RELATIONSHIPS BETWEEN ELEMENTARY TEACHERS' EXPRESSED ATTITUDES TOWARD STUDENTS, QUALITY OF DYADIC CLASSROOM INTERACTION AND STUDENT GRADES

By

BENJAMIN ADDISON HAZLETT

Bachelor of Science
Oklahoma State University
Stillwater, Oklahoma
1967

Master of Science
Oklahoma State University
Stillwater, Oklahoma
1974

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements of
the Degree of
DOCTOR OF EDUCATION
May, 1982

RELATIONSHIPS BETWEEN ELEMENTARY TEACHERS' EXPRESSED ATTITUDES TOWARD STUDENTS, QUALITY OF DYADIC CLASSROOM INTERACTION AND STUDENT GRADES

Thesis Approved:

Kenneth St. Clair
Thesis Adviser

Laurence D. Olson

Carl R. Anderson

Larry M. Perkins

Norman N. Durham
Dean of the Graduate College

ACKNOWLEDGMENTS

The author wishes to express his appreciation to his major adviser, Dr. Kenneth St. Clair, for his guidance and assistance throughout this study. In addition, the author wishes to express his gratitude to Dr. Carl Anderson, Dr. Russell Dobson and Dr. Larry Perkins, the members of his advisory committee.

To Dr. Bill Elsom and Dr. Steve Grissom, thanks for the assistance with the statistical method.

To the author's family, Lynn and Matt, special appreciation is expressed for their enormous amount of love and understanding.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

For many years educators have been attempting to evaluate teacher effectiveness. This is a very important aspect of educational administration in the areas of supervision and teacher evaluation.

One method of judging teacher efficiency is by analysis of classroom interaction. Interaction analysis is, quite simply, observing and analyzing the classroom interaction between a teacher and the students in that teacher's classroom. Interaction analysis is a method of measuring quantitative and qualitative dimensions of a teacher's verbal behavior in the classroom. Observational systems, however, clearly do not measure all interaction that takes place within the classroom. Interaction analysis as a classroom observational technique was developed by Flanders (1970) out of social-psychological theory and was designed to test the effect of social-emotional climate on student attitudes and learning.

Anderson (1945) developed one of the earliest approaches to the analysis of teaching behavior. In this classic study, Anderson assessed the integrative and dominative behavior of teachers in contacts with children.

White and Lippitt (1960) did an intensive study of the effects of leader behavior on children's groups. This study dealt with the autocratic-democratic dichotomy. Their study presented a discussion of research on group climate that was a bit different from the formal classroom situation. Their hypotheses were, however, basically the same as those tested by Anderson (1945).

The Flanders System of Interaction Analysis (FSIA), the most widely used classroom observation system, contains 10 categories. This system can be used by an observer coding while in the classroom. It does not require tape recording for playback for later coding. Flanders (1960) developed a simple yet sophisticated matrix technique that can tell the reader what preceeded and what followed every verbal behavior of both the teacher and the pupils.

The Flanders (1960) system has been used in a variety of teacher training activities to provide teachers with a means of obtaining feedback about their own teaching behaviors and the effects of those behaviors on the quantity and quality of participation in their classrooms.

FSIA contains 10 categories, as follows:

1. Accepts feelings
2. Praises or encourages
3. Accepts or uses ideas of students
4. Asks questions
5. Lecturing
6. Giving directions

7. Criticizing or justifying authority
8. Student talk-response
9. Student talk-initiation
10. Silence or confusion

Of these 10 categories, the first seven are considered teacher talk, the final three are student talk, with number eight being teacher-initiated.

The quality and quantity of the interaction within the classroom is recorded. It is a good tool for the analysis of certain aspects of teacher behavior related to the total class. It does not, however, effectively address itself to the quality and quantity of interaction which takes place between the teacher and the individual student. In other words, how does a specific student react to the interaction which is taking place?

Withall (1949) was the first of the early researchers to measure classroom climate by means of a categorical system that classified teacher statements. Withall's category system is, in many ways, similar to that used by Flanders (1960).

Bales (1951) searched for an improved understanding of the relationship between the behavior of group members and the productivity of those groups. Groups whose members' behavior was treated in a positive way responded with greater productivity. Groups whose members' behavior was treated in a negative way responded with lower productivity.

These studies of early research in the area of group interaction observation are cited in order to give the reader of this thesis a basis for comparison of group interaction and dyadic interaction, or that interaction which takes place between two individuals.

Only recently research has been performed on the subject of dyadic interaction. Dyadic interaction is that interaction which occurs between individuals. In this instance, between a teacher and individual students as opposed to the interaction between the teacher and the entire class. Good and Brophy (1969) have done research in the area of dyadic interaction which establishes a positive relationship between the teacher and the individual student.

Teacher-Child Dyadic Interaction (Good and Brophy, 1969) tests the relationship between teacher expectancies and pupil achievement. The individual child is the focus of the analysis. The researcher is able to assess differences in teacher behavior toward different types of learners within the classroom. It includes measures of both affective and cognitive behaviors. The category definitions include detailed differentiations of "level of questions" (specified as "process," "product," "choice" and "self-reference" questions), and "type of child's answers" ("correct," "part correct," "incorrect" and "no response"). The affective dimensions consists of a "teacher's feedback

reaction" category containing subcodings such as "praises," "affirmation of correct answer," "no feedback reaction," "criticizes."

Again, the quality and quantity of interaction within the classroom is recorded. This method measures not only teacher effectiveness within the classroom, but teacher effectiveness between the teacher and the individual student. This could be used by an administrator in the area of supervision by the evaluation of teacher effectiveness. It could also be useful in detecting and remediating problems of individual students within the classroom.

Justification of the Study

The majority of the research in the area of classroom interaction analysis concerns itself mainly with that interaction which takes place between a teacher and a group of students or the entire class.

Good and Brophy (1969), in their manual for coding classroom behavior, explain that their coding system is used for the study of dyadic interaction between teachers and children within the classroom:

> Emphasis is stressed on the word dyadic, since the manual applies only to those classroom interactions in which the teacher is dealing with a single, individual child. There are two major differences between the present system and other systems in common use: (a) it is not a universal system that attempts to code all classroom behavior--expository lecturing and other situations in which the teacher is addressing himself to the entire class as a group are omitted entirely; (b) the teacher's interactions in his class are recorded and analyzed

> separately for each individual student, so that the student rather than the class is treated as the unit of analysis. Except for the observation aspects of behavior modification studies, classroom research on teacher-child interaction has tended to treat the class as a unit, ignoring intra-class individual differences in teacher-child contact patterns. The present authors have argued at length elsewhere (Good and Brophy, 1969) that this methodology is not always appropriate for the kinds of questions which have been investigated with it. In addition, it is specifically inapplicable to studies that focus on intra-class individual differences, including studies of communication of differential performance expectations by teachers. The coding system to be presented was developed specifically for the latter research purpose, although it is applicable to a much wider range of studies of teachers' and pupils' classroom behavior.
>
> In stressing the need to shift from the class to the individual student as the basic unit of analysis in classroom observation studies, Good and Brophy (1969) question two tacit assumptions made at least implicitly by investigators who study teacher effectiveness with observation and coding systems using the class as a unit. These two are: (a) intra-class individual differences in the way the teacher interacts with different children are of little or no importance relative to inter-class differences among teachers; (b) the teacher behavior variables involved are properly conceptualized as interactions between the teacher and the class as opposed to interactions between teacher and individual children (p. 1).

Good and Brophy conclude that observation of dyadic teacher-child interaction is the method of choice, not only in research concerning individual differences among the children in a class, but also in research on teacher effectiveness, which frequently has been approached through systems using the class as the unit.

Statement of the Problem

Many children in our classrooms are being either harmed or helped by the quality of dyadic interaction that takes place within these classrooms. If the relationship between quality of dyadic interaction and its affects on students can be positively demonstrated, then teachers and administrators can at least have a tool with which to detect and improve the quality of dyadic interaction that takes place within the classroom.

This study proposes to establish a basis for the testing of the following hypotheses:

Hypothesis I: There is a positive relationship between a teacher's expressed attitudes toward individual students and the quality of the interaction that takes place between the teacher and the students in the classroom.

Hypothesis II: There is a positive relationship between a teacher's expressed attitudes toward individual students and the level of academic achievement as measured by the grades of the individual students.

Hypothesis III: There is a positive relationship between the quality of interaction that takes place within the classroom and the students' academic achievement as measured by the grades of selected students within the classroom.

Major Assumptions

The following assumptions will apply:

1. Dyadic interaction does take place within the classroom.
2. The quality of dyadic interaction that takes place within the classroom varies from student to student, i.e., teachers behave differently toward some students.
3. The quality of dyadic interaction that takes place within the classroom can be measured by using Good and Brophy's (1969) coding manual.
4. Teachers' expectations affect students' behavior.
5. Teachers are correct in their assessment of their attitudes toward students.
6. The level of achievement as measured by students' grades are an accurate reflection of the students' performances in class.

Definition of Terms

Attachment Group: The observed students, selected by a teacher as those she would like to keep in her class for another year, for the joy of having these students in her class.

Indifference Group: The observed students selected by a teacher as those she might easily overlook in her classroom. That is, which students the teacher would be least prepared to discuss.

Rejection Group: The observed students, as selected by a teacher as those who, if possible, could be transferred immediately to another classroom.

Design Limitations

The following limitations apply to this research:

1. The sample was taken from a small selection of students from one school district in northeastern Oklahoma.
2. The generalizability of the study is thus limited to the teachers and students participating in the study.
3. There was only one observer; therefore, the possibility exists of observer bias.

Summary

The majority of the research in the area of classroom interaction analysis tends to address the relationship between the teacher and the class as a whole. The interactive relationship must surely exist. However, in a classroom situation, there must also exist a dyadic interaction relationship which shall be studied with the expectation of demonstrating a positive interaction between the teacher and the student. It will also be the intention to demonstrate a positive relationship between quality of interaction and student achievement.

CHAPTER II

BACKGROUND AND ORIGIN OF STUDY

There have long been many methods of analyzing classroom interaction. These methods have most often been designed to improve teacher effectiveness or, the teacher's ability to teach a group of students. There are presently more than 50 methods of classroom interaction analysis in use (Simon and Boyer, 1970). These systems of classroom interaction analysis commonly tend to treat the class as a whole unit without taking into account the individual differences of the students.

> Such systems have been successfully used for studying demographic characteristics of classroom life, understanding teacher-class verbal interactions, gathering information about pedagogical strategies, and training teachers to examine their teaching behaviors in the classroom (Good and Brophy, 1969, p. 7).

Recently there has been evidence presented which gives logical support to the idea that measurement of a classroom interaction analysis should be between the teacher and the student, as opposed to between the teacher and the class.

Studies Related to Teacher Attitudes and Quality of Interaction

Davis and Dollard (1940) have performed research which

demonstrates that children of lower socioeconomic class families receive more of the teacher's corrections, while the children of higher socioeconomic class families reap the majority of the rewards which are bestowed by the teacher.

Natriello and Dornbusch (1979) report on studies designed to experimentally assess the effects of teacher presentations of standards and teacher warmth. Teachers reported on how they would respond to hypothetical classroom problems presented by students selected at random from their roll books. Responses scored for standards and warmth revealed several complex patterns of behavior based on differences in student characteristics.

Withal (1949) postulates that the teacher's behavior is assumed to be the single most important factor in creating a classroom climate. The teacher's verbal behavior is a representative sample of the total behavior. Withal also postulates that learning is most likely to take place when experiences occur in a situation which is non-threatening. Withal's study was the earliest to suggest the use of a teacher's verbal statements as a method of analyzing teacher classroom behavior.

In 1970, Flanders stressed that "teaching behavior is the most potent, single controllable factor that can alter learning opportunities in the classroom" (p. 13).

If the attitudes and perceptions of teachers affect their behavior and the roles they have defined for

themselves (Brophy and Good, 1974), it is important to understand these underlying beliefs, particularly since they may have impact on how teachers behave toward pupils (Palardy, 1969; Seaver, 1973; Pilling and Pringle, 1978).

Some studies have researched the relationship between teachers' attitudes and perceptions and their interactions with pupils. Ryans (1964) found that teachers who had received high observer assessments on his three major patterns of teacher classroom behavior--warm versus aloof, responsive versus evading, stimulating versus dull--could be clearly distinguished from those teachers receiving low observer assessments. The high group was more favorable in its opinion of students, more likely to employ democratic classroom procedures and was represented by a mean inventory response which suggested high emotional adjustment.

Benninga, Guskey and Thornburg (1981) found that certain teacher attitudes are related to student perceptions of teachers. If teaching behaviors are influenced by teacher attitudes, changes in teacher behavior may also change attitudes. If teachers had available to them more effective interactive techniques to use in the classroom it seems likely that they might assume more responsibility for student outcomes and might, in the process, change their attitudes toward students.

Horowitz (1967) writes that in the average classroom there is somebody talking two-thirds of the time.

Two-thirds of the talk is teacher talk and two-thirds of the teacher talk consists of direct influence. This direct influence by the teacher includes lecture, direction giving, and/or criticism.

Clarizio and Yelon (1967), in an article on modeling, write that school teachers have a unique opportunity to influence the behavior of entire groups of children. A behavior pattern, once acquired through imitation, is often maintained without deliberate reinforcement because human beings learn to reinforce themselves for behaving in certain ways. Through the modeling effect, children come to acquire responses that were not originally a part of their behavior.

Ausubel (1957, p. 39) writes that "it is impossible for children to learn what is not approved and tolerated simply by generalizing in reverse from the approval they receive for the behavior that is acceptable."

If it is to be assumed that a teacher is able to influence the behavior of an entire group of children through modeling, then must it also be assumed that all children in that particular group will behave in the same manner? Children, even in tightly controlled groups, simply do not act alike. The teacher's actions in a classroom most likely affect a particular student's behavior. As different people are apt to perceive an action by another person in their own way, each person is liable to react to that action in their own way, or as they

perceive the action. Therefore, an action by a teacher in front of a class might be perceived differently by different students. And thus, it might affect each student's behavior in a different way.

Studies Related to Teacher Attitudes and Student Achievement

Weber (1971) found that, among other characteristics, teachers had high expectations toward their students in four inner city schools whose students were achieving above the national norm in reading.

Rutter et al. (1979) found a positive relationship between pupil achievement and high teacher expectations when they were combined with the use of praise and approval.

If teachers' attitudes do affect behavior, and if that behavior has impact on student perceptions about the classroom and resultant student achievement (Page, 1958; Staines, 1958; Coopersmith and Feldman, 1974; Brophy, 1979), a study of the interaction of teacher attitudes and student perceptions is important.

Yamamoto (1967) also writes that much of the classroom time is involved with teacher talk, but to whom is the teacher talking? Teachers are so accustomed to seeing their class as a group that it is often overlooked that this group is made up of individuals, each one unique in many ways. Classroom groups are seldom, if ever, affected as a group by their achievement as a group. Students are

competing against or cooperating with each other as individuals and not against or with other groups as a whole.

Therefore, the teacher may be influencing students--but specifically which students, why and how? If two-thirds of the talk in a classroom is indeed teacher talk, then the remaining one-third of the talk is student talk. Here, other questions arise. Which students are doing this one-third of the talk, to whom are they talking, and why? There is obviously interaction taking place in most classrooms but between which participants is the interaction taking place?

Carter (1952) concludes that teachers generally tend to give higher marks to girls than to boys. Of all subjects that were tested, there were no significant differences in intelligence or achievement among those subjects. However, girls generally received higher marks in those subjects from their teachers than the boys in the same subject areas.

Rosenthal and Jackson (1968), in Pygmalion in the Classroom, write of the "self-fulfilling prophecy" (p. 88). Simply stated, if a teacher expects, from previous information, that a particular student will be either a high or low achiever, that particular student will generally conform to the teacher's preconceived expectations.

In each of these instances we are given information on research conducted in the area of interaction between teacher and student. Students behave or react to various stimuli as individuals. Each class is made up of

individuals. The teacher may be interacting with the class; however, different individuals may perceive the same interaction in very different ways and thus be affected by that interaction differently.

Blass (1980) did a study on the correlation between the grades received by students and the teacher's evaluations of students. He found a positive correlation between these two factors, i.e., the student who received a high evaluation from the teacher received higher grades, and vice versa.

The relationship between teacher's expectations of students' communicative competence in the classroom and certain aspects of teacher's language during interaction with students was investigated in a study involving 55 nursery school and primary school children and their seven female teachers (Cherry and Berman, 1978). The teacher expectations model used in the study proposed that teachers form expectations of students' abilities, that they interact differentially with students depending upon those expectations, and that the expectations are directly related to the students' achievements. The relationship between teachers' expectations of students' communicative ability and interaction during lessons was perceived to be a complex interaction involving teachers' expectations, the individual teacher, and the measure of behavior.

Studies Related to Quality of Interaction and Student Achievement

Lonky and Reihman (1980) found that verbal praise has a positive affect of increased motivation on students with a high internal locus of control. For students with a high external locus of control, verbal praise given in support of individual performance has a positive affect of increased motivation. Therefore, verbal praise or positive interaction has a high motivating affect on most students.

Entwisle and Hayduk (1978) suggest that even the earliest marks that children receive in school can be major determinants of future evaluations. Teachers' earliest evaluations of students may play a leading role in the determination of that student's achievement levels.

Other research has shown a positive relationship between the level of student achievement and the type of instruction that takes place (Tobias, 1978). This research indicates that individual students react differently to the types of instruction they receive, i.e., the different ways that interaction takes place.

The major objective of Chapter II is to cite studies which are relevant to the three hypotheses in order of their presentation in Chapter I.

CHAPTER III

RESEARCH DESIGN

"A research design is the plan, structure and strategies of investigation conceived so as to obtain answers to research questions and control variance" (Kerlinger, 1964, p. 280). This chapter will set forth the plan followed for this research project. It will discuss the instrumentation used, the population tested, the method of collection of the data and the treatment of the collected data. Also included will be a definition of terms, design limitations and the summary.

Instrumentation

The instrument used for this research is Teacher-Child Dyadic Interaction: A Manual for Coding Classroom Behavior (Good and Brophy, 1969). In this system of coding there are five different types of dyadic interaction situations. They are:

1. Response opportunities, in which the child publicly attempts to answer a question posed by the teacher.
2. Recitation, in which the child reads aloud, describes some experience or object, goes through

arithmetic tables or makes some other extended oral presentation.

3. Procedural contacts, in which the teacher-child interaction concerns permission, supplies and equipment, or other procedural matters concerned with the child's individual needs or with classroom management.
4. Work-related contacts, in which the teacher-child interaction concerns seat work, homework or other written work completed by the child.
5. Behavioral contacts, in which the teacher disciplines the child or makes individual comments concerning his classroom behavior.

These five broad categories of teacher-child interaction are kept distinct from one another in coding. Each type of interaction has its own place for coding on the coding sheets. In addition to this physical separation of the coding for the five types of dyadic contacts, coding distinctions are also made concerning the nature and sequence of the interaction observed. For every interaction, the coder notes whether the initiator was the teacher or the child and also codes information concerning the teacher's message or response to the child during the interaction. In addition, the coding of response opportunities and recitation turns also includes information concerning the type of question asked and the quality of the child's response, both of which are coded before coding the nature

of the teacher's feedback. The latter coding also includes preservation of the sequential order of events, so that the chain of action and reaction sequences within these interactions is maintained.

The use of this method gives the observer a tool with which accurate codings of classroom observations can be made. Each time any interaction takes place between the teacher and a child, that specific type of interaction is entered into the coding sheet. Thus, all interaction that takes place in the classroom can be coded, or only the interaction that takes place between the teacher and selected students may be used. When the observation time is completed, the coding sheet is then referred to in order to ascertain the various types of interaction which have taken place.

Reliability

Reliability might be weakened by using only one coder. There is difficulty in establishing lack of observer bias. However, if bias exists, it would most likely exist throughout the sample. The attempt was made when coding responses to code only the positive, neutral and/or negative responses without regard to the subject. In other words, only objective observations were made. After practice using the Good-Brophy Dyadic Interaction Coding Manual (1969), coding and recoding becomes relatively easy.

Validity

Since the system used involves objective coding of observable behavior, its validity is assured automatically if it is reliably applied according to the instructions in the manual. The only real threats to validity occur in connection with unforeseen types of interactions with which the manual was not prepared to deal. No unforeseen types of interactions occurred. In this study, for example, coding was restricted to interactions involving academic work and discussion, since attention was being directed to teacher's expectations for academic performance by children. Non-academic activities were not coded at all.

Population Tested

The population from which this sample was taken was selected from a Northeastern Oklahoma community. The sample consisted of fifth and sixth grade students from six elementary schools. Of approximately 150 students, 36 students were selected for observation. All classes observed were being instructed in mathematics and each class was self-contained. The socioeconomic level of the students observed varied from upper middle class to lower class. Of the 36 students selected for observation, there were: three Black students, one Native American student and 32 Caucasian students. Of those selected, there were 17 female and 19 male students. The students were not

selected by racial or sexual characteristics, however. The selection procedure shall be discussed in the following section of this chapter. Finally, of the six teachers used in the observation, all were female Caucasians and all were tenured teachers with experience levels from 4 to 20 years of teaching.

Collection of Data

The first step in the process of the collection of data was to discuss the proposed project with the Superintendent of Schools. The superintendent gave permission for the study to proceed. The study was then explained to each elementary school principal. There were seven elementary schools within the system; however, one was excluded as it was an "open concept building," and the classes were not self-contained. Each of the elementary principals gave his approval and agreed to introduce the researcher to the selected teachers. The teachers were selected by the principals as those whom they felt would be most cooperative and not threatened by a classroom observer. The researcher then met individually with each classroom teacher.

Finally, appointments were made with each teacher for the visitation of the classroom in order to make the observation of the interaction. The appointments were made at the teachers' convenience. The only condition was that the class time to be observed was being spent on mathematics. The times for the observations varied from morning

to afternoon. Each class was observed for a 45 minute time span.

The researcher had previously spent several hours observing and coding in classes other than those to be used for the research project in order to familiarize himself with the coding procedures. Enough practice was spent so that the researcher felt quite comfortable with the instrument and was able to identify the various question and response types.

The teachers of the students to be observed in the sample were asked to supply the researcher with some specific information. Teachers were asked to identify two students who they would keep for another year for the sheer joy of having these students in class. These students were placed in the Attachment Group. Teachers were then asked to select two students from their classes who they usually would overlook. That is, if someone were to ask the teacher about any of their students, which two students they would be least prepared to discuss. These students were placed in the Indifference Group. Teachers were then asked to select two students who they would transfer to another class immediately, if possible. These students were placed in the Rejection Group. Finally, the teachers were asked to supply the researcher with a seating chart. The seating chart allowed the researcher to identify the students who had been previously selected by their teachers. These students were then assigned numbers in order to keep their identity anonymous.

At the end of the school term, the cumulative records of the selected students were checked. The achievement grades in mathematics were then recorded for use with the previously collected data.

Treatment of Data

Upon completion of the classroom observation and the logical compilation of the data, it was decided to use a complex chi-square and the contingency coefficient (C) to test the Hypotheses.

> When you have frequency data comparing the effects of two variables and there are more than two groups on either of the two variables, the complex chi-square can be used to test the hypothesis of no relationship between variables. If the chi-square test shows that there is most likely a relationship between the variables, then the contingency coefficient can be computed to give an indication of the relationship (Bruning and Kintz, p. 209).

Summary

This chapter has described the instrumentation used in this study. It has also described the method used in the selection of the sample studied, the method used for the collection of the data and the treatment to be used for the data collected. Data from the study will be presented and analyzed in the following chapter.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter will present the tabulation of the results of the data to be investigated as presented in Chapter III. Each hypothesis will be presented along with the statistical treatment and results which were obtained.

Hypothesis I: There is a positive relationship between a teacher's expressed attitudes toward individual students and the quality of the interaction that takes place between the teacher and the students in the classroom.

This hypothesis was tested by use of a complex chi-square and the contingency coefficient (C). The complex chi-square is used to test the hypothesis of no relationship between the variables when there are more than two groups on either of two variables. If the chi-square test shows that there is most likely a relationship between the variables, the contingency coefficient can be computed to give an indication of the degree of the relationship.

The chi-square value of the data obtained on Hypothesis I is 66.748. With four degrees of freedom (df), the obtained X^2 is significant at the .05 level. There is a difference in the quality of the interaction between the

teacher and the individual students according to the "Attachment," "Indifference" and "Rejection" groups as identified by the teacher (Table I).

TABLE I

RELATIONSHIP BETWEEN TEACHERS' EXPRESSED ATTITUDES TOWARD STUDENTS AND THE QUALITY OF INTERACTION THAT TAKES PLACE WITHIN THE CLASSROOM*

Group	Quality of Interaction		
	Positive	Neutral	Negative
Attitudes			
Acceptance Group	51	3	1
Indifference Group	17	4	5
Rejection Group	34	21	64

*Chi-square = 66.748; df = 4; C = .5.

The contingency coefficient is .5. Thus, it is concluded that teacher's expressed attitudes toward individual students and the quality of the interaction that takes place between the teacher and the students are significantly related. An example of a positive response would be, "That is correct. You have done a good job." A

negative response example might be, "Wrong, you haven't done your homework." A neutral response would most likely be no response at all, or maybe just a "yes" or "no."

Hypothesis II: There is a positive relationship between a teacher's expressed attitudes toward individual students and the level of academic achievement as measured by the grades of the individual students.

Hypothesis II was tested by use of a complex chi-square and the contingency coefficient. The chi-square value of the data obtained on Hypothesis II is 16.614. With four degrees of freedom (df), the X^2 is significant at the .05 level. There is a difference in the quality of the interaction between the teacher and the individual students and the level of the achievement as measured by the grades of the individual students (Table II).

The contingency coefficient equals .562. Thus, it is concluded that a teacher's expressed attitudes toward individual students and the level of student academic achievement as measured by grades of the individual student are significantly related.

Hypothesis III was tested by use of a complex chi-square and the contingency coefficient. The chi-square value of the data obtained on Hypothesis III is 70.885. With eight degrees of freedom (df), the X^2 is significant at the .001 level. There is a difference in the quality of the interaction that takes place within the classroom and the level of student academic achievement as measured by the grades of the individual students (Table III).

TABLE II

RELATIONSHIP BETWEEN TEACHERS' EXPRESSED ATTITUDES TOWARD STUDENTS AND ACADEMIC ACHIEVEMENT AS MEASURED BY MATHEMATICS GRADES*

	Mathematics Grades				
	A	B	C	D	F
Attitudes					
Acceptance Group	7	5	0	0**	0**
Indifference Group	4	4	4	0**	0**
Rejection Group	0	3	2(9)	5	2

*Chi-square = 16.64; df = 4; C = .562.

**Collapsed D and F columns into C column in order to reduce 0 cells.

TABLE III

RELATIONSHIP BETWEEN QUALITY OF INTERACTION WITHIN THE CLASSROOM AND STUDENTS' ACADEMIC ACHIEVEMENT AS MEASURED BY GRADES*

	Grades				
	A	B	C	D	F
Quality of Interaction					
Positive Interaction	47	19	15	19	0
Neutral Interaction	2	2	8	12	3
Negative Interaction	1	8	15	42	4

*Chi-square = 70.885; df = 8; C = .514.

The contingency coefficient equals .514. Thus, it is concluded that the quality of the interaction that takes place within the classroom and the level of student academic achievement as measured by the grades of the individual students are significantly related.

The analysis of the data presented in Chapter IV supports the three hypotheses. There are significant relationships between: teacher's expressed attitudes and quality of classroom interaction, teacher's expressed attitudes and quality of student academic achievement and quality of classroom interaction and quality of student academic achievement. Chapter V will discuss conclusions, recommendations for further research and a summarization.

Further Considerations

Using the data gathered in this study, a chi-square and contingency coefficient were used to test the relationship, if any, of some other variables. The relationships tested were between: sex of the student and the quality of dyadic interaction, sex of the student and the level of academic achievement as measured by mathematics grades, and sex of the student and citizenship grades. Also tested were: the relationship between the race of the student and the quality of the dyadic interaction, the relationship between the race of the student and the level of academic achievement as measured by mathematics grades and the relationship between race of the student and citizenship grades.

Of all these tests, there were no significant relationships except between the race of the student and the quality of the dyadic interaction. In this instance, there was a X^2 of 50.048. With four degrees of freedom there is less than .001 that the relationship was due to chance (Table IV). The cell of negative interaction for Black students was 29.704, which in itself was significant at the .999 level. This indicates that while there was no significant relationship between the grades that the students received and their race or sex, there was, in this sample, a very significant relationship between race and the quality of the dyadic interaction in the classroom. In other words, Black students received a much higher percentage of negative interaction than the other students of the sample.

TABLE IV

RELATIONSHIP BETWEEN QUALITY OF INTERACTION WITHIN THE CLASSROOM AND RACE OF THE SELECTED STUDENTS*

	Race		
	Black	Native American	Caucasion
Quality of Interaction			
Positive Interaction	9	9	84
Neutral Interaction	1	0	13
Negative Interaction	69	0	15

*Chi-square = 50.048; df = 4; C = .447.

CHAPTER V

SUMMARY, RECOMMENDATIONS, CONCLUSION

Summary

This study was a description of observed interactions within classroom situations between teachers and selected students. Significant relationships were found to exist between the teacher's expressed attitudes toward individual students and the quality of interaction that takes place between teacher and the student in the classroom, between teacher's expressed attitudes toward individual students and the level of student achievement as measured by the grades of individual students and between the quality of interaction that takes place within the classroom and the level of student academic achievement as measured by the grades of the individual students. The relationships of the variables were studied from a sample of 36 students selected from a student group of approximately 150 students in a northeastern Oklahoma school district.

The collection of the data was achieved through classroom observations which took place during the spring semester of 1978. The instrument used during the observation and the data collection was Teacher-Child Dyadic Interaction, A Manual for Coding Classroom Behavior, by Good and

Brophy (1969). To examine the relationships the complex chi-square and the contingency coefficient were the statistical techniques used. On each statistical analysis, the level of significance achieved was at .05 or above.

Findings

The results of the statistical analyses of the data collected are:

1. Hypothesis I, that there is a positive relationship between a teacher's expressed attitudes toward individual students and the quality of the interaction that takes place between the teacher and the students in the classroom, was supported.

2. Hypothesis II, that there is a positive relationship between a teacher's expressed attitudes toward individual students and the level of academic achievement as measured by the grades of individual students, was supported.

3. Hypothesis II, that there is a positive relationship between the quality of interaction that takes place within a classroom and the student's academic achievement as measured by the grades of selected students within the classroom, was supported.

In addition it was noted that there is a positive relationship between the race of the student and the quality of the dyadic classroom interaction.

Dyadic interaction takes place in the classroom. By its definition it must be a mutual undertaking. In the elementary school in particular, the teacher must take the majority of the responsibility of the quality of that interaction. The teacher must be the leader in the classroom. A major responsibility of an administrator is to help the teachers and students in his charge to meet their greatest possible level of success. The method of classroom observation discussed in this study is at least one way of assisting in achieving that goal. The interaction that takes place in the classroom between the teacher and the individual student is important and can have a positive or negative affect on each individual student. Teachers should be made aware that as they develop certain feelings about individual students, these feelings can have a helpful or detrimental affect on the students.

Recommendations

Classroom dyadic interaction observation can be used in several worthwhile ways. For an administrator it can be used for teacher supervision and evaluation. Determination of the quality of interaction within a classroom is but one method, when used with others, of supervision and evaluation. This observation method requires the administrator to spend some time in the classroom. The administrator, therefore, is in a position to avail himself of

very worthwhile information on classroom interaction as well as being visible to the classroom teacher and the students.

Teachers could be made aware or reminded, through observations by fellow teachers or administrators, of how they are interacting with individual students. The observations check list is not difficult to use and could be a helpful tool in developing a positive relationship between teachers and their students. Through experience with teachers, this observer has learned that they often are unaware of the quality of their interactions with individual students.

Teachers, with the help of administrators, fellow teachers, or by use of video recording, could use classroom dyadic interaction observation as a method of self-improvement. A teacher could see, or be shown, how they interact with selected students and could then be given suggestions on improvement in teaching.

Another useful product of dyadic interaction observation would be the observation and notation of how a specific student interacts with the teacher and/or fellow students. This is a helpful tool for an administrator to use in student evaluations.

Oklahoma is blessed with many diverse cultures. Many of our students come from homes where traditional values are held. These students may require "special" treatment in the classroom. Through observation of quality of

interaction between the teacher and the selected student, different ways of interaction could be discussed which could benefit the student and thus help the teacher.

Further research in the area of dyadic interaction within the classroom could be done by studying interaction among different ethnic groups. Interaction between teachers belonging to any particular ethnic group and students belonging to the same and/or different ethnic groups as the teacher might be studied. Dyadic interaction between students of the same and/or different sex as the teacher might be studied. Different qualities of interaction concerning students of different socioeconomic levels could also be studied.

Our schools are composed of so many different individuals with different needs. Again, if teachers could be reminded of their methods of meeting those individual needs or possibly not meeting those needs, positive steps could be made in the improvement of each child's school experiences.

Due to laws governing the confidentiality of student records, widespread studies of this type might be difficult. Parent permission would be required for a researcher to gather some of the required data from a student's cumulative records. Therefore, to do follow up research of this type out of the researcher's own school district would require quite a bit more time and paper work than for a researcher gathering data in a school district in which he or she is employed.

Recommendations for Further Research

As this research was being conducted, several possibilities for further research were observed. The size of the sample of the students to be observed was a limiting factor. It is therefore recommended that larger samples of students be used in further research.

The possibility of single observer bias exists in this research. In further research, at least two observers should be used. Another possibility in this area might be the use of video taping classes. The video tape could then be viewed and the interactions coded. Still, more than one observer is recommended.

All classroom reachers observed in this research were Caucasian females. Similar research in this area might be conducted using, for observation, teachers of different races and sex.

In this research, teachers were asked to identify students using three different classifications. Future research in this area is recommended by having students classify their teachers. In this research, teachers interacted differently with the students whom they identified by three different categories. Would students interact differently with teachers for whom they (the students) have positive or negative feelings?

Finally, it is recommended that this research be replicated in a variety of locations and districts of varying sizes.

Conclusion

This study was undertaken in order to examine the relationships between teachers' expressed attitudes toward students, the quality of dyadic classroom interaction and students' grades. Positive relationships were found to exist in all hypotheses tested. A positive relationship was also found to exist between the quality of dyadic classroom interaction and the race of the students observed. All correlations were relatively strong and significant at .05 or greater. These results are generalized only to the population tested and replication, including further controls, is recommended.

A SELECTED BIBLIOGRAPHY

Anderson, H. H. and Brewer, H. "Studies of Teachers' Classroom Personalities." Applied Psychological Monographs, 1945, 6, p. 220.

Ausubel, D. Theory and Problems of Child Development. New York: Greene and Stratton, 1957.

Bales, R. Interaction Analysis Process. Cambridge: Addison Wesley Press, Inc., 1951.

Benninga, J. S., Guskey, T. R. and Thornburg, K. R. "The Relationship Between Teacher Attitudes and Student Perceptions of Classroom Climate." The Elementary School Journal, 1981, 82(1), p. 66.

Blass, T. "What Do Positive Correlations Between Student Grades and Teacher Evaluations Mean?" Teaching of Psychology, 1980, 7(1), p. 186.

Brophy, J. E. "Teacher Behavior and Its Effects." Journal of Educational Psychology, 1979, 71, pp. 733-50.

Brophy, J. E. and Good, T. W. Teacher-Student Relationships: Causes and Consequences. New York: Hole, Rinehart and Winston, 1974.

Bruning, J. L. and Kintz, B. L. Computational Handbook of Statistics. Glenview, IL: Scott Foresman and Co., 1968.

Carter, K. S. "How Invalid Are Marks Assigned by Teachers?" Journal of Educational Psychology, 1952, 43, pp. 218-228.

Cherry, L. J. and Berman, L. S. Teacher-Student Interaction and Teachers' Perceptions of Students' Communicative Competence: A Cross Sectional Study. (Technical Report No. 473.) Madison: University of Wisconsin, Nov., 1978.

Clarizio, H. F. and Yelon, S. L. "Learning Theory Approaches to Management: Rationale and Intervention Techniques." Journal of Special Education, 1967, 1, pp. 267-274.

Coopersmith, S. and Feldman, R. "Fostering a Positive Self-Concept and High Self-Esteem in the Classroom," in Psychological Concepts in the Classroom, R. H. Coop and K. White, eds. New York: Harper and Row, 1974, p. 283.

Davis, A. and Dollard, J. Children of Bondage. Washington, D.C.: American Council on Education, 1940.

Entwisle, D. R. and Hayduk, L. A. Academic Expectations and the School Attainment of Young Children. (Report No. 269.) Baltimore: John Hopkins University, 1978.

Flanders, N. A. Interaction Analysis in the Classroom: A Manual for Observers. Minneapolis: University of Minnesota Press, 1960.

Flanders, N. A. Analyzing Teacher Behavior. Reading, Mass.: Addison Wesley Publishing Co., 1970.

Good, T. and Brophy, J. Teacher-Child Dyadic Interaction: A Manual for Coding Classroom Behavior. (Report Series #27.) Austin: Research and Development Center for Teacher Education, University of Texas, Dec., 1969.

Horwitz, J. Feedback Processes in Classroom Groups. Washington, D.C.: Office of Education, Report #BR-6-1722-7 1722-77, Apr., 1967.

Kerlinger, F. N. Foundations of Behavior Research. New York: Holt, Rinehart and Winston, Inc., 1964.

Lonky, E. and Reihman, J. "Cognitive Evaluation Theory, Locus of Control and Positive Verbal Feedback." Paper presented at Annual Convention of the American Psychological Association, Montreal, Quebec, Canada, Sept., 1980.

Natriello, G. and Dornbusch, S. M. "An Experimental Study of the Effects of Student Status and Performance Characteristics of Teacher Standards and Warmth." Paper presented at Annual Meeting of the American Educational Research Association, San Francisco, Apr., 1979.

Page, E. E. "Teacher Comments and Student Performance." Journal of Educational Psychology, 1958, 46, pp. 173-81.

Palardy, M. J. "What Teachers Believe, What Children Achieve." Elementary School Journal, 1969, 69, pp. 370-74.

Pilling, D. and Pringle, M. K. Controversial Issues in Child Development. London: Elek Books, 1978.

Rosenthal, R. and Jacobson, L. Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development. New York: Holt, Rinehart and Winston, 1968.

Rutter, M., Maughan, B., Mortimore, P., Auston, J. and Smith, S. Fifteen Thousand Hours: Secondary Schools and Their Effects on Children. Cambridge: Harvard University Press, 1979.

Ryans, D. C. "Research on Teacher Behavior in the Context of the Teacher Characteristics Study," in Contemporary Research on Teacher Effectiveness, B. J. Biddle and W. Ellena, eds. New York: Rinehart and Winston, 1964, p. 290.

Seaver, W. B. "Effects of Naturally Induced Teacher Expectancies." Journal of Personality and Social Psychology, 1973, 28, pp. 333-42.

Simon, A. and Boyer, E. G. Mirrors for Behavior. Philadelphia: Research for Better Schools, Inc., 1970.

Staines, T. W. "The Self Picture as a Factor in the Classroom." British Journal of Educational Psychology, 1958, 28, pp. 97-111.

Tobias, S. "Interaction Between Achievement and Instructional Method." Paper presented at Annual Meeting of the American Educational Research Association, Boston, Mass., 1980.

Weber, G. Inner-City Children Can be Taught to Read: Four Successful Schools. Washington, D.C.: Council for Basic Education, 1971.

White, R. K. and Lippitt, R. Autocracy and Democracy. New York: Harper and Brothers, 1960.

Withal, J. "The Development of a Technique for the Measurement of Socio-Emotional Climate in Classrooms." Journal of Experimental Education, 1949, XVII, pp. 347-61.

Yamamoto, K. "Analysis of Teaching--Another Look." School Review, 1967, 75, pp. 205-214.

VITA

Benjamin Addison Hazlett

Candidate for the Degree of

Doctor of Education

Thesis: RELATIONSHIPS BETWEEN ELEMENTARY TEACHERS' EXPRESSED ATTITUDES TOWARD STUDENTS, QUALITY OF DYADIC CLASSROOM INTERACTION AND STUDENT GRADES

Major Field: Educational Administration

Biographical:

Personal Data: Born in Ponca City, Oklahoma, November 24, 1944, the son of Mr. and Mrs. Addison Hazlett.

Education: Graduated from Ponca City High School in 1962; received Bachelor of Science degree in Education from Oklahoma State University in May, 1967; received Master of Science degree in Educational Administration from Oklahoma State University in 1974; completed requirements for the Doctor of Education degree at Oklahoma State University in May, 1982.

Professional Experience: Taught school and coached athletics in the Denver Public Schools, Denver, Colorado, 1967-73; Graduate Assistant in the Teacher Certification Department, College of Education, Oklahoma State University, 1974-75; Elementary Principal, Oakridge Elementary School, Sapulpa Public Schools District I-33, Sapulpa, Oklahoma, 1975-78; Elementary Principal, Washington Elementary School, Sapulpa Public Schools District I-33, Sapulpa, Oklahoma, 1978 to present.

Professional Organizations: Phi Delta Kappa, professional educational fraternity, CCOSA-OAESP, state professional educational administration organization; NAESP, national professional educational administration organization, Acacia, social fraternity.