool years (Metzner & Mischel, 1962). The sexes did not differ consistently at later ages. Thus, kindergarten boys seem to have experienced more ambiguous feelings about a teacher's display of assurance due to their desire for greater activity and impulsivity in the classroom. This probably would be found in any other setting as well with equally restricting norms of behavior.

A teacher's formality of style in the classroom showed no significant differences in affect upon students at grades K, 2, 4, and 6. Perhaps the teacher's formal relationship with the students serves to maintain a social distance. Therefore, no developmental change in the interpersonal relationship and the feelings that accompany it is observed. Also, no sex differences in the students' affective reaction to a teacher's formality of style were revealed. Again, most of the sex differences which have been implied from observation of the variances have involved variables of greater interpersonal nature. Boys and girls both reported a greater amount of consensus (less variance) at higher grades on how they felt about this teacher behavior.

Noteworthy was the sharp decline in the variance of perceptions of boys from grades 2 to 4 as compared to the more gradual decline of the girls from grades K to 4. Perhaps boys acculturation into the school system in terms of its demand for structure and the acceptance of formal classroom relationships is a more disconcerting experience for them than for girls (Meyer & Thompson, 1956). Boys accept it only after a longer

rejection of the system and period of mixed emotions than girls experience. Again, perhaps this phenomena occurs in other life settings which require one to submit and accept the established system or organizational rules. For boys, this may be a more difficult adjustment than for girls, who are generally taught to be more submissive, less independent, and less competitive than boys.

A self-centered teacher did not affect students at different grades differently. Nor did he/she affect boys and girls differently. This factor conveyed a very subtle, interpersonal type of characteristic, which was difficult to interpret by studying the variances of the boys and girls separately across grades. The trend was not simply toward greater consensus at higher grades, as has been most common with the previously discussed factors, unless one combined the variances for boys and girls.

Students at the higher grades (2, 4, and 6) reported that they felt less unhappy than did the kindergarteners with a teacher who showed meanness of disposition. Perhaps the kindergarteners were more sensitive to/or took more personally a teacher's "hateful" behavior whereas the older children had learned not to let it bother them. Through prior experience in the school setting, the older children had learned the bounds of teacher behavior and were probably less threatened than the kindergarteners by a teacher's mean disposition. Further evidence of students' awareness of this factor of teacher behavior was reported by Leeds and Cook (1947):

> The teacher most disliked by pupils was characterized by the latter as being of a mean disposition ('fusses' and 'scolds,' 'cross,' 'gets angry,' 'bossy'). Teachers well liked were

described as being 'nice,' 'kind,' 'friendly,' 'understanding,' 'willing to help,' 'able to explain clearly,' and 'fair.' (p. 159)

Boys were made to feel more unhappy by a mean teacher than were girls. The previous discussion of the different methods used by the teacher to control boys as opposed to girls would support this finding. There is a greater incidence of negative control directed toward boys, which may include "making ugly faces" and "yelling." This may be explained by a history of interactions in which weaker forms of intervention were ineffective (Meyer & Thompson, 1956; Serbin, O'Leary, Kent, & Tonick, 1973). These findings might also explain the larger variance (ambiguity of feelings) for the boys than for girls, particularly at the K-level. Girls are also more conforming and so would more likely than boys accept such forms of disapproval. On the other hand, boys more often than girls ignore a teacher's direction (Serbin et al., 1973), possibly provoking "mean" behavior in the teacher.

The students at the higher grades (2, 4, and 6) reported feeling sadder than K-level students when a teacher played favorites. This may be a function of the structure of the learning situation. At the kindergarten level, children are less likely to be objectively evaluated by their teachers. There are more group learning experiences, which are conducive to subjective kinds of evaluation. In contrast, at the higher grade levels, students are more likely to be objectively evaluated--based on their individual performance on a task. Thus, playing favorites may be more readily perceived by the older students; there are more external referents available to assess students independently of teachers' personal reactions. For example, in grade K, teachers generally report regarding a child's progress in terms of how he/she "adjusts," whereas

in grade 6, they report in terms of how a child scores on a test.

In a study with 13 and 14 year old students (Jenkins & Lippitt, 1951), the most significant category of teacher behavior for students was that the teacher be fair in dealing with students. The items defining this category were: "Are fair, don't have pets; Don't embarrass or pick on unliked kids; Are courteous to students, don't yell" (p. 52). Notice the similarity of the items to those of the present study within the "playing favorites" category. The greatest reduction in variance (greater consensus) occurs for both boys and girls between grades 2 and 4. The comparable decrease in variance across grades for both sexes suggested that there was no differential interaction between the teacher and boys as opposed to girls with regard to playing favorites.

A teacher who demeans students was not perceived to affect students at different grades differently. Nor was any differences reported in the student affect of boys and girls due to this teacher behavior. However, the variances indicated an initially larger variance for girls than boys at grade K, which decreased to be smaller than the boys' variance at grade 6. In contrast, the boys showed a stable degree of consensus across all grades. This suggests that perhaps the boys were affected in a consistent way across all grades by a teacher who demeans students, whereas girls were less sure initially of how to interpret such teacher behavior, and/or less personally exposed to such behavior, but arrived at greater consensus on the issue at higher grades.

At grade K, the girls reported being much happier than girls or boys at any grade level with a teacher who demeans students. The item of highest loading may provide a clue to this finding. Perhaps they experienced a happier emotion resulting from the teacher's grabbing and

shaking the student who was running around the classroom. They may have felt, with some degree of ambivalence, that this action was justified and at the same time a very extreme one. On the other hand, boys across all grades are probably the more likely sex to be grabbed and shook by the teacher, so they would generally agree that it is not a very positive experience.

Students at the 6th grade level reported feeling less sad than those at grades K and 2 when a teacher did not foster artistic expression. This finding may be related to the trend of the educational system to decrease the importance of artistic activities at the higher elementary grade levels. Thus, the older students were less bothered by a teacher who does not foster artistic expression because it was not an expected part of the curriculum. Also, at the 6th grade level and sometimes sooner, the curriculum requires that students make choices as to whether to take certain "special interest" courses, e.g., chorus, band, and art. They go to special teachers outside of the general classroom for these classes. The homeroom teacher and/or teacher of core courses is thereby relieved of responsibility for training in these areas.

With regard to size of variance of response, the girls showed a wider range from grades K to 6 than did the boys. They attained a remarkably small variance (greater consensus) at grade 6 as compared to the boys. Perhaps this developmental trend was not present with the boys because this factor is not as important to them as to the females. Oremland (1977), in summary of a symposium on The Sexual and Gender Development of Young Children (1974), stated that artistic activity was never mentioned or studied in any of the reports even though the traditional tendency is to view it as more related to the females (and the

male homosexual). He further added that "there was little concern that boys may be deprived of the opportunity for, or reinforcement of, artistic endeavor" (p. 299).

A teacher who acted as a task-master reportedly had no difference of affect upon the students developmentally nor between sexes. However, study of the variance of responses revealed a sharp decrease between grades K and 2 for both boys and girls. Then, the variance continued to decrease for the girls through grade 6 while it showed a sudden increase for boys at grade 4. Before attempting to interpret these findings, first consider the items which loaded on this factor. They seemed very similar to those comprising a category reported by Jenkins and Lippitt (1951). It referred to the teacher's control over the activities of the student. The teacher has the power to 1) enforce certain activities upon the student or 2) give permission for other activities. Perhaps the boys and girls both felt ambiguous about the teacher's display of power when they first entered school. Through socialization, they came to accept it at the higher grades. What of the 4th grade boys? Evidence suggested that boys were more peer-oriented at least at this age than girls (Hollander & Marcia, 1970). Maybe they experienced more of a threat to their own peer-group power and therefore reported a greater range of feelings in response to the teacher's task-master, power position.

A final factor which emerged from the factor analysis was consideration. Girls were made to feel happier than boys when a teacher showed consideration. The graph (Figure 16-F12) suggests that this difference in emotional effect is larger at grades K and 2 than at grades 4 and 6. The item of highest loading on this factor, a teacher who "speaks softly," may in part explain these differences. Such a behavior is an

unquestionably more appropriate one for a female (teacher or otherwise). Also, it is a subtle interpersonal technique more commonly used by the female. Livesley and Bromley (1973) reported sex differences in the grouping of traits:

> Girls tended to be a little more sensitive to the stimulus person's interpersonal qualities than were boys, and made slightly more use of such terms as understanding, comforting, thoughtful, patient, gentle, rough, and jealous. (p. 181)

This they found to be consistent with previous studies.

A comparison of the variances at each grade revealed that the girls maintained a certain level of consensus about their feelings over all grades, slightly decreasing at grade 6. Boys were much more ambivalent (showing less consensus) at grades K and 2 than the girls. It may be that they become aware of (perceive) consideration later developmentally than the girls or they may be unsure of how to interpret such behavior in an authority figure.

In summary, the relatively few developmental trends were surprising for functions as complex as the perceiving of persons (teachers) and interpersonal relations. As Yarrow and Campbell (1963) suggested from their study:

> More specific differences by age may have been undetected by the analysis (e.g., concrete details of agressive or nurturant behavior might be quite different at different age levels, though the generic categories would be the same. (p. 64)

In the use of the same categories (factors) for all students, very probably subtle differences in teacher perception have not been detected. Future researchers with access to greater numbers of subjects might

consider doing a different factor analysis for students at each grade level. The present study was limited in this respect due to the number of subjects and scope of the study.

Developmental changes were suggested through a discussion of the variances. The biggest changes observed occurred between grades K and 2. Livesley and Bromley (1973) reported that around 7 or 8 years of age, children showed a substantial change in the way they describe people. The change was from descriptions based on time-bound characteristics to those behavior regularities across time and situations. The change occurred between the ages of 8 and 12 years. This was one possible explanation for our findings. Another was the influence of the school as a socializing agent. Newcomers learn quickly how to perceive teacher behavior/characteristics in conjunction with their peers.

A third explanation, irrespective of the content of the scale items and the context in which the scale was given, was the extreme response style (ERS) phenomenon. This is the tendency to select extreme alternatives on rating scales. The literature suggested that this variable might be related to cognitive differentiation and/or be developmental phenomenon, decreasing with age (Johnson, 1973). This would account for differences between student and teacher ratings, to be discussed later.

Another observation revealed by the variance comparisons was the increase in consensus (decrease in variance) for girls across grades, and the less clearly defined trends for boys. Differential socialization, interaction with teacher and peer group influence, and perceptual development have been presented as possible explanations for this finding.

With regard to sex differences in perception of teachers, the significant findings were few, but the implications were many. It seems

that boys have been inducted into one culture and girls into another--each to the disadvantage of the other (Lee & Gropper, 1974). The need for teacher sensitization, self-awareness, and conscious forms of intervention have become apparent. Several studies reviewed by Bar-Tal (1979) supported the premise that teachers in the classroom could modify maladaptive patterns of causal perceptions and maintain adaptive ones, thereby improving academic performance. This had been done by providing pupils with instructions and feedback that would encourage them to make internal attributions (ability, effort, interest) for success and internal-unstable attributions (effort) for failure, rather than stereotypical causal perceptions based on pupils' sex, race, or social class. Bar-Tal reported several successful studies of such "attribution retraining." The findings of the present study suggested that something very different was occurring in the girl student-female teacher interaction distinct from the boy student-female teacher interaction. More studies could be done to determine how these perceptions interact with achievement developmentally.

Student and Teacher Perceptions Compared

In the final analysis, emphasis was shifted away from the developmental aspect of the study and toward the accuracy of the teacher's perception of the students' affective response to particular teacher behaviors/characteristics. Those teachers more accurate in predicting students' responses should be more effective in relationships with their students (Gage, 1972). Whitfield (1976) criticized that "teachers are insistent that boys and girls see as they (teachers) do, believe as they do, and act as they act" (p. 347). They do not understand nor are receptive of the stimuli which make an impact on children.

Generally, it was found that students reported being more extremely affected by each of the factors of teacher behavior/characteristics than the teachers reported. The teacher response--of attribution to the "typical" child in their respective grades--regressed toward the mean of the 7 possible scale items. Students reported feeling happier than teachers thought when a teacher was student-centered, had an attractive demeanor, and displayed assurance. They reported feeling sadder than teachers thought when a teacher had an unattractive demeanor, meanness of disposition, demeaned students, and did not foster artistic expression. On one factor, (playing favorites) students reported feeling less unhappy than teachers thought. There was no differences in the responses of students and teachers about a teacher who showed formality of style, self-centeredness, was a task-master, and was considerate.

There are plenty of opinionated articles in the literature on a comparison of student and teacher perceptions. Most discussions have become possible through a lumping together of all the teacher studies as separate from the student studies. Few, if any, have performed a direct comparison of student and teacher perceptions in the same sample and study. Thus, the possible explanations presented for these findings will need further research and were intended to promote such research.

One explanation for the more extreme affect (greater degree of happiness or sadness) reported by the students was that they were more emotionally labile than their adult teachers. Perhaps the teachers were not aware of the extent to which children were affected by certain teacher behavior/characteristics. They have been educated on how to deal with the child's cognitive development, but, as the system defines it, the school psychologist will deal with the area of affect and emotion.

Or, perhaps the teachers were defensive in that it was their behaviors/characteristics being studied. Staying near the mean of the response scale (neutral affect) was safer than going out on a proverbial limb, suggesting perhaps a central tendency rating bias (DeCotiis, 1977).

Other factors thay may have played a part were related to the design of the study. Perhaps by being asked to imagine a "typical" student's response, the teachers were unintentionally given an instructional set (Cronbach, 1977) towards a more neutral response on the scale. (This technique also presented a problem in finding literature to support or refute the findings of the present study. Most studies on teacher perception were based on evaluations of specific teachers by a specific group of students and vice-versa. Few studies have attempted to study perceptions in the general context of teacher and student role.) The students were asked to tell how a student would feel if his/her teacher behaved in a certain way. There was no mention of a "typical" teacher.

Secondly, the factor structure used in the comparison was that previously derived in the factor analysis of student responses to the Faces scale. As such, they reflected the student's conception of teacher behavior/characteristics, which were important to them (the students). The teachers may have perceived their area of influence to be more cognitive and less interpersonal and thereby diminished the extent of their influence in the affective domain.

Lastly, that the teachers at the higher grade levels were generally more inaccurate in prediction of the students' responses may have been related to the teachers' conception of child development. Traditional theory would have led one to believe that with increased cognitive growth, the affect of the child would come under more self-control.

The present findings did not support this generalization.

Conclusion

The domain of teacher influence upon the child has primarily been defined by society at large as one of teaching in the didactical sense of the word. This study has shown that various areas of teacher behavior/characteristics, e.g., discipline, instruction, and personality exert significant influence upon the affect of elementary school children. Teachers need to become aware of the interpersonal behaviors affecting young children. It is at this age that the contingencies for all future learning become established.

Bar-Tal (1979) reported several cases in which teachers have implemented "attribution retraining" in children. Perhaps the common teacher-student role stereotypes, sex-role stereotypes, and developmental stereotypes as they influence the learning process can be brought under behavioral control. Through more developmental studies of young children's perceptions of their teachers, the contingencies of the learning environment may be defined.

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# APPENDIX A

# TEST MATERIALS


Old Dominion University • 804-489-6000 • P.O. Box 6173 • Norfolk, Va. 23508

Date_____

Dear Parents:

As you know, what children think of teachers can have a strong influence on what they learn. I am working with the teachers at Southwestern Elementary School on a study of these influences. This kind of study can help teachers understand the children better and do a better job of teaching. A child will participate only if he or she is willing and has a parent's permission to do so.

Here is a brief description of what we are going to do: I will talk to each child individually at school, but outside of the classroom, for about 20-30 minutes during regular school hours. I will ask questions about certain things that teachers do. The children will show how they feel about these things by pointing to "faces." Some of these faces have "happy" expressions and some have "sad" expressions. Other children of the same age have enjoyed using these faces.

The answers that any one child gives will not be told to anyone. We are only interested in making comparisons between the children in different grades.

If you have any questions about this project, please call me at 480-1968. Please fill in the bottom of this page and have your child return it to the teacher. Thank you for your cooperation.

Sincerely,

Meta Lowe
Psychology Department
Old Dominion University

---

I have read the letter above.

(Check one)

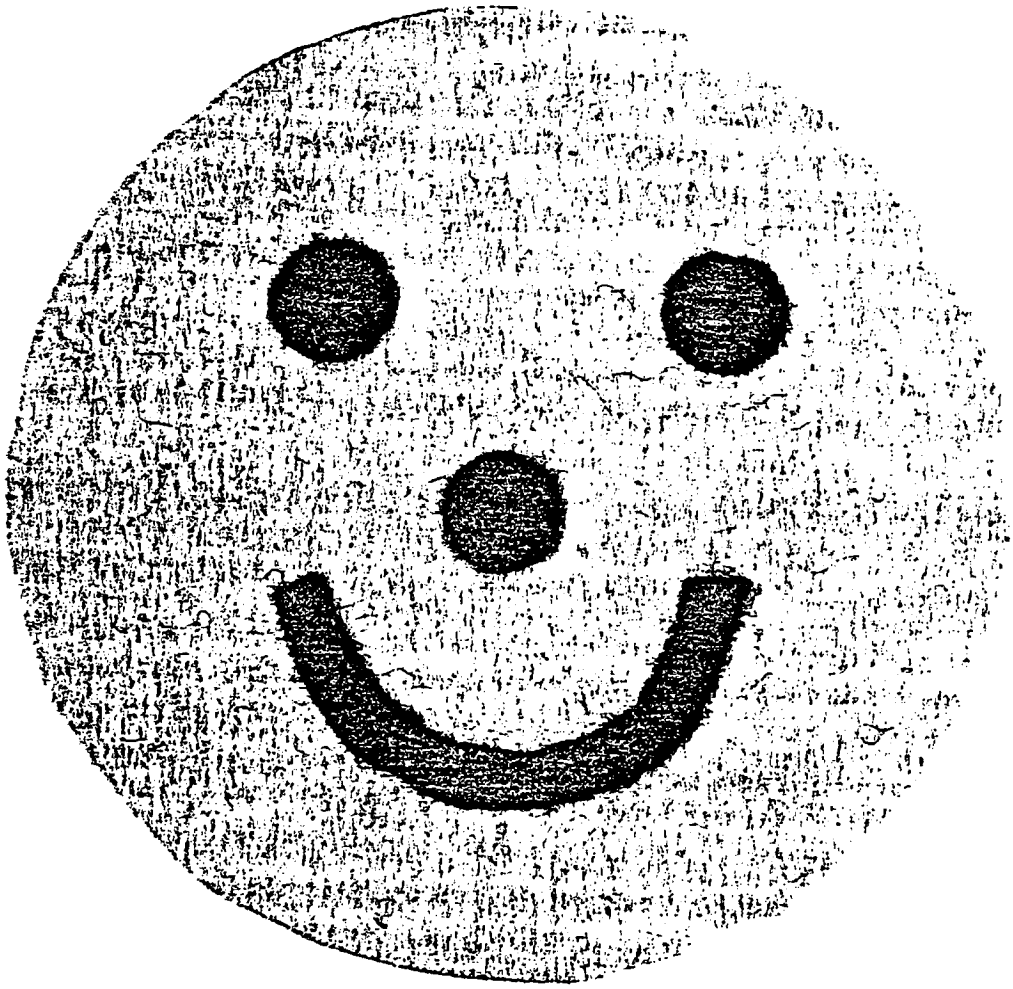
My child may participate_____ _____
(Child's Name)

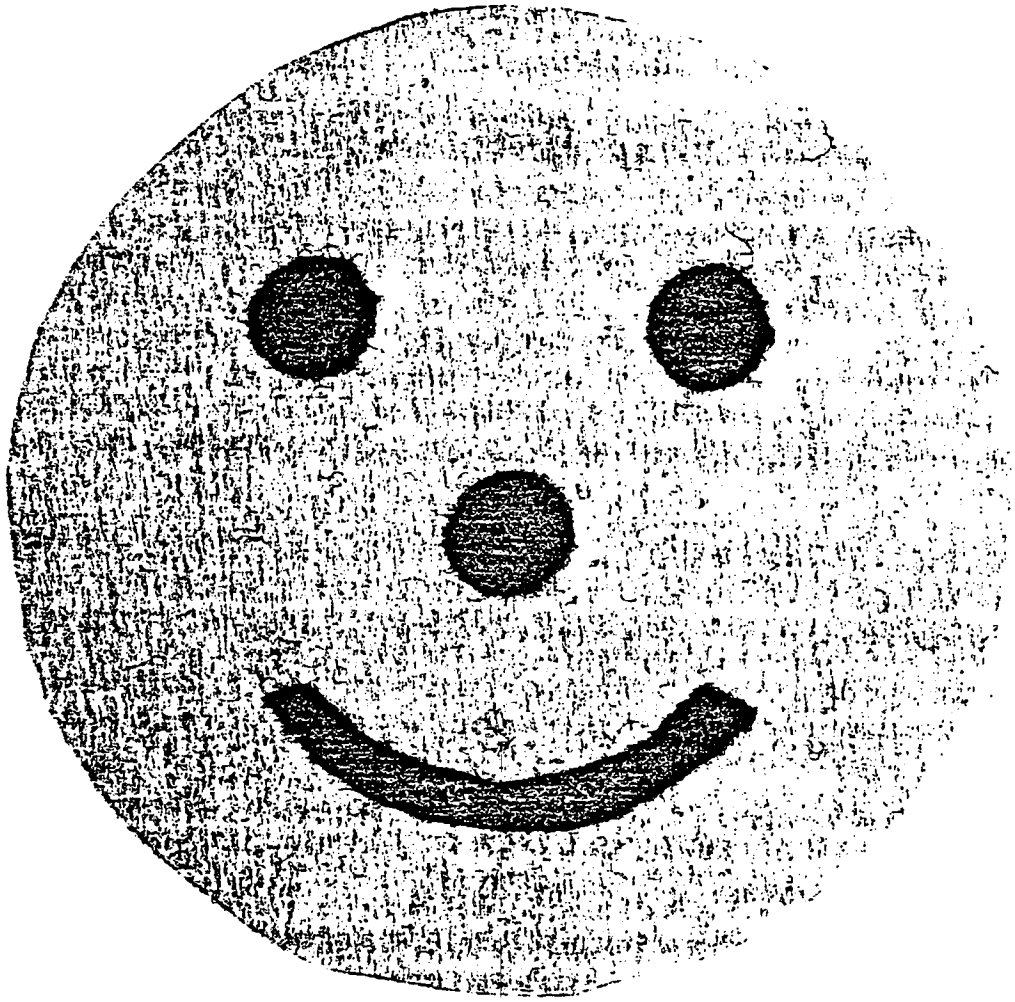
My child may not participate_____

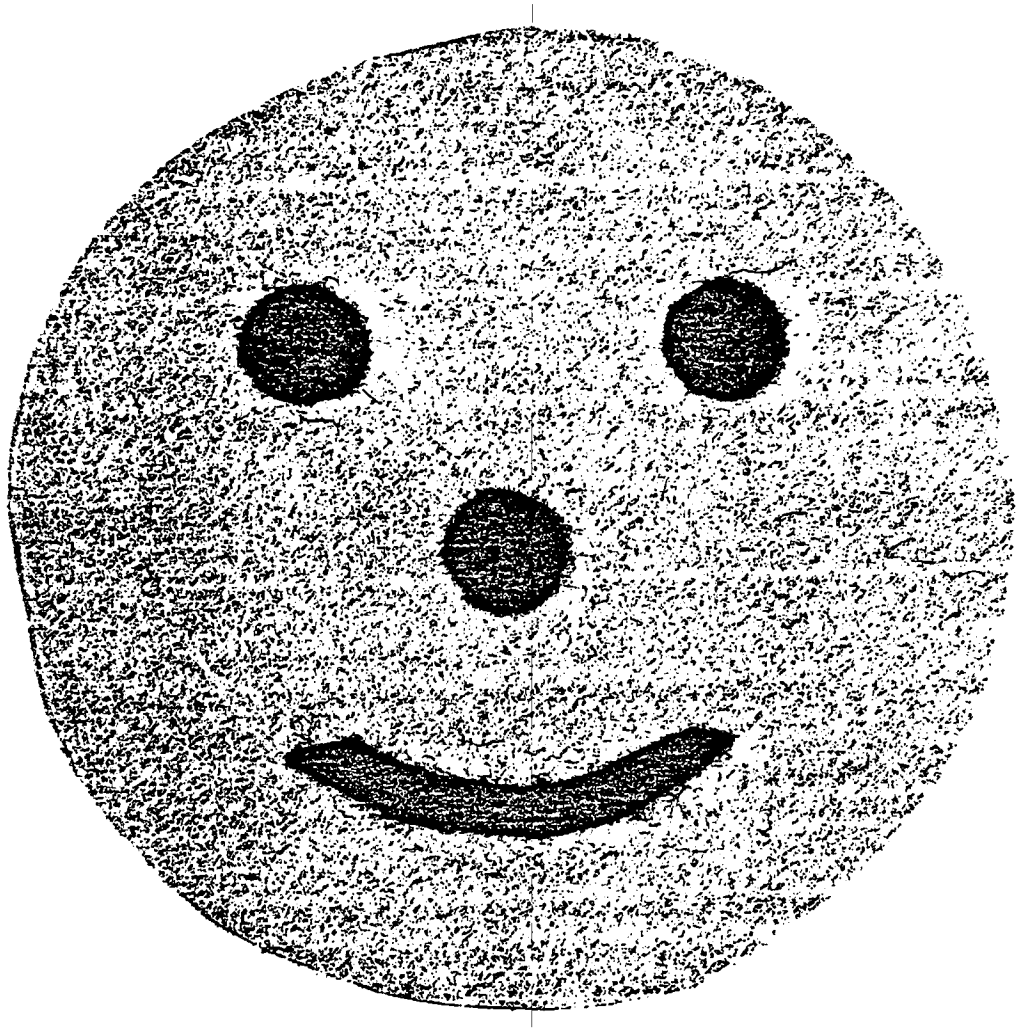
_____
(Child's Birthdate)

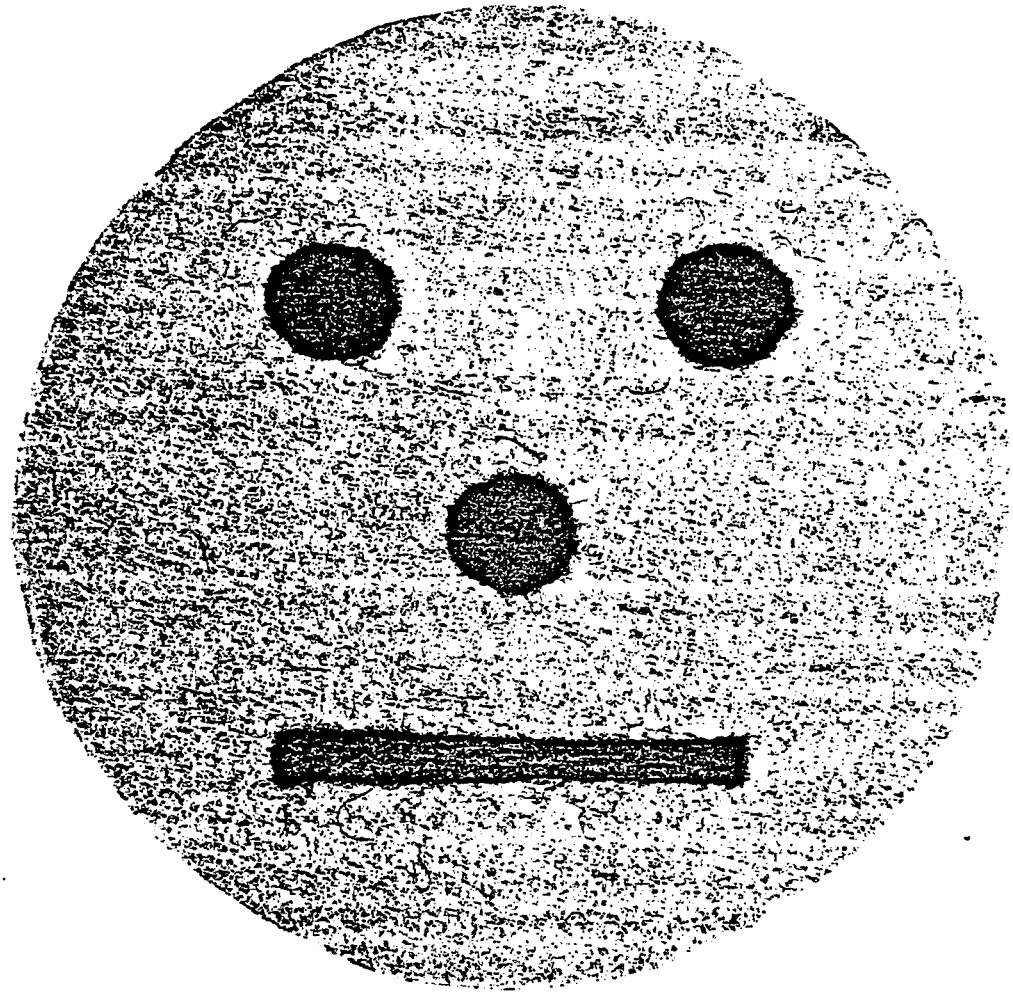
_____
(Parent/Guardian Signature)

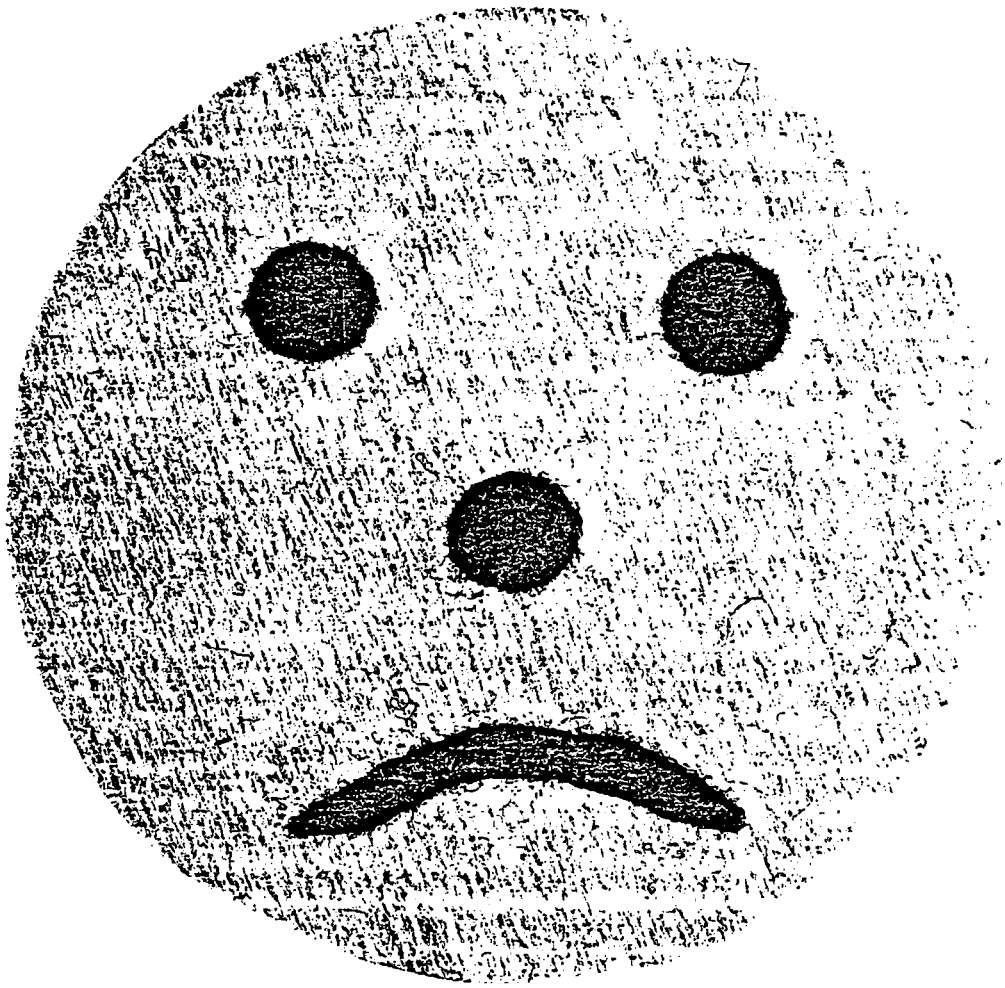
_____
(Date Signed)

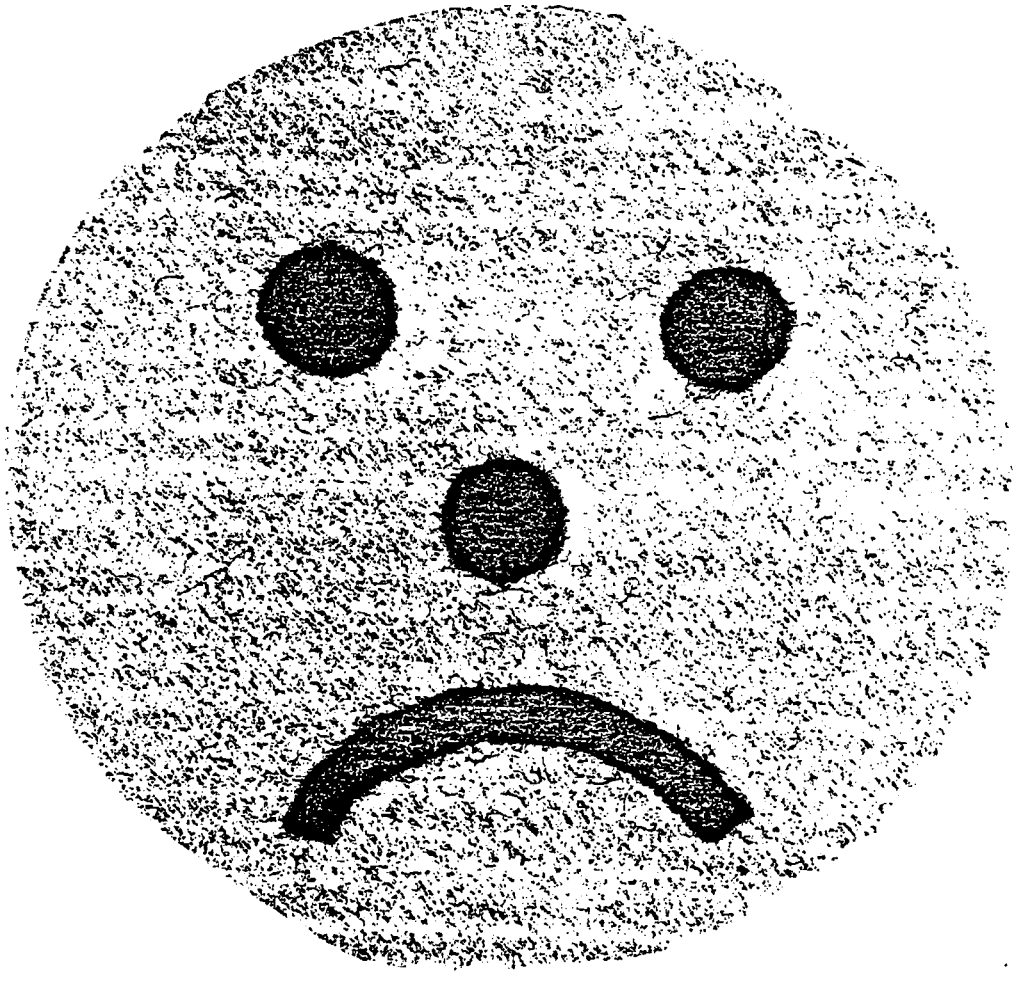


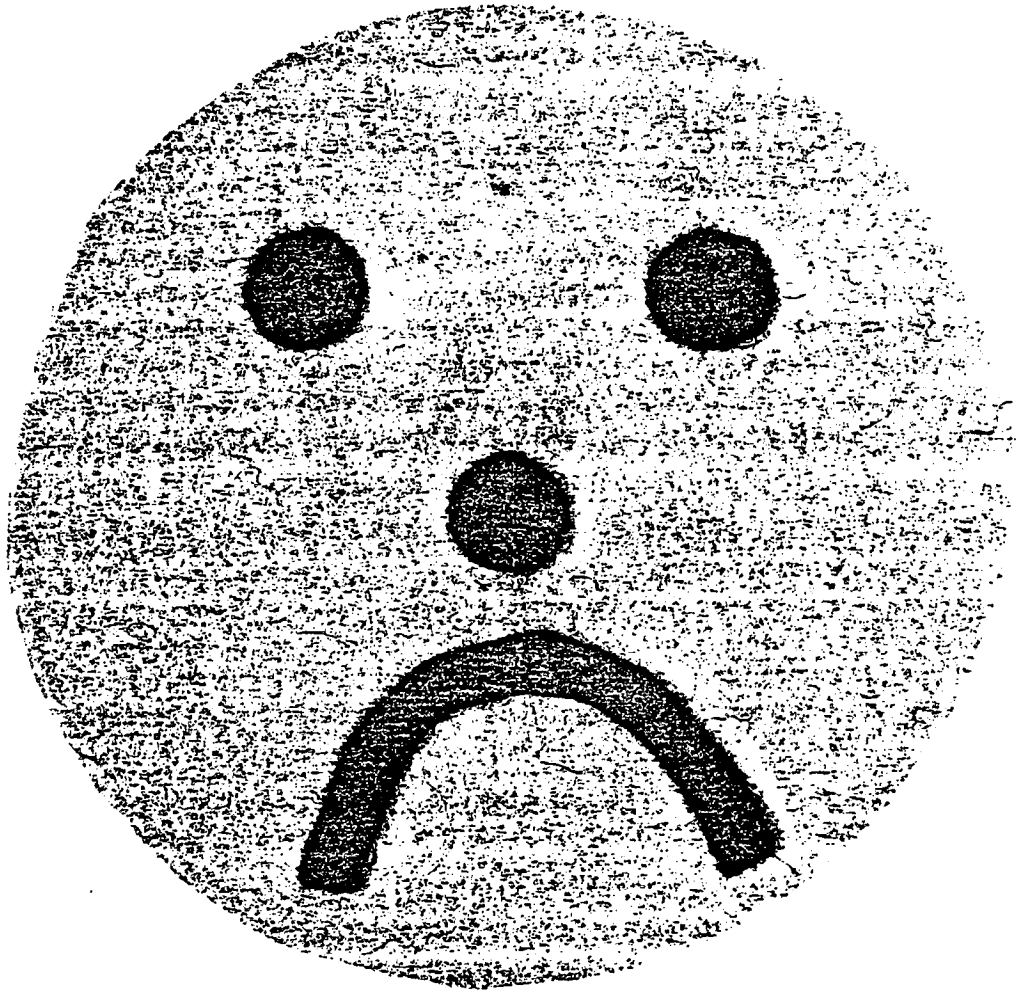








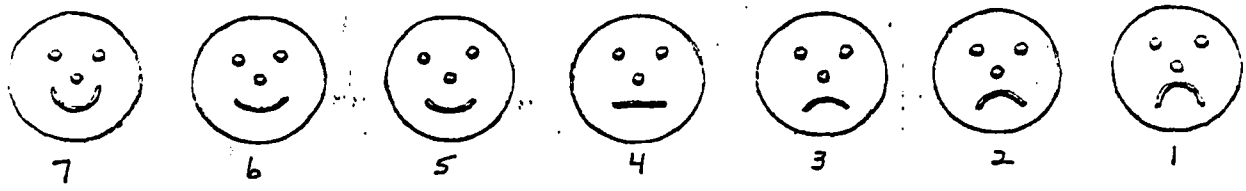




ANSWER SHEET

OLD DOMINION UNIVERSITY

FACES SCALE FOR TEACHERS 38




| B | G | B | G | B | G | B | G |
|---|---|---|---|---|---|---|---|
| 1--- | --- | 2--- | --- | 3--- | --- | 4--- | --- |
| | 17 | | 33 | | 2 | | 9 |
| 5--- | --- | 6--- | --- | 7--- | --- | 8--- | --- |
| | 3 | | 10 | | 21 | | 13 |
| 9--- | --- | 10--- | --- | 11--- | --- | 12--- | --- |
| | 14 | | 34 | | 6 | | 32 |
| 13--- | --- | 14--- | --- | 15--- | --- | 16--- | --- |
| | 19 | | 27 | | 18 | | 5 |
| 17--- | --- | 18--- | --- | 19--- | --- | 20--- | --- |
| | 24 | | 4 | | 20 | | 11 |
| 21--- | --- | 22--- | --- | 23--- | --- | 24--- | --- |
| | 30 | | 16 | | 25 | | 26 |
| 25--- | --- | 26--- | --- | 27--- | --- | 28--- | --- |
| | 29 | | 12 | | 31 | | 8 |
| 29--- | --- | 30--- | --- | 31--- | --- | 32--- | --- |
| | 22 | | 1 | | 7 | | 35 |
| 33--- | --- | 34--- | --- | 35--- | --- | 36--- | --- |
| | 23 | | 36 | | 15 | | 20 |

OLD DOMINION UNIVERSITY

FACES SCALE FOR TEACHERS 38

1. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER WERE SICK.

2. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER WERE PRETTY OR HANDSOME.

3. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER COMPLAINED.

4. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HE, SHE) TRIPPED ON (HIS, HER) SHOESTRING AND THE TEACHER LAUGHED.

5. IF THE TEACHER WORE SLOPPY CLOTHES, HOW WOULD (FREDDY, FRIEDA) FEEL?

6. IF (FREDDY, FRIEDA) WERE RUNNING AROUND THE CLASSROOM AND THE TEACHER GRABBED (HIM, HER) AND SHOOK (HIM, HER), HOW WOULD (FREDDY, FRIEDA) FEEL?

7. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF THE TEACHER MADE EVERYBODY FEEL HAPPY.

8. IF THE SCHOOL HAD A SHOW AND THE TEACHER DIDN'T GO, HOW WOULD (FREDDY,FRIEDA) FEEL?

9. IF THE TEACHER DID NOT WANT TO TAKE THE CLASS OUTSIDE AND (HE, SHE) WERE SLOW AND LAZY, HOW WOULD (FREDDY, FRIEDA) FEEL?

10. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER MADE UGLY FACES AT (HIM, HER).

11. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER HELPED KIDS TO LEARN MATH.

12. IF THE TEACHER SCREAMED AND HIT (FREDDY, FRIEDA) FOR BEING BAD, HOW WOULD (HE, SHE) FEEL?

13. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF THE TEACHER MADE THE CLASS BE QUIET.

14. IF THE TEACHER HELPED WITH GAMES AND ACTIVITIES, HOW WOULD (FREDDY, FRIEDA) FEEL?

15. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF THE TEACHER REMEMBERED EVERY-BODY'S BIRTHDAY.

16. IF (HIS, HER) TEACHER SHOWED THE CLASS HOW TO DANCE, HOW WOULD (FREDDY, FRIEDA) FEEL?

17. IF THE TEACHER HAD PETS OR FAVORITE STUDENTS, HOW WOULD (FREDDY,FRIEDA) FEEL?

18. IF THE CLASS WERE DRAWING AND THE TEACHER SAID, "HURRY, HURRY", HOW WOULD (FREDDY, FRIEDA) FEEL?

19. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER WENT TO ANIMAL OR PUPPET SHOWS WITH THE CLASS.

20. IF THE TEACHER LOOKED UGLY, HOW WOULD (FREDDY, FRIEDA) FEEL?

21. IF THE TEACHER SPOKE SOFTLY, HOW WOULD (FREDDY, FRIEDA) FEEL?

22. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF THE TEACHER KNEW LOTS OF THINGS.

23. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER PICKED ON KIDS.

24. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER LET (HIM, HER) GO TO THE RESTROOM BY (HIM-/HER-)SELF.

25. IF THE TEACHER TOLD SOME FUNNY STORIES, HOW WOULD (FREDDY, FRIEDA) FEEL?

26. IF (HIS, HER) TEACHER WAITED PATIENTLY UNTIL EVERYONE FINISHED, HOW WOULD (FREDDY, FRIEDA) FEEL?

27. IF THE TEACHER TALKED FAST, HOW WOULD (FREDDY, FRIEDA) FEEL?

28. IF THE CLASS HAD A PARTY AND THE TEACHER TOOK MORE COOKIES THAN ANYONE ELSE, HOW WOULD (FREDDY, FRIEDA) FEEL?

29. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF THE TEACHER DID NOT CARE WHAT THE CLASS DID AT PLAY PERIOD.

30. IF (HIS, HER) TEACHER DID NOT TAKE THE CLASS PLACES, HOW WOULD (FREDDY, FRIEDA) FEEL?

31. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF THE CLASS BULLY WERE HITTING ON KIDS AND THE TEACHER MADE (HIM, HER) STOP.

32. IF THE TEACHER DID NOT DRAW OR PAINT WITH (HIM, HER), HOW WOULD (FREDDY, FRIEDA) FEEL?

OLD DOMINION UNIVERSITY

FACES SCALE FOR TEACHERS 38

33. IF (HIS, HER) TEACHER SAT IN (HIS, HER) DESK THE RIGHT WAY, HOW WOULD (FREDDY, FRIEDA) FEEL?

34. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF THE TEACHER GAVE (HIM, HER) HARD QUESTIONS.

35. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER WORE A NICE SUIT.

36. SHOW ME HOW (FREDDY, FRIEDA) WOULD FEEL IF (HIS, HER) TEACHER YELLED AT (HIM, HER).

# APPENDIX B

## ANALYSES OF THE 36 ITEMS

Appendix B: (1) Means and Standard Deviations of the 36 Items

| Item | Mean | SD |
|---|---|---|
| V 1 | 2.3664 | 1.5650 |
| V 2 | 2.6641 | 1.5962 |
| V 3 | 2.6260 | 1.4850 |
| V 4 | 3.3359 | 1.7214 |
| V 5 | 6.0611 | 1.3854 |
| V 6 | 6.4198 | .9919 |
| V 7 | 4.5649 | 2.4717 |
| V 8 | 2.8702 | 1.8622 |
| V 9 | 1.6718 | 1.1926 |
| V 10 | 1.5344 | .8797 |
| V 11 | 2.4504 | 1.2903 |
| V 12 | 6.1527 | 1.2308 |
| V 13 | 3.0382 | 1.7115 |
| V 14 | 1.8550 | 1.1644 |
| V 15 | 6.2824 | 1.0545 |
| V 16 | 6.1374 | 1.4184 |
| V 17 | 2.1069 | 1.3141 |
| V 18 | 6.6489 | .6671 |
| V 19 | 3.7252 | 1.7367 |
| V 20 | 6.3206 | 1.4846 |
| V 21 | 6.5573 | 1.2036 |
| V 22 | 4.3511 | 2.3136 |
| V 23 | 6.2672 | 1.1082 |

Appendix B: (1)(Continued)

| Item | Mean | SD |
|---|---|---|
| V 24 | 5.3435 | 1.9126 |
| V 25 | 1.9695 | 1.3919 |
| V 26 | 5.6412 | 1.8567 |
| V 27 | 6.3511 | 1.2583 |
| V 28 | 6.2824 | 1.4265 |
| V 29 | 1.8550 | 1.1308 |
| V 30 | 5.0611 | 1.7574 |
| V 31 | 3.4885 | 1.6425 |
| V 32 | 1.3817 | .7986 |
| V 33 | 6.4580 | 1.0832 |
| V 34 | 1.7252 | 1.0674 |
| V 35 | 2.7710 | 1.5863 |
| V 36 | 2.5878 | 1.5285 |

Note. n = 131.

Appendix B: (1)(Continued)

1. If (his, her) teacher did not take the class places, how would (Freddy, Frieda) feel?

2. Show me how (Freddy, Frieda) would feel if (his, her) teacher complained.

3. If the teacher wore sloppy clothes, how would (Freddy, Frieda) feel?

4. If the class were drawing and the teacher said "hurry, hurry," how would (Freddy, Frieda) feel?

5. If (his, her) teacher showed the class how to dance, how would (Freddy, Frieda) feel?

6. Show me how (Freddy, Frieda) would feel if (his, her) teacher helped kids to learn math.

7. Show me how (Freddy, Frieda) would feel if the class bully were hitting on kids and the teacher made (him, her) stop.

8. If the class had a party and the teacher took more cookies than anyone else, how would (Freddy, Frieda) feel?

9. Show me how (Freddy, Frieda) would feel if (he, she) tripped on (his, her) shoestring and the teacher laughed.

10. If (Freddy, Frieda) were running around the classroom and the teacher grabbed (him, her) and shook (him, her), how would (Freddy, Frieda) feel?

11. If the teacher looked ugly, how would (Freddy, Frieda) feel?

12. If (his, her) teacher waited patiently until everyone finished, how would (Freddy, Frieda) feel?

13. If the school had a show and the teacher didn't go, how would (Freddy, Frieda) feel?

14. If the teacher did not want to take the class outside and (he, she) were slow and lazy, how would (Freddy, Frieda) feel?

15. Show me how (Freddy, Frieda) would feel if (his, her) teacher wore a nice suit.

16. Show me how (Freddy, Frieda) would feel if the teacher knew lots of things.

17. Show me how (Freddy, Frieda) would feel if (his, her) teacher were sick.

18. Show me how (Freddy, Frieda) would feel if the teacher remembered everybody's birthday.

Appendix B: (1)(Continued)

19. Show me how (Freddy, Frieda) would feel if the teacher made the class be quiet.

20. Show me how (Freddy, Frieda) would feel if (his, her) teacher went to animal or puppet shows with the class.

21. Show me how (Freddy, Frieda) would feel if the teacher made everybody feel happy.

22. Show me how (Freddy, Frieda) would feel if the teacher did not care what the class did at play period.

23. If (his, her) teacher sat in (his, her) desk the right way, how would (Freddy, Frieda) feel?

24. If the teacher had pets or favorite students, how would (Freddy, Frieda) feel?

25. Show me how (Freddy, Frieda) would feel if (his, her) teacher picked on kids.

26. Show me how (Freddy, Frieda) would feel if (his, her) teacher let (him, her) go to the restroom by (him, her) self.

27. If the teacher helped with games and activities, how would (Freddy, Frieda) feel?

28. If the teacher told some funny stories, how would (Freddy, Frieda) feel?

29. Show me how (Freddy, Frieda) would feel if (his, her) teacher yelled at (him, her).

30. If the teacher spoke softly, how would (Freddy, Frieda) feel?

31. If the teacher talked fast, how would (Freddy, Frieda) feel?

32. If the teacher screamed and hit (Freddy, Frieda) for being bad, how would (he, she) feel?

33. Show me how (Freddy, Frieda) would feel if (his, her) teacher were pretty or handsome.

34. Show me how (Freddy, Frieda) would feel if (his, her) teacher made ugly faces at (him, her).

35. If the teacher did not draw or paint with (him, her), how would (Freddy, Frieda) feel?

36. Show me how (Freddy, Frieda) would feel if the teacher gave (him, her) hard questions.

Correlation coefficients:

| | V1 | V2 | V3 | V4 | V5 | V6 | V7 | V8 | V9 | V10 |
|---|---|---|---|---|---|---|---|---|---|---|
| V1 | 1.00000 | 0.21900 | 0.21499 | 0.17668 | -0.05297 | -0.02553 | -0.06784 | 0.08771 | 0.23392 | 0.15282 |
| V2 | 0.21900 | 1.00000 | 0.26462 | 0.08337 | 0.05457 | -0.21147 | 0.00167 | 0.10168 | 0.18410 | 0.05211 |
| V3 | 0.21499 | 0.26462 | 1.00000 | 0.31735 | -0.03368 | 0.04999 | -0.00486 | 0.26605 | 0.03004 | 0.07174 |
| V4 | 0.17668 | 0.08337 | 0.31735 | 1.00000 | 0.12035 | 0.15554 | 0.00930 | 0.25607 | 0.06536 | 0.19044 |
| V5 | -0.05297 | 0.05457 | -0.03368 | 0.12035 | 1.00000 | 0.27228 | 0.07521 | -0.02970 | -0.09486 | 0.12451 |
| V6 | -0.02553 | -0.21147 | 0.04999 | 0.15554 | 0.27228 | 1.00000 | 0.23196 | -0.01609 | -0.16222 | -0.13567 |
| V7 | -0.06784 | 0.00167 | -0.00486 | 0.00930 | 0.07521 | 0.23196 | 1.00000 | -0.06751 | -0.12190 | 0.02285 |
| V8 | 0.08771 | 0.10169 | 0.26605 | 0.25607 | -0.02970 | -0.01609 | -0.06751 | 1.00000 | 0.07766 | 0.10370 |
| V9 | 0.23392 | 0.18410 | 0.03004 | 0.06536 | -0.09486 | -0.16222 | -0.12190 | 0.07766 | 1.00000 | 0.28580 |
| V10 | 0.15282 | 0.05211 | 0.07174 | 0.19044 | 0.12451 | -0.13567 | 0.02285 | 0.10370 | 0.28580 | 1.00000 |
| V11 | 0.11954 | 0.18606 | 0.38569 | 0.25345 | 0.00601 | 0.03744 | 0.11016 | 0.25182 | -0.09315 | 0.13875 |
| V12 | -0.05722 | -0.19296 | -0.17474 | -0.06069 | 0.01253 | 0.18021 | -0.05638 | 0.08926 | -0.28003 | -0.07593 |
| V13 | 0.31351 | 0.28911 | 0.38398 | 0.14183 | -0.09507 | -0.09107 | 0.07487 | 0.06432 | 0.05895 | 0.06299 |
| V14 | 0.13070 | 0.20950 | 0.26201 | 0.29314 | -0.07553 | -0.08008 | -0.13970 | 0.13316 | 0.25906 | 0.13633 |
| V15 | -0.12945 | -0.16257 | -0.11377 | 0.07871 | 0.22505 | 0.18728 | 0.13015 | 0.00706 | -0.20097 | 0.07653 |
| V16 | -0.17533 | -0.16633 | -0.20550 | -0.00645 | 0.12880 | 0.24846 | 0.19053 | -0.05436 | -0.30056 | -0.04697 |
| V17 | 0.20897 | 0.31795 | 0.17437 | 0.16083 | 0.02596 | -0.12320 | -0.02347 | 0.15345 | 0.06182 | 0.12988 |
| V18 | -0.17054 | -0.16941 | -0.18797 | -0.05057 | 0.13991 | 0.24777 | 0.26119 | 0.08069 | -0.15567 | -0.01861 |
| V19 | 0.15933 | 0.09264 | 0.02546 | -0.05894 | -0.16881 | -0.12898 | -0.00657 | 0.08641 | 0.03782 | -0.03405 |
| V20 | -0.15027 | -0.24635 | 0.00248 | 0.08998 | 0.29334 | 0.52949 | 0.19553 | -0.05718 | -0.30071 | -0.00850 |
| V21 | -0.17866 | -0.12605 | 0.00562 | 0.12059 | 0.22394 | 0.38885 | 0.27865 | -0.01554 | -0.34855 | 0.02174 |
| V22 | 0.00031 | 0.18811 | 0.01837 | -0.04336 | 0.04126 | 0.09951 | 0.16010 | 0.01601 | -0.10288 | -0.00975 |
| V23 | 0.10279 | -0.26198 | -0.29406 | -0.00708 | 0.03438 | 0.19108 | -0.02744 | -0.22164 | -0.09029 | -0.03711 |
| V24 | 0.03729 | 0.04564 | -0.00316 | 0.18665 | 0.17782 | 0.03693 | -0.22361 | 0.07309 | 0.13076 | -0.00021 |
| V25 | 0.15457 | 0.22731 | 0.27354 | 0.01073 | -0.17853 | -0.27478 | -0.14028 | 0.16168 | 0.42024 | 0.06997 |
| V26 | 0.06147 | 0.14591 | 0.12951 | 0.04040 | 0.02354 | 0.14925 | 0.10820 | 0.00200 | -0.11960 | 0.02880 |
| V27 | -0.06193 | -0.09019 | -0.02797 | 0.19727 | 0.08027 | 0.39249 | 0.20532 | -0.01651 | -0.18403 | -0.02488 |
| V28 | -0.28445 | -0.08301 | 0.05026 | -0.02327 | 0.18971 | 0.24716 | 0.22274 | -0.00057 | -0.32038 | 0.03810 |
| V29 | 0.13457 | 0.12622 | 0.10487 | 0.03707 | -0.02867 | -0.15788 | -0.14935 | 0.07501 | 0.16977 | 0.24090 |
| V30 | 0.02536 | -0.03376 | -0.06487 | 0.05165 | -0.02366 | 0.03813 | -0.02217 | -0.08453 | -0.14084 | -0.04117 |
| V31 | 0.16623 | 0.24791 | 0.06919 | 0.28703 | 0.05778 | -0.04660 | -0.02682 | 0.24220 | 0.14533 | -0.02768 |
| V32 | 0.12727 | 0.13754 | 0.04347 | -0.13313 | -0.16028 | -0.35921 | -0.18800 | 0.27149 | 0.26986 | 0.22208 |
| V33 | 0.00914 | -0.24847 | -0.18440 | -0.00063 | 0.30929 | 0.12751 | -0.01119 | 0.04495 | -0.16261 | 0.00758 |
| V34 | 0.23573 | 0.11246 | 0.24525 | 0.13435 | -0.18104 | -0.05729 | -0.12440 | 0.15607 | 0.14614 | 0.01832 |
| V35 | 0.13941 | 0.20027 | 0.17561 | -0.03077 | -0.30861 | -0.06064 | 0.07249 | 0.09663 | 0.11854 | 0.08837 |
| V36 | 0.08935 | 0.17612 | 0.14166 | 0.05010 | 0.04104 | 0.03922 | 0.01121 | 0.11889 | 0.19949 | 0.13647 |

APPENDIX B: (2) (Continued)

| | V11 | V12 | V13 | V14 | V15 | V16 | V17 | V18 | V19 | V20 |
|---|---|---|---|---|---|---|---|---|---|---|
| V1 | 0.11954 | -0.05722 | 0.31351 | 0.13070 | -0.12945 | -0.17533 | 0.20897 | -0.17054 | 0.15903 | -0.15027 |
| V2 | 0.15606 | -0.19296 | 0.28911 | 0.20950 | -0.16257 | -0.16633 | 0.31795 | -0.16941 | 0.09964 | -0.24635 |
| V3 | 0.38569 | -0.17474 | 0.38398 | 0.26201 | -0.11377 | -0.20550 | 0.17437 | -0.18797 | 0.02546 | 0.00248 |
| V4 | 0.25345 | -0.06069 | 0.14183 | 0.29314 | 0.07871 | -0.00645 | 0.16083 | -0.05057 | -0.05894 | 0.08998 |
| V5 | 0.00601 | 0.01253 | -0.09507 | -0.07553 | 0.22505 | 0.12880 | 0.02596 | 0.13991 | -0.16881 | 0.29334 |
| V6 | 0.13744 | 0.18021 | -0.09107 | -0.08008 | 0.18728 | 0.24846 | -0.12320 | 0.24777 | -0.12898 | 0.52949 |
| V7 | 0.14016 | -0.05638 | 0.07487 | -0.13270 | 0.13015 | 0.19053 | -0.02347 | 0.26119 | -0.00657 | 0.19553 |
| V8 | 0.25182 | 0.08926 | 0.06432 | 0.13316 | 0.00706 | -0.05436 | 0.15345 | 0.08069 | 0.08641 | -0.05718 |
| V9 | -0.09315 | -0.28003 | 0.05895 | 0.25906 | -0.20097 | -0.30056 | 0.06182 | -0.15567 | 0.03782 | -0.30071 |
| V10 | 0.13875 | -0.07593 | 0.06299 | 0.13633 | 0.07653 | -0.04697 | 0.12988 | -0.01861 | -0.03405 | -0.00850 |
| V11 | 1.00000 | 0.02418 | 0.14542 | 0.11038 | -0.11683 | 0.00796 | 0.11657 | -0.11871 | -0.11598 | 0.06057 |
| V12 | 0.02418 | 1.00000 | -0.22188 | -0.06494 | 0.16803 | 0.45055 | -0.16235 | 0.14075 | 0.14213 | 0.12034 |
| V13 | 0.14542 | -0.22188 | 1.00000 | 0.21510 | -0.15094 | -0.26518 | 0.25468 | -0.20377 | -0.07408 | -0.00788 |
| V14 | 0.11038 | -0.06494 | 0.21510 | 1.00000 | -0.10421 | -0.02510 | 0.14092 | -0.20473 | -0.11877 | -0.06189 |
| V15 | -0.11683 | 0.16803 | -0.15094 | -0.10421 | 1.00000 | 0.27730 | -0.16628 | 0.29518 | -0.05810 | 0.12843 |
| V16 | 0.00796 | 0.45055 | -0.26518 | -0.02514 | 0.27730 | 1.00000 | -0.02857 | 0.31155 | 0.17159 | 0.36249 |
| V17 | 0.11657 | -0.16235 | 0.25468 | 0.14092 | -0.16628 | -0.02857 | 1.00000 | -0.08849 | -0.00726 | -0.05318 |
| V18 | -0.11871 | 0.14075 | -0.20377 | -0.20473 | 0.29518 | 0.31155 | -0.08849 | 1.00000 | 0.01566 | 0.23883 |
| V19 | -0.11598 | 0.14213 | -0.07408 | -0.11877 | -0.05810 | 0.17159 | -0.00726 | 0.01566 | 1.00000 | -0.18037 |
| V20 | 0.06057 | 0.12034 | -0.00788 | -0.06189 | 0.12843 | 0.36249 | -0.05318 | 0.23883 | -0.18037 | 1.00000 |
| V21 | 0.11453 | 0.27445 | -0.12994 | -0.10166 | 0.39022 | 0.54960 | 0.01556 | 0.36057 | -0.02922 | 0.63538 |
| V22 | 0.02546 | 0.03505 | -0.08401 | -0.05234 | -0.02835 | 0.08364 | 0.17226 | 0.03067 | -0.14044 | 0.09910 |
| V23 | -0.14936 | 0.23492 | -0.25697 | -0.21416 | 0.39572 | 0.08903 | -0.14125 | 0.13829 | 0.05443 | 0.04572 |
| V24 | -0.14118 | 0.11479 | 0.02651 | 0.06400 | 0.22614 | 0.11007 | 0.10158 | 0.07115 | -0.02926 | -0.01199 |
| V25 | 0.06340 | -0.18583 | 0.21683 | 0.16336 | -0.21419 | -0.21215 | 0.08170 | -0.16076 | 0.16515 | -0.21112 |
| V26 | 0.08402 | -0.01287 | 0.13990 | -0.12745 | 0.06002 | 0.12694 | 0.00638 | 0.22667 | 0.14333 | 0.12019 |
| V27 | 0.08662 | 0.17868 | -0.09913 | -0.03847 | 0.17396 | 0.39944 | -0.03682 | 0.12053 | 0.11489 | 0.37162 |
| V28 | 0.12260 | 0.18554 | 0.03651 | -0.10419 | 0.30963 | 0.14415 | -0.05316 | 0.21820 | -0.14230 | 0.24748 |
| V29 | 0.07147 | -0.07239 | 0.02673 | 0.12411 | -0.04924 | -0.16493 | 0.01051 | -0.19040 | 0.06180 | -0.23325 |
| V30 | -0.03258 | 0.07034 | -0.03914 | -0.01443 | 0.12760 | 0.05524 | -0.05614 | 0.05780 | 0.00302 | -0.01346 |
| V31 | 0.15308 | -0.03718 | 0.20401 | 0.16604 | 0.03519 | -0.00922 | 0.22508 | -0.08794 | 0.14450 | -0.13097 |
| V32 | -0.09345 | -0.05974 | -0.00511 | 0.10962 | 0.00802 | -0.29112 | 0.04146 | -0.12191 | 0.15939 | -0.40892 |
| V33 | -0.09369 | 0.08562 | -0.09249 | -0.10550 | 0.45160 | 0.02381 | -0.15354 | 0.20301 | -0.00618 | 0.01800 |
| V34 | 0.09256 | -0.03223 | 0.06053 | 0.33286 | -0.03986 | -0.24924 | 0.17465 | -0.22300 | -0.03275 | -0.17698 |
| V35 | 0.20487 | -0.09227 | 0.47073 | 0.18178 | -0.17717 | 0.01751 | 0.17050 | -0.09112 | 0.06075 | -0.08290 |
| V36 | 0.16506 | 0.00918 | 0.14132 | 0.04395 | -0.15629 | -0.14753 | -0.00854 | -0.06006 | 0.13665 | -0.03623 |

| | V21 | V22 | V23 | V24 | V25 | V26 | V27 | V28 | V29 | V30 |
|---|---|---|---|---|---|---|---|---|---|---|
| V1 | -0.17860 | 0.00031 | 0.10279 | 0.03729 | 0.16407 | 0.06147 | -0.06193 | -0.28445 | 0.13457 | 0.02536 |
| V2 | -0.12665 | 0.18841 | -0.26198 | 0.04564 | 0.22731 | 0.14591 | -0.09019 | -0.08301 | 0.12622 | -0.03376 |
| V3 | 0.00562 | 0.01837 | -0.29406 | -0.00316 | 0.27354 | 0.12951 | -0.02797 | 0.05026 | 0.10487 | -0.06487 |
| V4 | 0.12459 | -0.04336 | -0.00708 | 0.18665 | 0.01073 | 0.04040 | 0.19727 | -0.02327 | 0.03707 | 0.05165 |
| V5 | 0.22394 | 0.04126 | 0.03439 | 0.17782 | -0.17853 | 0.02354 | 0.08027 | 0.18971 | -0.02867 | -0.02366 |
| V6 | 0.38885 | 0.09951 | 0.19108 | 0.03693 | -0.27478 | 0.14925 | 0.39249 | 0.24716 | -0.15788 | 0.03813 |
| V7 | 0.27865 | -0.16010 | -0.02744 | -0.23361 | -0.14028 | 0.10820 | 0.20532 | 0.22274 | -0.14935 | -0.02217 |
| V8 | -0.01554 | 0.01601 | -0.22164 | 0.07309 | 0.16168 | 0.00200 | -0.01651 | -0.00057 | 0.07501 | -0.08453 |
| V9 | -0.34855 | -0.10288 | -0.09029 | 0.13076 | 0.42024 | -0.11960 | -0.18403 | -0.32038 | 0.16977 | -0.14084 |
| V10 | 0.02174 | -0.00975 | -0.03711 | -0.00021 | 0.00997 | 0.02880 | -0.02488 | 0.03818 | 0.24090 | -0.04117 |
| V11 | 0.11453 | 0.07546 | -0.14936 | -0.14110 | 0.06340 | 0.08402 | 0.08662 | 0.12260 | 0.07147 | -0.03258 |
| V12 | 0.27445 | 0.03505 | 0.23492 | 0.11479 | -0.18583 | -0.01287 | 0.17868 | 0.18554 | -0.07239 | 0.07034 |
| V13 | -0.14990 | 0.08401 | -0.25687 | 0.02651 | 0.21683 | 0.13990 | -0.09913 | 0.03651 | 0.02673 | -0.03914 |
| V14 | -0.10106 | -0.05234 | -0.21116 | 0.06400 | 0.16336 | -0.12745 | -0.03847 | -0.10019 | 0.12411 | -0.01443 |
| V15 | 0.39022 | -0.02835 | 0.39572 | 0.22614 | -0.21419 | 0.06002 | 0.17396 | 0.30963 | -0.04924 | 0.12760 |
| V16 | 0.54060 | 0.08364 | 0.08903 | 0.11007 | -0.21215 | 0.12694 | 0.39944 | 0.14415 | -0.16493 | 0.05524 |
| V17 | 0.01556 | 0.17226 | -0.14125 | 0.10158 | 0.08170 | 0.00638 | -0.03682 | -0.05316 | 0.01051 | -0.05614 |
| V18 | 0.36057 | 0.03067 | 0.13829 | 0.07115 | -0.16076 | 0.22667 | 0.12053 | 0.21820 | -0.19040 | 0.05780 |
| V19 | -0.02922 | -0.14044 | 0.05443 | -0.02926 | 0.16515 | 0.14333 | 0.11489 | -0.14230 | 0.06180 | 0.00302 |
| V20 | 0.63538 | 0.09910 | 0.04572 | -0.01199 | -0.21112 | 0.12019 | 0.37162 | 0.24748 | -0.23325 | -0.01346 |
| V21 | 1.00000 | 0.09770 | 0.26815 | 0.04653 | -0.26985 | 0.23129 | 0.56055 | 0.35565 | -0.14927 | 0.07107 |
| V22 | 0.09770 | 1.00000 | 0.01113 | 0.06640 | 0.03202 | 0.06895 | 0.18455 | 0.09325 | 0.07254 | -0.10558 |
| V23 | 0.26815 | 0.01113 | 1.00000 | 0.02169 | -0.20412 | 0.02825 | 0.27421 | 0.04922 | 0.00047 | 0.05870 |
| V24 | 0.04653 | 0.06640 | 0.02169 | 1.00000 | 0.16289 | 0.02847 | 0.09013 | -0.04993 | 0.00187 | 0.17222 |
| V25 | -0.26985 | 0.03202 | -0.20412 | 0.16289 | 1.00000 | 0.05228 | -0.12997 | -0.27842 | 0.14866 | -0.15960 |
| V26 | 0.23129 | 0.06895 | 0.02825 | 0.02847 | 0.05228 | 1.00000 | 0.21238 | 0.11987 | -0.09825 | 0.01855 |
| V27 | 0.56055 | 0.18455 | 0.27421 | 0.09013 | -0.12997 | 0.21238 | 1.00000 | 0.23572 | -0.09908 | -0.04456 |
| V28 | 0.35565 | 0.09325 | 0.04922 | -0.04993 | -0.27842 | 0.11987 | 0.23572 | 1.00000 | -0.05547 | 0.02375 |
| V29 | -0.14927 | 0.07254 | 0.00047 | 0.00187 | 0.14866 | -0.09825 | -0.09908 | -0.05547 | 1.00000 | -0.04970 |
| V30 | 0.07107 | -0.10558 | 0.05870 | 0.17222 | -0.15960 | 0.01855 | -0.04456 | 0.02375 | -0.04970 | 1.00000 |
| V31 | 0.02854 | 0.06989 | 0.02494 | 0.13961 | 0.12770 | 0.04026 | 0.05779 | 0.04571 | 0.10470 | -0.04772 |
| V32 | -0.37502 | -0.04811 | -0.02050 | -0.09153 | 0.16280 | -0.05738 | -0.25686 | -0.04809 | 0.20656 | -0.05510 |
| V33 | 0.13904 | -0.11993 | 0.31382 | 0.24651 | -0.09269 | 0.16267 | 0.11249 | 0.15957 | -0.00187 | 0.04985 |
| V34 | -0.15532 | 0.06741 | 0.03654 | 0.06167 | 0.22212 | -0.17823 | -0.12233 | -0.10524 | 0.21527 | -0.00329 |
| V35 | -0.09380 | 0.18556 | -0.34125 | -0.06515 | 0.11177 | 0.07897 | -0.04804 | 0.08659 | 0.11427 | 0.01057 |
| V36 | -0.02889 | -0.00008 | -0.10705 | 0.00671 | 0.17842 | 0.09927 | -0.00415 | -0.05203 | 0.11645 | 0.07244 |

| | V31 | V32 | V33 | V34 | V35 | V36 |
|---|---|---|---|---|---|---|
| V1 | 0.16623 | 0.12727 | 0.00914 | 0.23573 | 0.13941 | 0.08935 |
| V2 | 0.24791 | 0.13754 | -0.24847 | 0.11746 | 0.20027 | 0.17612 |
| V3 | 0.06919 | 0.04347 | -0.18440 | 0.24525 | 0.17561 | 0.14166 |
| V4 | 0.28703 | -0.13313 | -0.00063 | 0.13435 | -0.03077 | 0.05010 |
| V5 | 0.05778 | -0.16028 | 0.30929 | -0.18104 | -0.30861 | 0.04104 |
| V6 | -0.04660 | -0.35921 | 0.12751 | -0.05729 | -0.06064 | 0.05922 |
| V7 | -0.02692 | -0.18800 | -0.01119 | -0.12448 | 0.07249 | 0.01121 |
| V8 | 0.24229 | 0.27149 | 0.04495 | 0.15607 | 0.09663 | 0.11889 |
| V9 | 0.14533 | 0.26986 | -0.16261 | 0.14614 | 0.11854 | 0.19949 |
| V10 | -0.02768 | 0.22208 | 0.00758 | 0.01832 | 0.08837 | 0.13647 |
| V11 | 0.15308 | -0.09345 | -0.09369 | 0.09056 | 0.20487 | 0.16506 |
| V12 | -0.03718 | -0.05974 | 0.08562 | -0.03223 | -0.09227 | 0.00918 |
| V13 | 0.29401 | -0.00511 | -0.09249 | 0.06053 | 0.47073 | 0.14132 |
| V14 | 0.16604 | 0.10962 | -0.10550 | 0.33286 | 0.18178 | 0.04395 |
| V15 | 0.03519 | 0.00802 | 0.45160 | -0.03986 | -0.17717 | -0.15629 |
| V16 | -0.00922 | -0.29112 | 0.02381 | -0.24924 | 0.01751 | -0.14753 |
| V17 | 0.22509 | 0.04146 | -0.15354 | 0.17465 | 0.17050 | -0.00854 |
| V18 | -0.08794 | -0.12191 | 0.20301 | -0.22300 | -0.09112 | -0.06006 |
| V19 | 0.14450 | 0.15939 | -0.00618 | -0.03275 | 0.06075 | 0.13665 |
| V20 | -0.13097 | -0.40892 | 0.01800 | -0.17698 | -0.08290 | -0.03623 |
| V21 | 0.02854 | -0.37502 | 0.13904 | -0.15532 | -0.09380 | -0.02889 |
| V22 | 0.06989 | -0.04811 | -0.11993 | 0.06741 | 0.18556 | -0.00008 |
| V23 | 0.02494 | -0.02050 | 0.31382 | 0.03654 | -0.34125 | -0.10705 |
| V24 | 0.13961 | -0.09153 | 0.24651 | 0.06167 | -0.06515 | 0.00671 |
| V25 | 0.12770 | 0.16280 | -0.09269 | 0.22212 | 0.11177 | 0.17842 |
| V26 | 0.04026 | -0.05738 | 0.16267 | -0.17823 | 0.07897 | 0.09927 |
| V27 | 0.05779 | -0.25686 | 0.11249 | -0.12233 | -0.04804 | -0.00415 |
| V28 | 0.04571 | -0.04809 | 0.15957 | -0.10524 | 0.08659 | -0.05203 |
| V29 | 0.10470 | 0.20656 | -0.00197 | 0.21527 | 0.11427 | 0.11645 |
| V30 | -0.04772 | -0.05510 | 0.04985 | -0.00329 | 0.01057 | 0.07244 |
| V31 | 1.00000 | 0.09132 | -0.00135 | 0.09033 | 0.20269 | 0.09308 |
| V32 | 0.09132 | 1.00000 | 0.03645 | 0.17814 | 0.12417 | 0.08576 |
| V33 | -0.00135 | 0.03645 | 1.00000 | -0.02336 | -0.21605 | -0.04306 |
| V34 | 0.09033 | 0.17814 | -0.02336 | 1.00000 | 0.10338 | 0.08562 |
| V35 | 0.20269 | 0.12417 | -0.21605 | 0.10338 | 1.00000 | 0.18918 |
| V36 | 0.09308 | 0.08576 | -0.04306 | 0.08562 | 0.18918 | 1.00000 |

# APPENDIX C

## FACTORS SHOWING NO SIGNIFICANT DIFFERENCES

Appendix C: (1) Student ANOVA for the Derived Factors of Teacher Behavior Showing No Significant Differences

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | | "Attractive Demeanor" (F2) | | |
| Grade(G) | 2.397 | 3 | .799 | .558 |
| Sex(S) | .595 | 1 | .595 | .415 |
| G X S | 1.467 | 3 | .489 | .341 |
| Error | 176.257 | 123 | 1.433 | |
| | | "Unattractive Demeanor" (F3) | | |
| G | 20.222 | 3 | 6.741 | 2.588 |
| S | .068 | 1 | .068 | .026 |
| G X S | 1.804 | 3 | .601 | .231 |
| Error | 320.392 | 123 | 2.605 | |
| | | "Display of Assurance" (F4) | | |
| G | 4.267 | 3 | 1.422 | .654 |
| S | .398 | 1 | .398 | .183 |
| G X S | 15.378 | 3 | 5.126 | 2.358 |
| Error | 267.403 | 123 | 2.174 | |

Appendix C: (1)(Continued)

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | | "Formality of Style" (F5) | | |
| G | 10.885 | 3 | 3.628 | 1.384 |
| S | 2.650 | 1 | 2.650 | 1.011 |
| G X S | 2.746 | 3 | .915 | .349 |
| Error | 322.505 | 123 | 2.622 | |
| | | "Self-Centered" (F6) | | |
| G | 12.310 | 3 | 4.103 | 1.630 |
| S | 3.897 | 1 | 3.897 | 1.548 |
| G X S | 5.173 | 3 | 1.724 | .685 |
| Error | 309.709 | 123 | 2.518 | |
| | | "Demeans Students" (F9) | | |
| G | 7.522 | 3 | 2.507 | 1.974 |
| S | 4.040 | 1 | 4.040 | 3.180 |
| G X S | 7.926 | 3 | 2.642 | 2.080 |
| Error | 156.242 | 123 | 1.270 | |

Appendix C: (1)(Continued)

| Source | SS | df | MS | F |
|---|---|---|---|---|
| G | 3.158 | 3 | 1.053 | .463 |
| S | 3.311 | 1 | 3.311 | 1.455 |
| G X S | 2.986 | 3 | .995 | .437 |
| Error | 279.913 | 123 | 2.276 | |

Appendix C: (2) Cell Means Collapsed Across Non-Significant Variables for Student ANOVA

| | Grade (Sex-N.S.) | | | |
|---|---|---|---|---|
| Factor | K | 2 | 4 | 6 |
| Student-Centered | 6.2422 | 7.2761 | 7.6927 | 7.6966 |
| Meanness of Disposition | .5877 | .2501 | - .0501 | - .3277 |
| Playing Favorites | 4.5022 | 3.1320 | 3.0131 | 2.7121 |
| Not Fostering Artistic Expression | 3.4656 | 3.4346 | 4.1897 | 4.6535 |

| | Sex (Grade-N.S.) | |
|---|---|---|
| | M | F |
| Meanness of Disposition | .4016 | - .5411 |
| Consideration | .5145 | 1.1165 |

Appendix C: (3) Variances on Each Factor for Male and Female Students at Each Grade Level

| Factor | Grade K | 2 | 4 | 6 |
|---|---|---|---|---|
| Student-Centered | | | | |
| Male | 2.399 | 4.060 | .282 | .359 |
| Female | 2.749 | .477 | .500 | .141 |
| Attractive Demeanor | | | | |
| Male | 2.719 | 2.170 | 1.327 | 1.153 |
| Female | 1.880 | .558 | .716 | .781 |
| Unattractive Demeanor | | | | |
| Male | 4.239 | 2.329 | 2.033 | 2.289 |
| Female | 4.924 | 2.105 | 1.364 | 1.357 |
| Display of Assurance | | | | |
| Male | 8.970 | .972 | 1.057 | .956 |
| Female | 2.002 | 1.261 | .830 | .536 |
| Formality of Style | | | | |
| Male | 4.787 | 4.256 | 1.341 | 1.000 |
| Female | 4.744 | 2.654 | 1.272 | .773 |
| Self-Centered | | | | |
| Male | 3.042 | 1.823 | 3.136 | .918 |
| Female | 5.856 | 2.592 | .945 | 1.809 |
| Meanness of Disposition | | | | |
| Male | 4.465 | 1.804 | .865 | .996 |
| Female | 1.871 | .637 | .529 | .272 |

Appendix C: (3)(Continued)

| Factor | Grade K | 2 | 4 | 6 |
|---|---|---|---|---|
| Playing Favorites | | | | |
| Male | 3.186 | 4.356 | 1.496 | 1.071 |
| Female | 2.271 | 3.077 | .970 | 1.788 |
| Demeans Students | | | | |
| Male | 1.442 | 1.433 | 1.680 | 1.115 |
| Female | 2.341 | .728 | .692 | .714 |
| Not Fostering Artistic Expression | | | | |
| Male | 3.197 | 1.237 | 1.924 | 2.019 |
| Female | 3.928 | 3.764 | .878 | .666 |
| Task-Master | | | | |
| Male | 4.121 | 1.355 | 3.752 | 1.740 |
| Female | 3.679 | 1.111 | 1.383 | .889 |
| Consideration | | | | |
| Male | 4.389 | 5.494 | 2.338 | 1.570 |
| Female | 2.618 | 2.522 | 2.409 | 1.690 |

Appendix C: (4) F-Ratios Resulting from the Pairwise Comparisons of the Variances

| Factor | K+2 | K+4 | K+6 | 2+4 | 2+6 | 4+6 |
|---|---|---|---|---|---|---|
| Student-Centered | | | | | | |
| Male | 1.692 | 8.507* | 6.682* | 14.397* | 11.309* | 1.273 |
| Female | 5.763* | 5.498* | 19.496* | 1.048 | 3.383* | 3.546* |
| Attractive Demeanor | | | | | | |
| Male | 1.253 | 2.049* | 2.358* | 1.635 | 1.882 | 1.151 |
| Female | 3.369* | 2.626* | 2.407* | 1.283 | 1.400 | 1.091 |
| Unattractive Demeanor | | | | | | |
| Male | 1.820 | 2.085* | 1.852 | 1.146 | 1.018 | 1.126 |
| Female | 2.339* | 3.610* | 3.629* | 1.543 | 1.551 | 1.005 |
| Display of Assurance | | | | | | |
| Male | 9.228* | 8.486* | 9.383* | 1.087 | 1.017 | 1.106 |
| Female | 1.588 | 2.412* | 3.735* | 1.519 | 2.353* | 1.549 |
| Formality of Style | | | | | | |
| Male | 1.125 | 3.570* | 4.787* | 3.174* | 4.256* | 1.341 |
| Female | 1.787 | 3.730* | 6.137* | 2.086* | 3.433* | 1.646 |
| Self-Centered | | | | | | |
| Male | 1.669 | 1.031 | 3.314* | 1.720 | 1.986 | 3.416* |
| Female | 2.259* | 6.197* | 3.237* | 2.743* | 1.433 | 1.914 |
| Meanness of Disposition | | | | | | |
| Male | 2.475* | 5.162* | 4.483* | 2.086* | 1.811 | 1.151 |
| Female | 2.937* | 3.537* | 6.879* | 1.204 | 2.342* | 1.945 |

Appendix C: (4) (Continued)

| Factor | K+2 | K+4 | K+6 | 2+4 | 2+6 | 4+6 |
|---|---|---|---|---|---|---|
| Playing Favorites | | | | | | |
| Male | 1.367 | 2.130* | 2.975* | 2.912* | 4.067* | 1.397 |
| Female | 1.355 | 2.341* | 1.270 | 3.172* | 1.721 | 1.843 |
| Demeans Students | | | | | | |
| Male | 1.006 | 1.165 | 1.293 | 1.172 | 1.285 | 1.507 |
| Female | 3.216* | 3.383* | 3.279* | 1.052 | 1.020 | 1.032 |
| Not Fostering Artistic Expression | | | | | | |
| Male | 2.584* | 1.662 | 1.583 | 1.555 | 1.632 | 1.049 |
| Female | 1.044 | 4.474* | 5.898* | 4.287* | 5.652* | 1.318 |
| Task-Master | | | | | | |
| Male | 3.041* | 1.098 | 2.368* | 2.769* | 1.284 | 2.156* |
| Female | 3.311* | 2.660* | 4.138* | 1.245 | 1.250 | 1.556 |
| Consideration | | | | | | |
| Male | 1.252 | 1.877 | 2.796* | 2.350* | 3.499* | 1.489 |
| Female | 1.038 | 1.051 | 1.549 | 1.047 | 1.492 | 1.425 |

*$p < .01$.

Appendix C: (5) Student and Teacher Comparison: Factors Showing No Significant Differences

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | | "Formality of Style" (F5) | | |
| Grade(G) | 13.739 | 3 | 4.580 | 2.224 |
| Sex(S) | .365 | 1 | .365 | .177 |
| Designation(D) (Teach. or Stud.) | 2.748 | 1 | 2.748 | 1.335 |
| GS | .652 | 3 | .217 | .106 |
| GD | .876 | 3 | .292 | .142 |
| SD | 1.221 | 1 | 1.221 | .593 |
| GSD | .426 | 3 | .142 | .069 |
| Error | 368.532 | 179 | 2.059 | |
| | | "Self-Centered" (F6) | | |
| G | 11.304 | 3 | 3.768 | 1.923 |
| S | .499 | 1 | .499 | .255 |
| D | 4.905 | 1 | 4.905 | 2.503 |
| GS | 2.704 | 3 | .901 | .460 |
| GD | 9.385 | 3 | 3.128 | 1.596 |
| SD | 1.865 | 1 | 1.865 | .952 |
| GSD | .840 | 3 | .280 | .143 |
| Error | 350.780 | 179 | 1.960 | |

Appendix C: (5)(Continued)

| Source | SS | df | MS | F |
|---|---|---|---|---|
| | | "Task-Master" (F11) | | |
| G | 1.599 | 3 | .533 | .269 |
| S | .760 | 1 | .760 | .383 |
| D | .321 | 1 | .321 | .161 |
| GS | 2.304 | 3 | .768 | .388 |
| GD | 1.747 | 3 | .582 | .294 |
| SD | 1.078 | 1 | 1.078 | .544 |
| GSD | .889 | 3 | .296 | .150 |
| Error | 354.765 | 179 | 1.982 | |
| | | "Consideration" (F12) | | |
| G | 8.661 | 3 | 2.887 | 1.272 |
| S | 4.798 | 1 | 4.798 | 2.114 |
| D | .184 | 1 | .184 | .081 |
| GS | 3.029 | 3 | 1.010 | .445 |
| GD | 1.792 | 3 | .597 | .263 |
| SD | 2.055 | 1 | 2.055 | .906 |
| GSD | 3.959 | 3 | 1.320 | .582 |
| Error | 406.181 | 179 | 2.269 | |

# APPENDIX D

## FIGURES

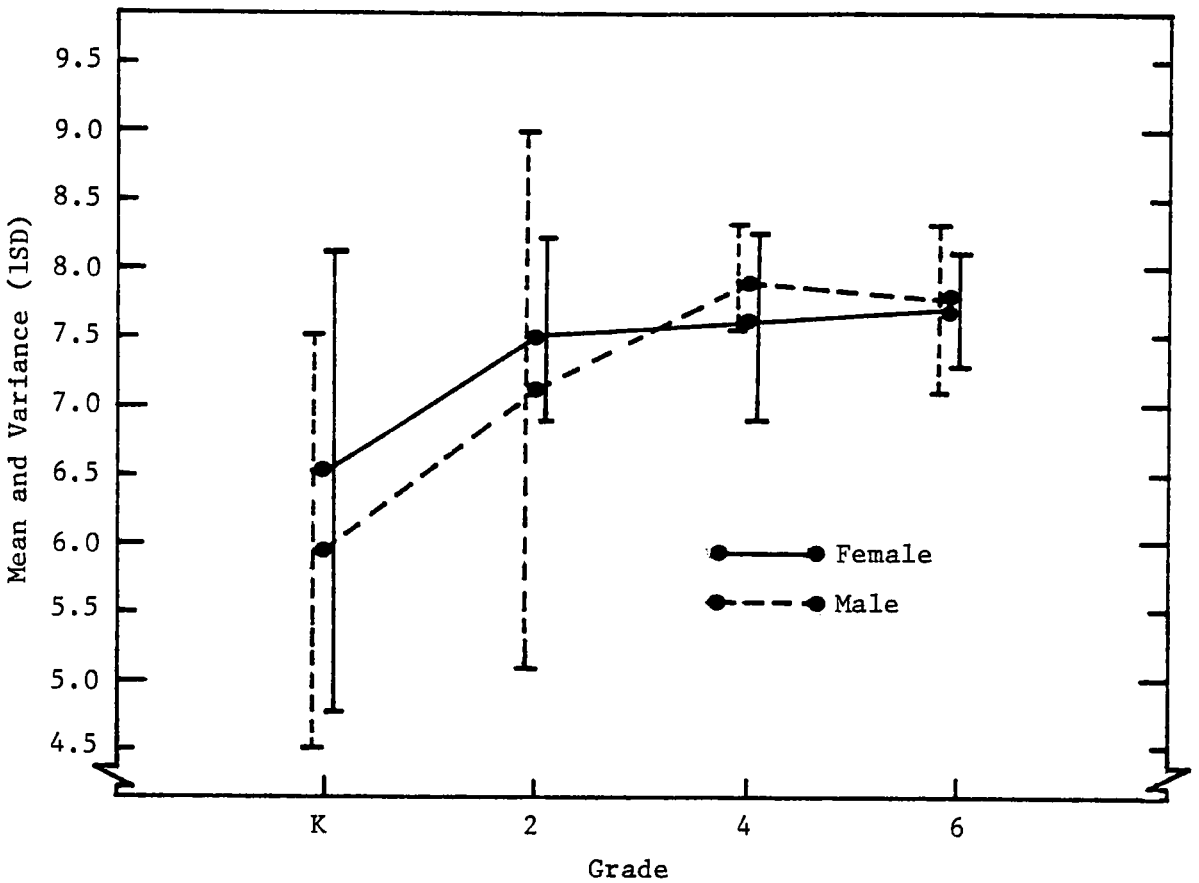



Figure 1. "Student-Centered"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

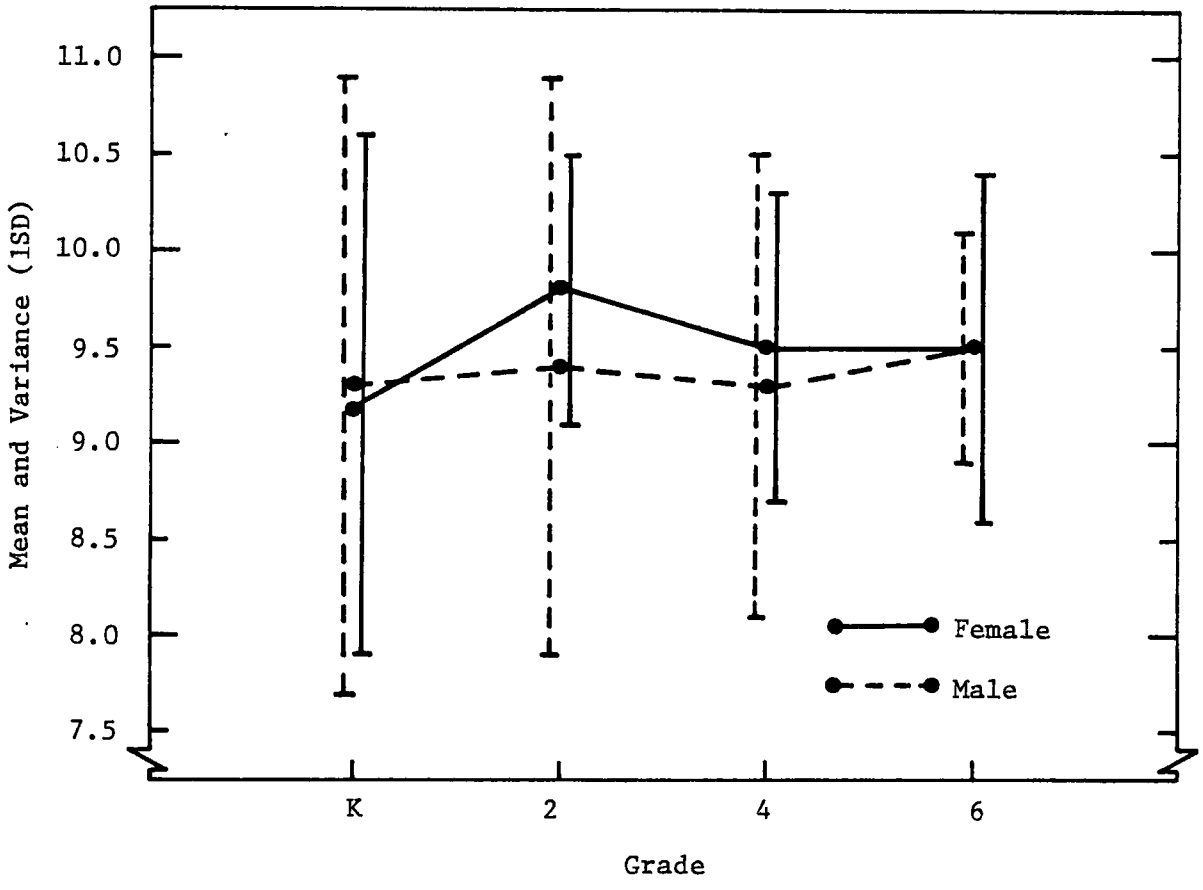



Figure 2. "Attractive Demeanor"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

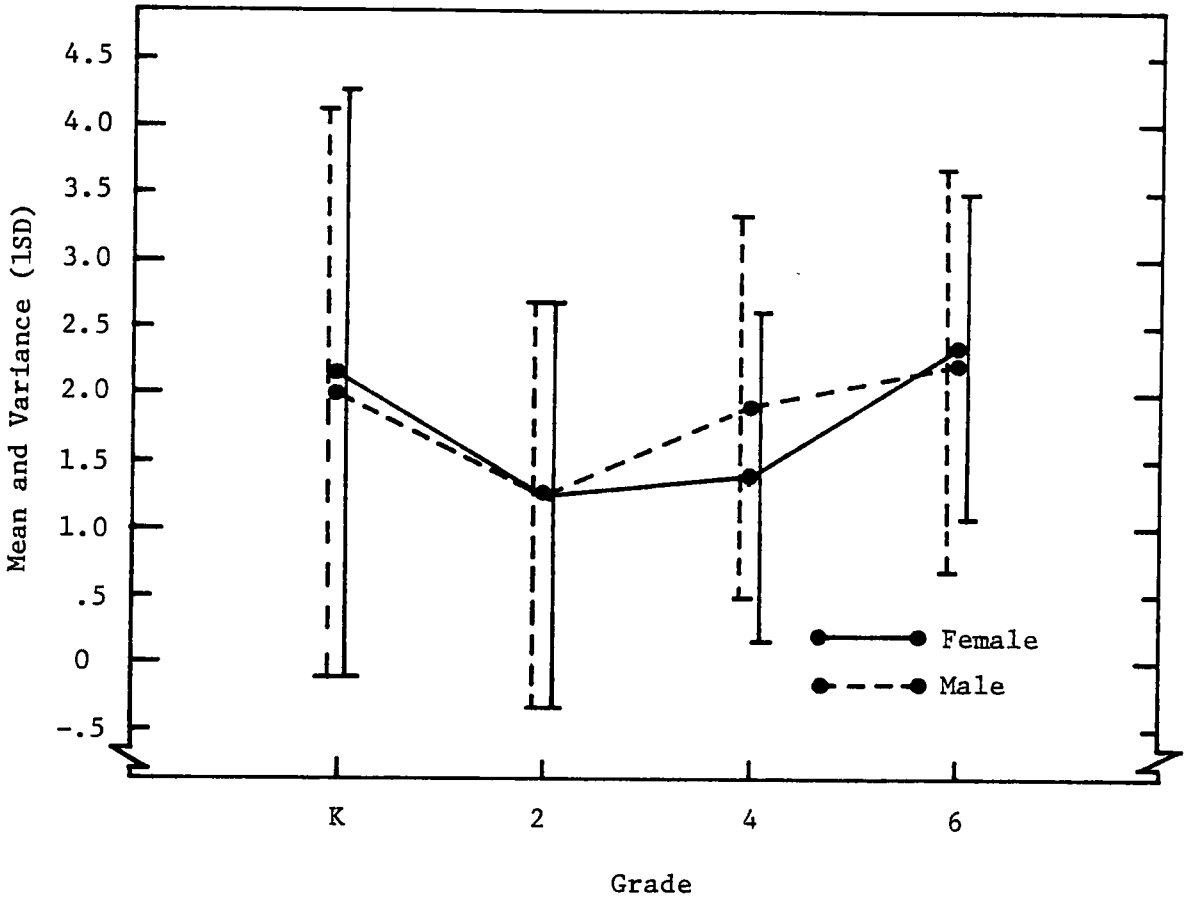



Figure 3. "Unattractive Demeanor"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

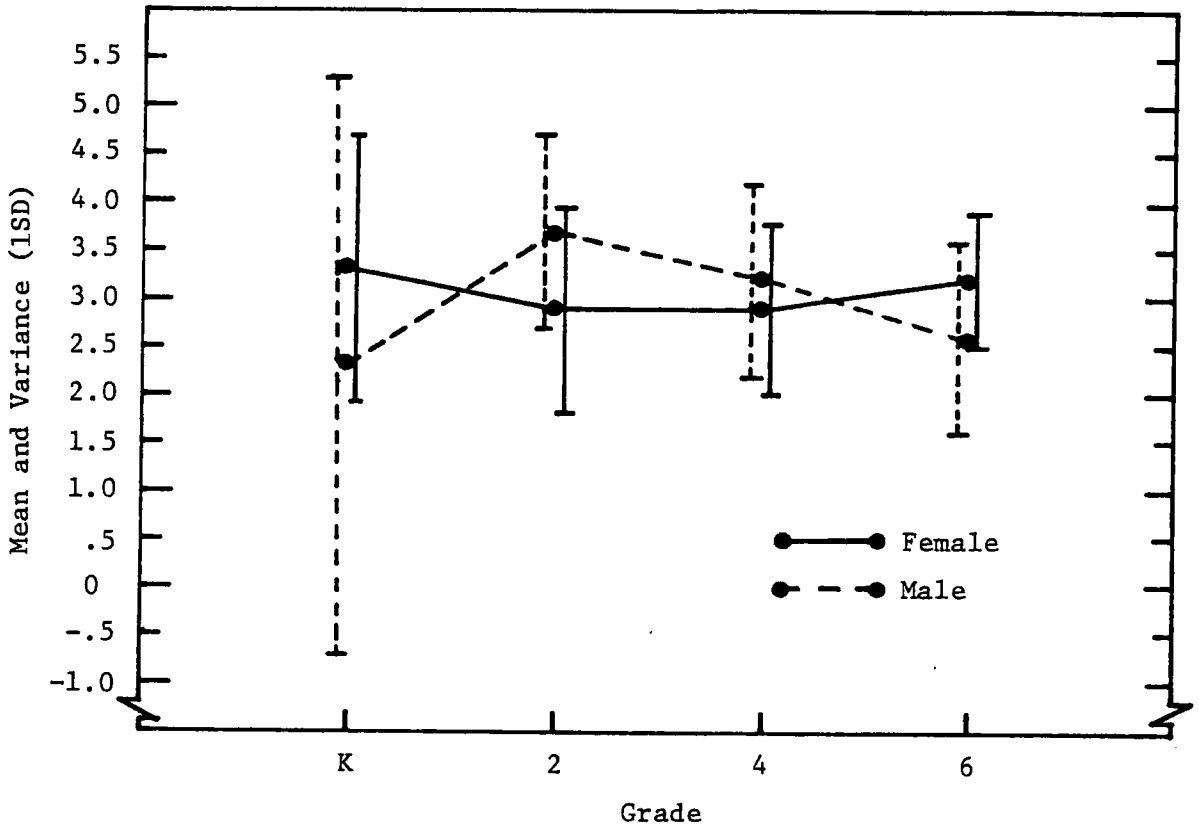



Figure 4. "Display of Assurance"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

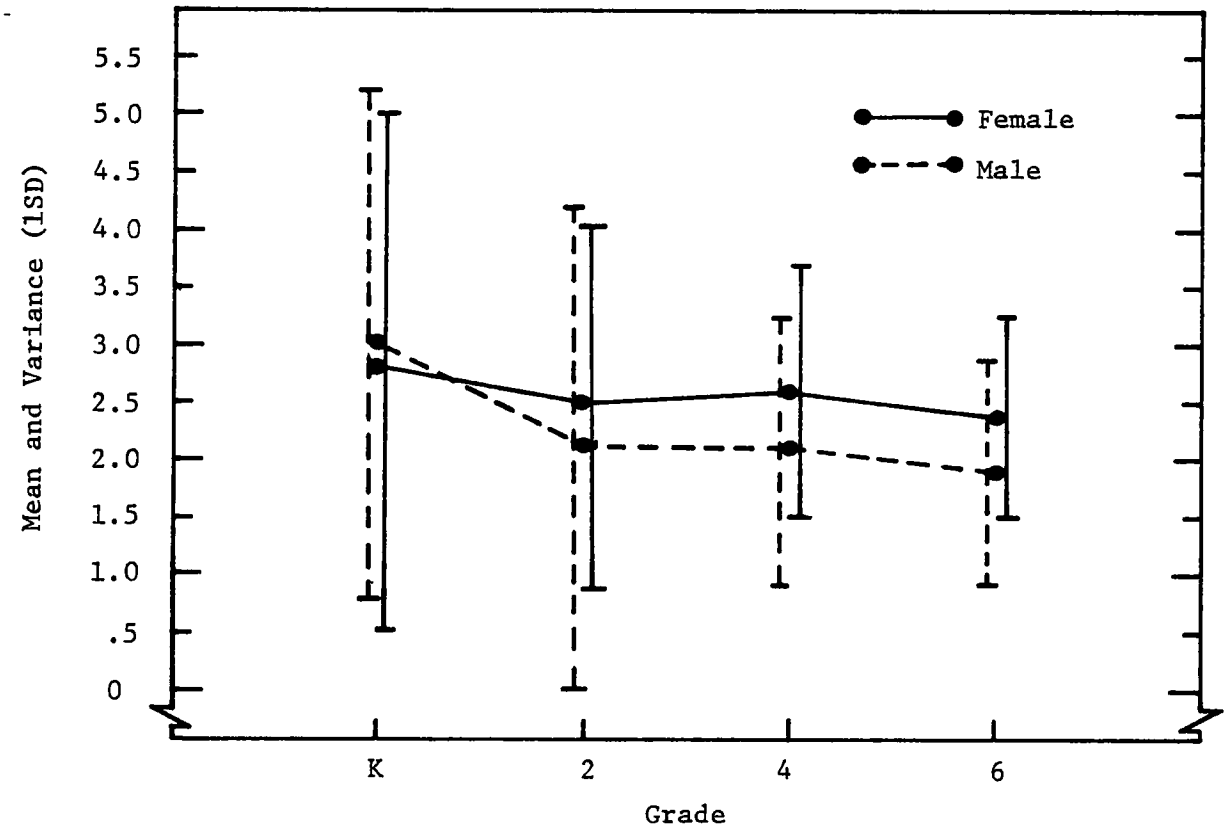



Figure 5. "Formality of Style"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

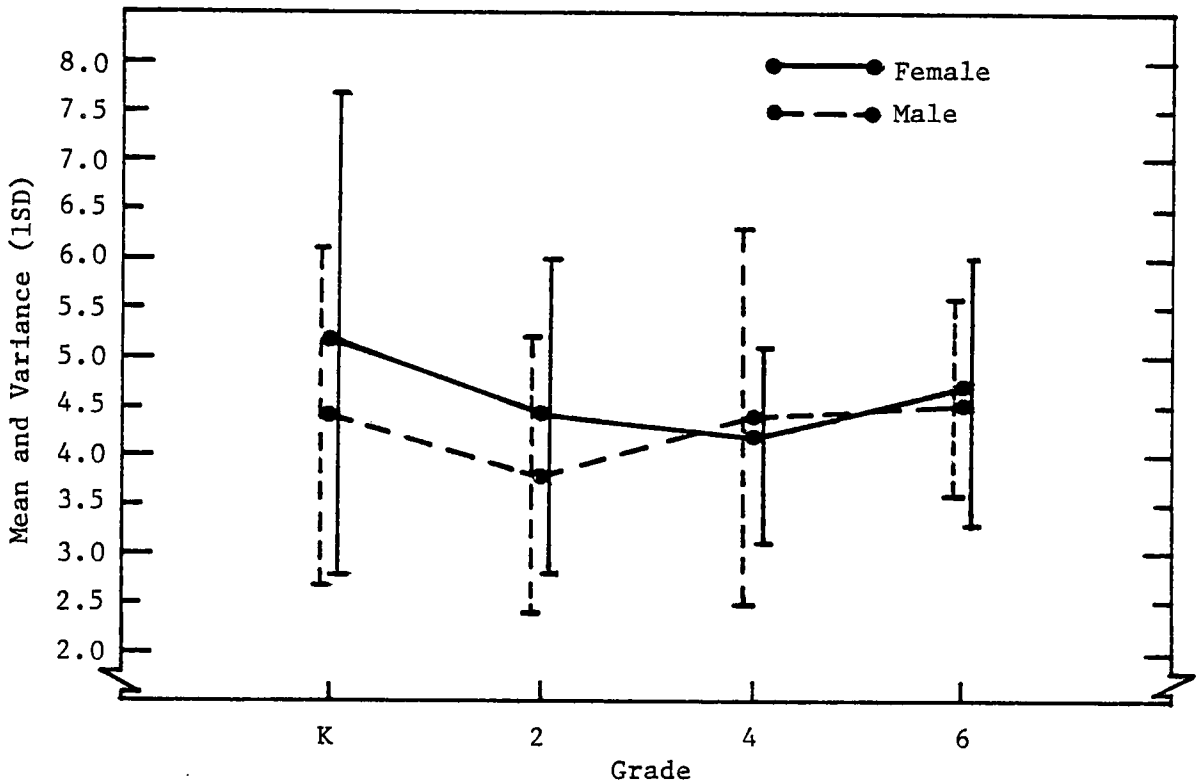



Figure 6. "Self-Centered"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

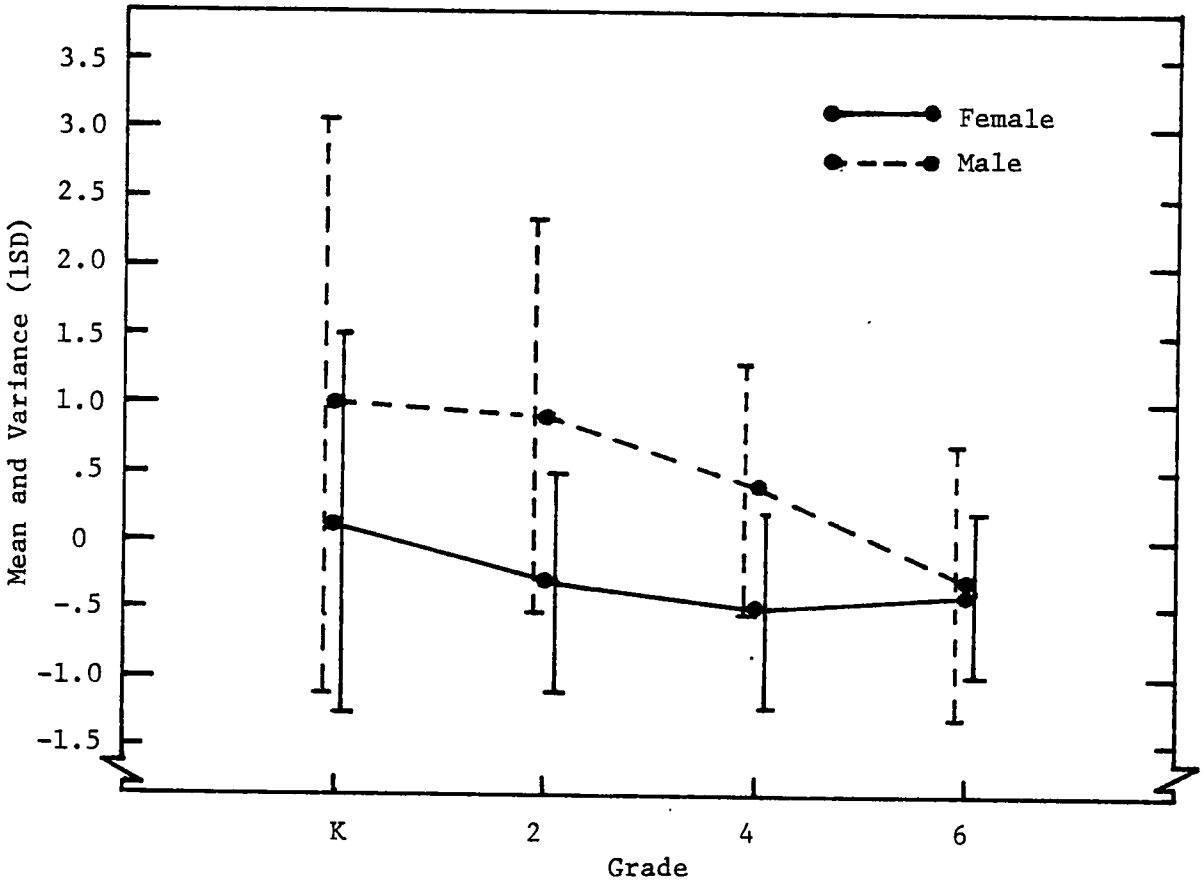



Figure 7. "Meanness of Disposition"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

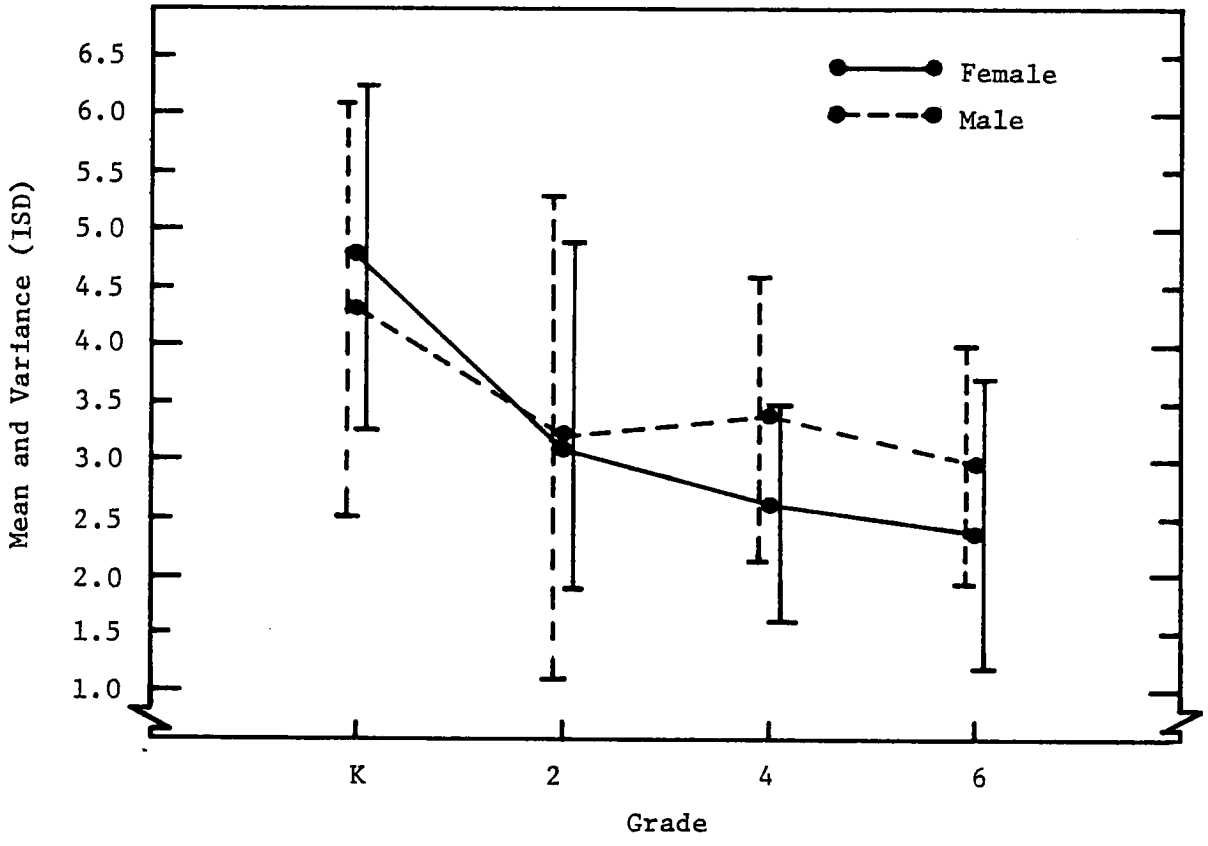



Figure 8. "Playing Favorites"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

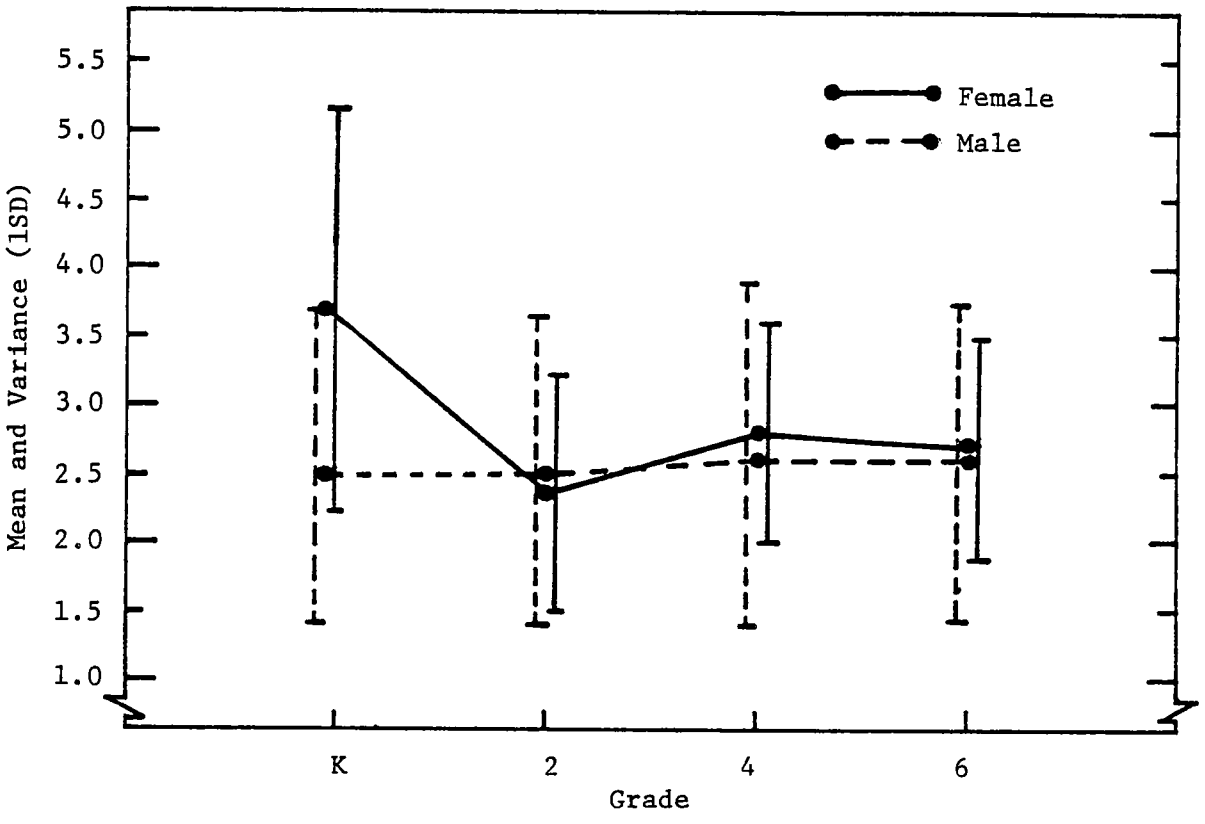



Figure 9. "Demeans Students"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

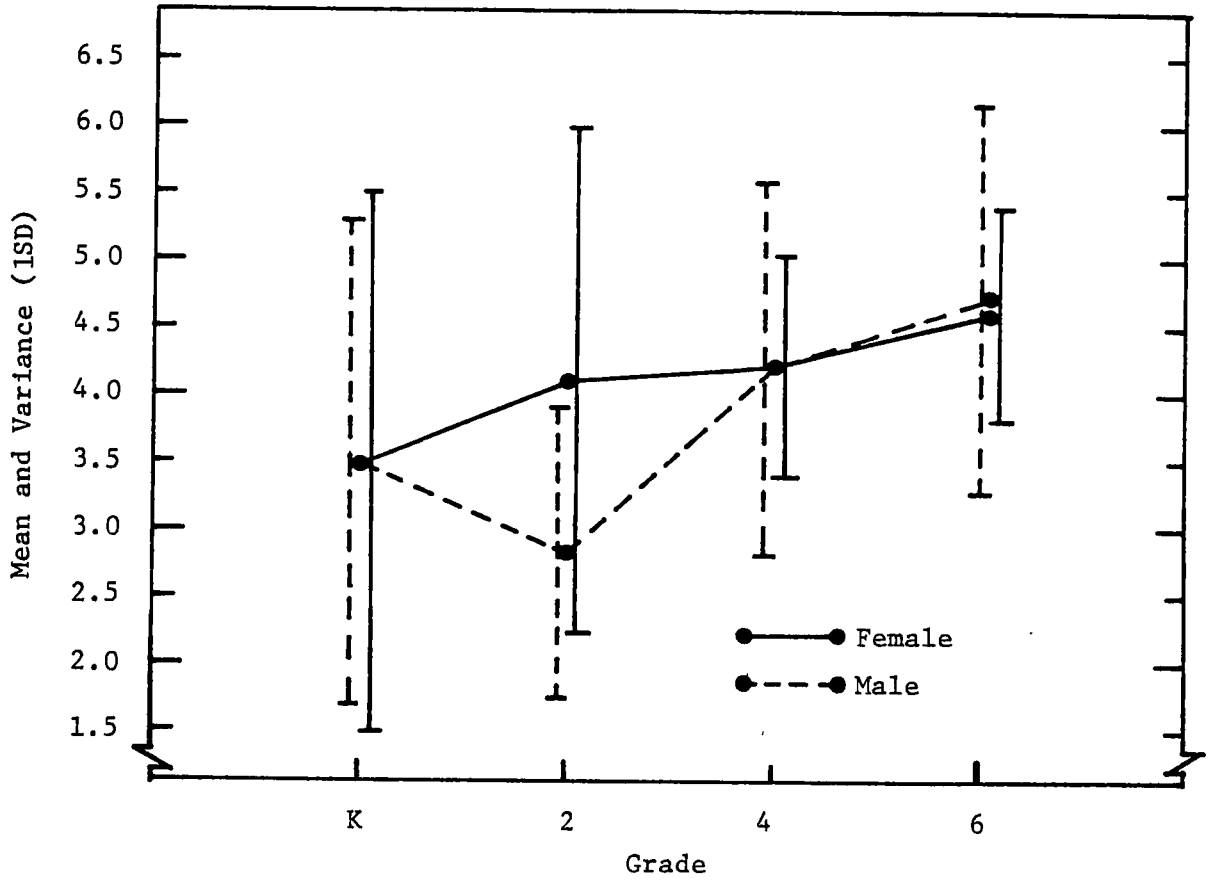



Figure 10. "Not Fostering Artistic Expression"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

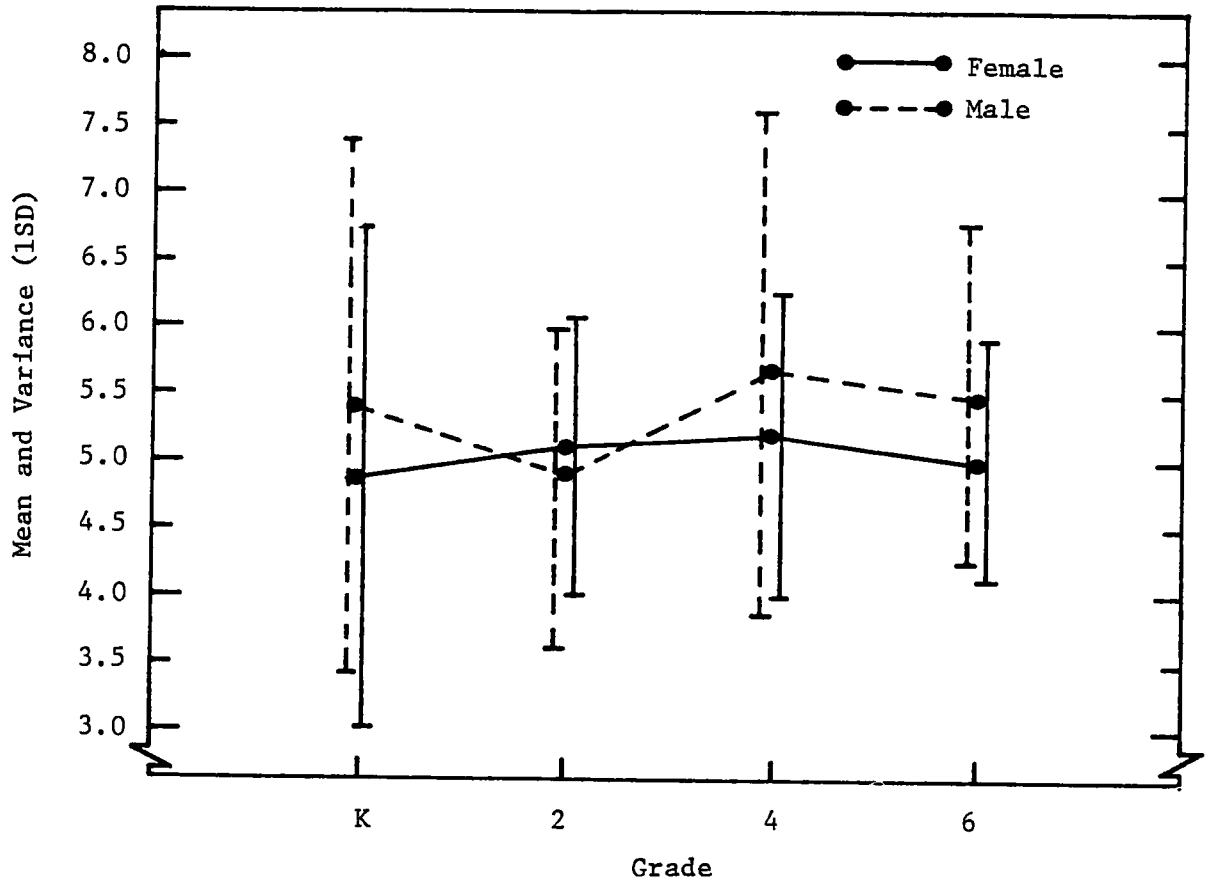



Figure 11. "Task-Master"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

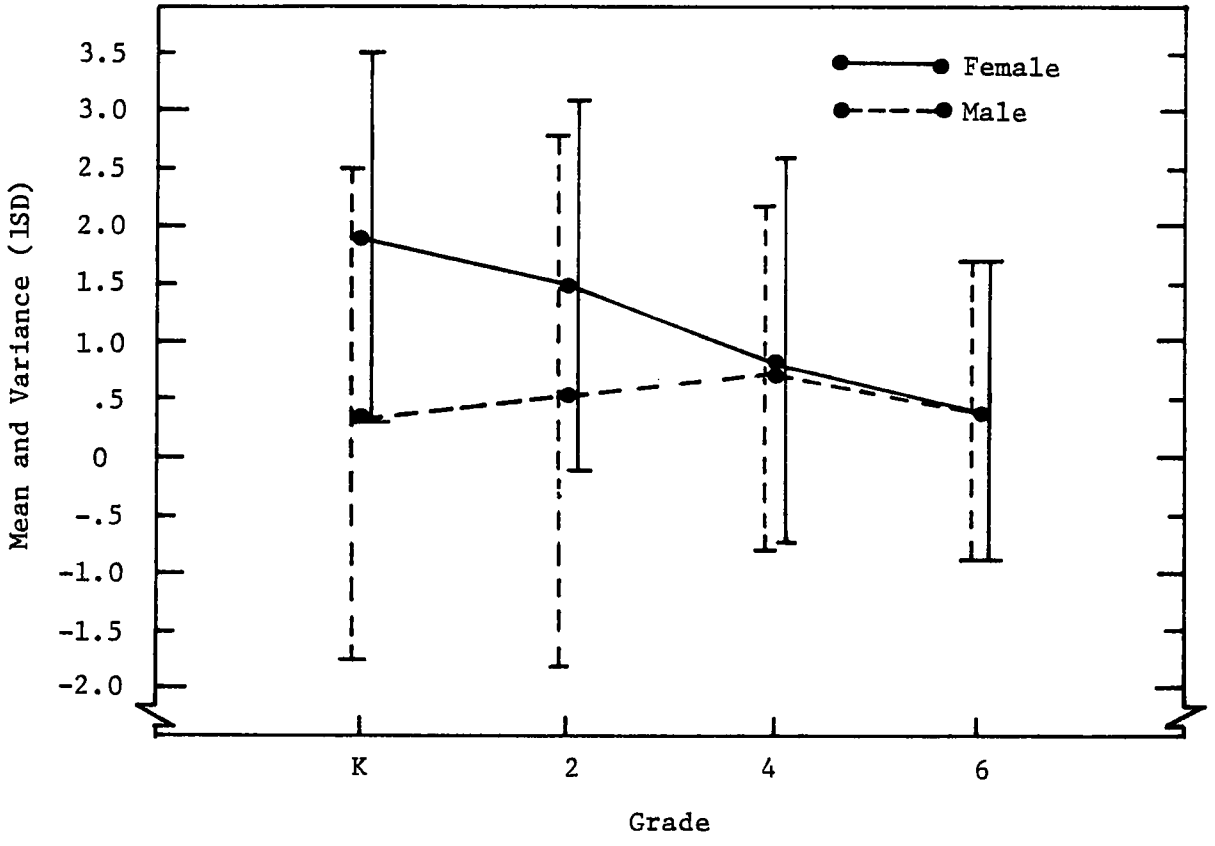



Figure 12. "Consideration"--A derived factor of teacher behavior from student analysis; grade and sex comparisons.

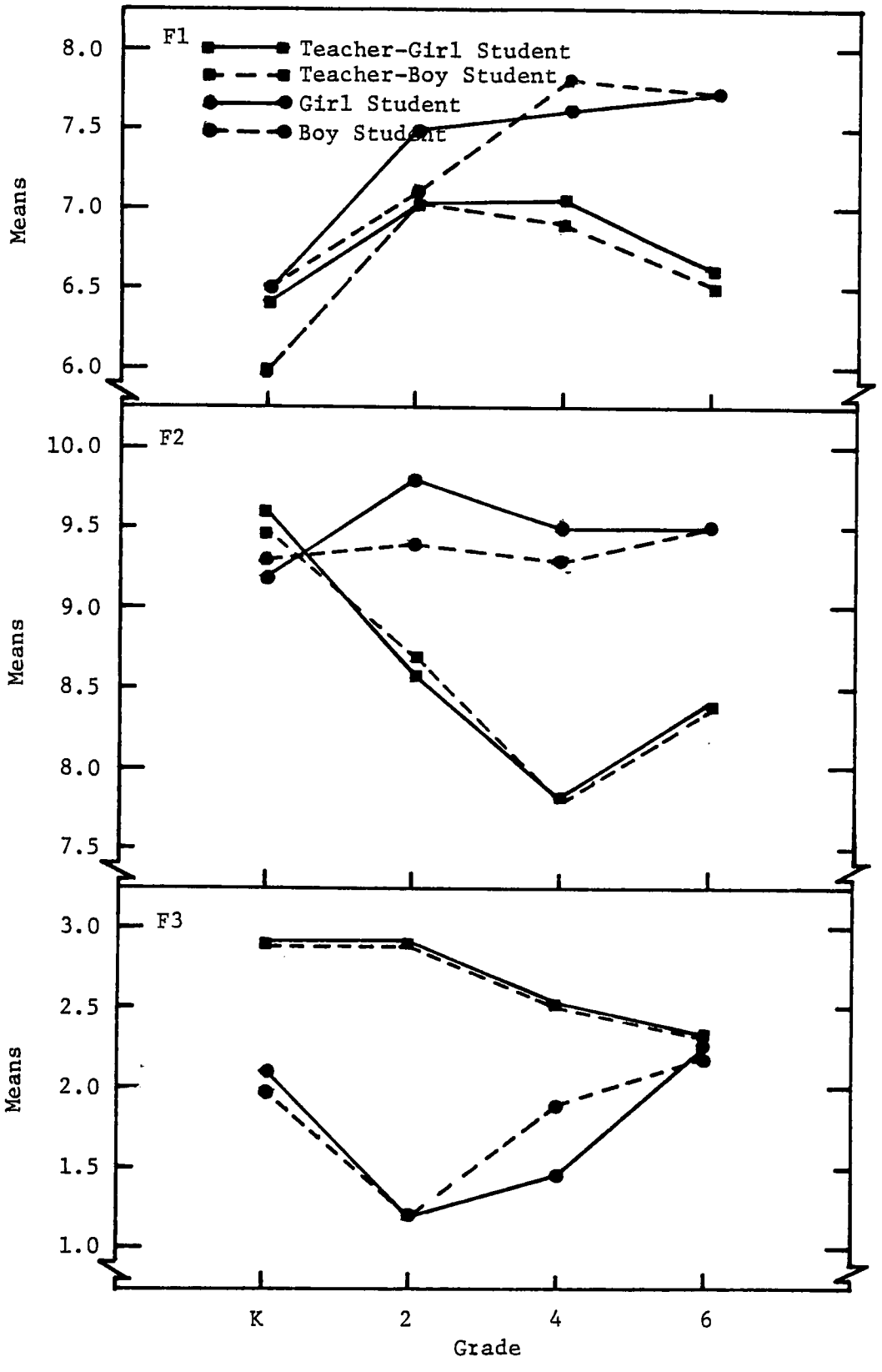



Figure 13. Student and teacher comparison of derived factors of teacher behavior for F1, F2, and F3.

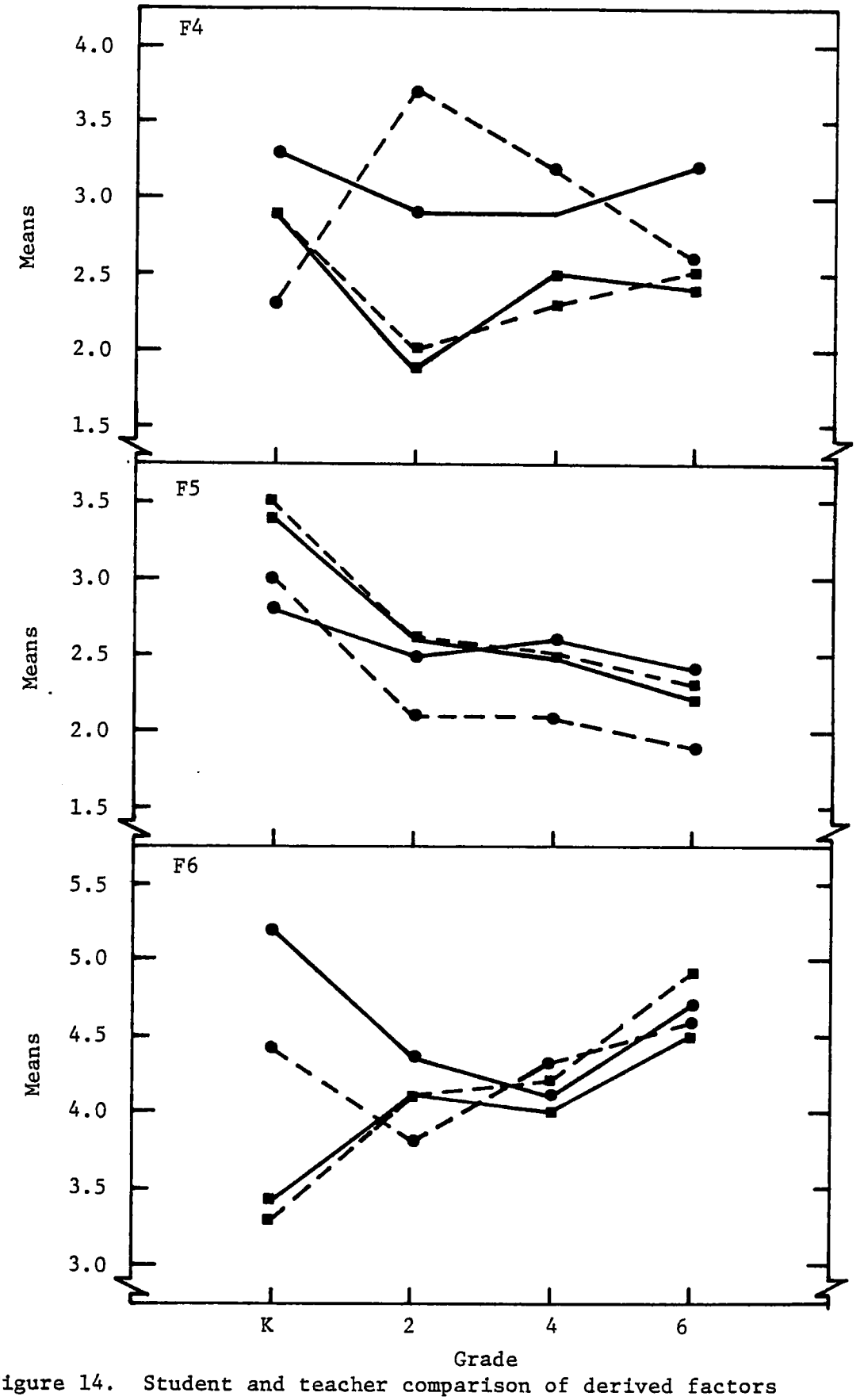



Figure 14. Student and teacher comparison of derived factors of teacher behavior for F4, F5, and F6.

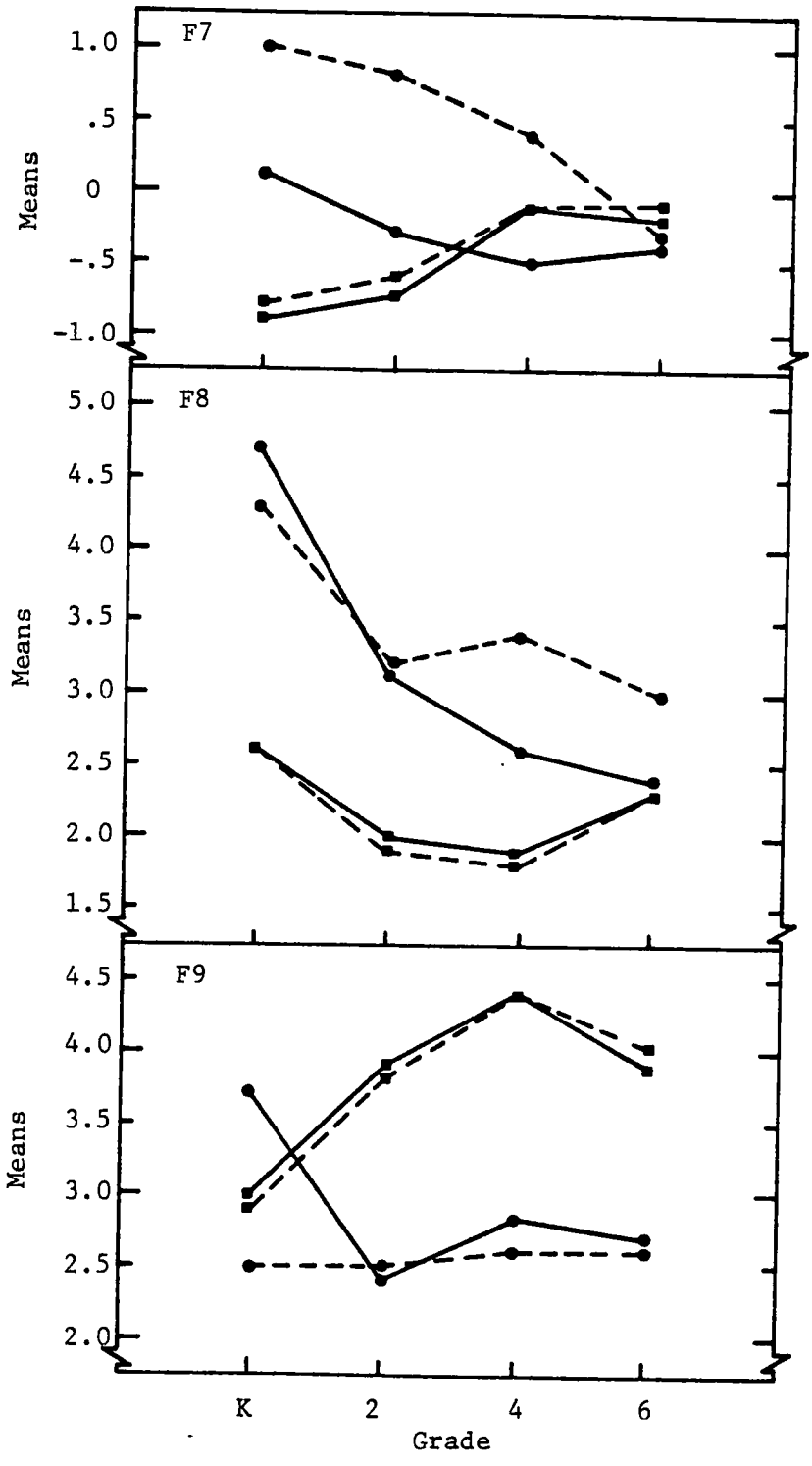



Figure 15. Student and teacher comparison of derived factors of teacher behavior for F7, F8, and F9.

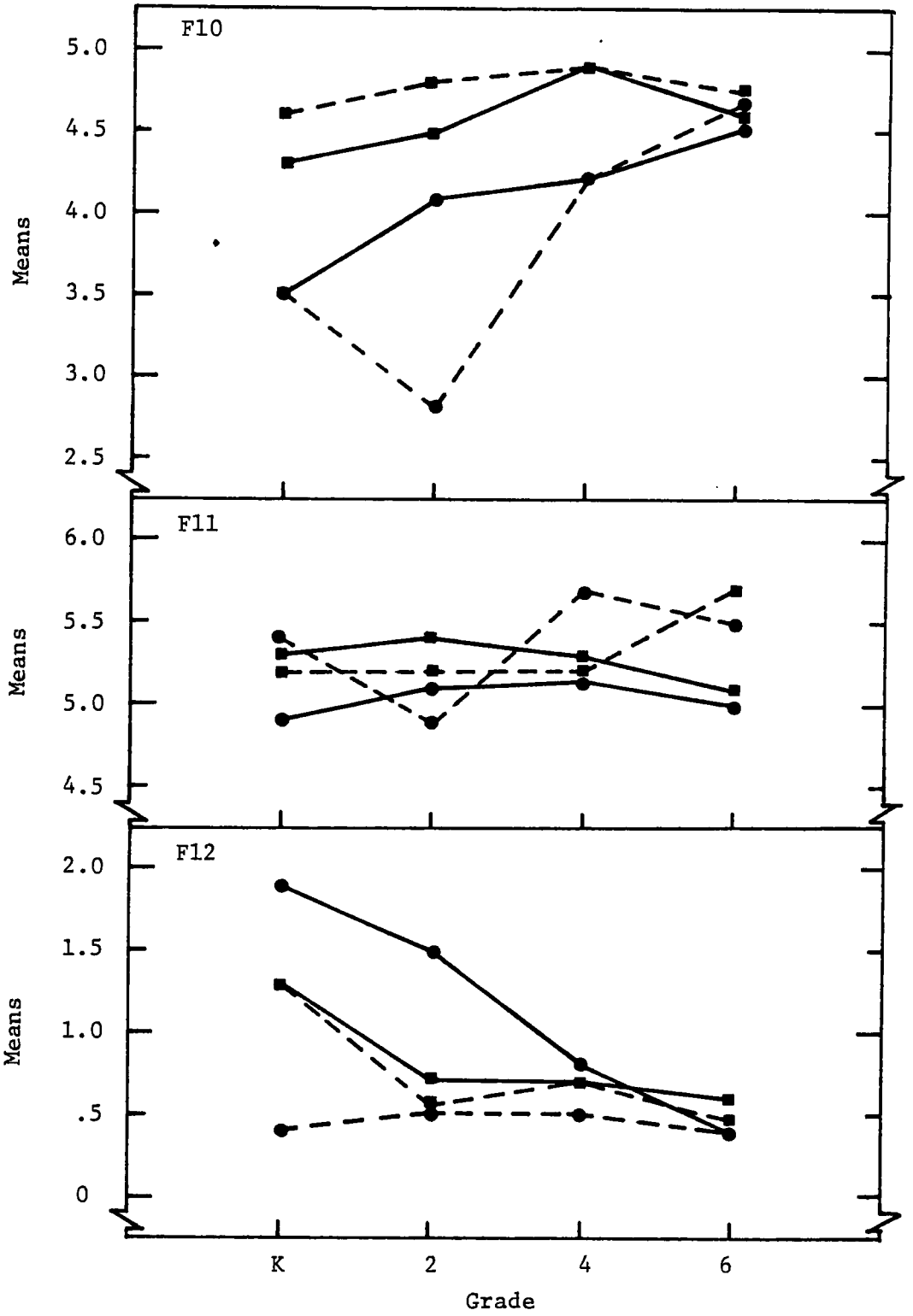



Figure 16. Student and teacher comparison of derived factors of teacher behavior for F10, F11, and F12.