THE EFFECTS OF A CONCENTRATED IN-SERVICE PROGRAM DESIGNED TO IMPROVE ELEMENTARY TEACHERS' ATTITUDES TOWARD CHILDREN

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ABSTRACT

THE EFFECTS OF A CONCENTRATED IN-SERVICE PROGRAM DESIGNED TO IMPROVE ELEMENTARY TEACHERS' ATTITUDE TOWARD CHILDREN

By

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This study was conducted in an attempt to determine what effect a concentrated in-service program, geared to sensitizing elementary teachers of grade 1-6 to the needs of students, would have on those attitudes of teachers which deal with pupil teacher relationships, as measured by the Minnesota Teacher Attitude Inventory.

In addition, the study attempted to determine if any relationships existed between scores obtained on the Rokeach Dogmatism Scale--Form E and the corresponding scores achieved by teachers on the Minnesota Teacher Attitude Inventory.

The subjects of the study were selected elementary teachers in a suburban Detroit school district. All classroom teachers of grades 1-6 in the district were asked to complete unidentified copies of both the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale--Form E. Scores for both tests were identified for 180 subjects.

Fifty-one subjects whose scores on the Minnesota Teacher Attitude Inventory fell more than one-half a standard deviation below the mean were classified as having poor attitudes toward children and were considered for placement in an experimental design. Thirty-two subjects were randomly selected from this group. Sixteen subjects were randomly assigned to a control group and sixteen to an experimental group.

The experimental group was exposed to a concentrated in-service program designed to actively involve teachers in tasks and experiences which would sensitize them to the needs of students. The objectives of the project were pursued through a combination of three types of experiences: (1) Seminar Sessions which were theoretical and emphasized research, literature or positions relating to the needs of students or approaches suggested for the classroom; (2) Small Work Groups designed to stimulate and aid in the practical implementation of ideas presented in the seminar and to facilitate personal involvement in the materials; and (3) Individual Visitations and Consultations held by consultants, who had previous training in group dynamics, and who functioned as supportive, positive resource people. Each subject was involved in the experimental treatment for a minimum of 31 hours, arranged on a released time basis, covering a four month span. At no time were the consultants or subjects informed that attitude change was the focus of the project.

At the conclusion of the in-service experience all elementary teachers of grades 1-6 were again administered the Minnesota Teacher Attitude Inventory.

The BASTAT correlation program and the FINN computer program using a four way analysis of covariance, were employed in analyzing the data.

Major Findings

A significant correlation of -.60 was found between the 180 scores on the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale--Form E. As teachers' scores on the Minnesota Teacher Attitude Inventory get higher (more positive) their scores on the Rokeach Dogmatism Scale--Form E get lower (more open minded).

When the scores of the 32 teachers in the experimental and control groups were analyzed, it was found that teachers in the experimental group experienced significantly greater gains on the post-test, after exposure to the experimental treatment, than did control group subjects who received no treatment. The level of significance exceeded the .01 level.

No significant relationship at the .05 level of confidence was found when teachers' post-test scores were compared with either grade level taught or years of teaching experience.

Non-statistical data gather from reports to a teacher evaluation, instrument dealing with the in-service experience, showed that the use of non-judgmental classroom meetings as proposed by William Glasser and sessions emphasizing self

esteem, were the most valuable aspects of the in-service experience. It appears that there are successful approaches and techniques for use in sensitizing teachers to the needs of children.

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Dedication

To John

who made it all possible

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

THE PROBLEM

Nature of the Problem

During his years as a teacher and administrator in the public schools, the writer has been deeply interested in the relationships that exist in the classroom between pupil and teacher. Varied patterns of teacher-pupil relationships have been noted. In particular, the writer has had occasion to work with teachers who have demonstrated or expressed less than positive attitudes about the students with whom they worked. A deep curiosity arose over the kinds of activities and experiences that might be of benefit to those teachers in bringing about a change in their perception of, and relationship with, students.

This interest led to the proposal and the implementation of this study.

Need for the Study

Problems relating to teacher-pupil relationships have been reported in the literature for many years. Extensive studies have been conducted in attempts to identify those characteristics of teachers which are

related to their effectiveness in the classroom. Ryans[1] in his ten-year study undertook to identify teacher characteristics and to analyze teacher behavior in the classroom.

More recent work by Glasser,[2] Flanders and others[3] are indicative of the renewed analytical and empirical interest in and concern for the development of positive relationships between teachers and students.

The importance of the personal relationship developed in the classroom between teacher and pupil as pointed out by several writers supports the need for this study.

Wingo relates that research findings support the principle that both the quantitative and the qualitative aspects of learning are related to the kinds of personal relationships developed in the classroom and that one very important dimension in such relations is the degree of rapport existing between the teacher and her pupils.[4]

Sontag and Kagan suggest that the teacher's capacity to foster positive identification with students is

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[1]David G. Ryans, Characteristics of Teachers (Washington, D.C.: American Council for Education, 1965).

[2]William Glasser, Schools Without Failure (New York: Harper Row, 1969).

[3]Ned Flanders, "Interaction Analysis and In-Service Training," Journal of Experimental Education, XXXVII, No. 1, (1968), 126-133.

[4]Max Wingo, "Methods of Teaching," in Encyclopedia of Educational Research, ed. by Chester W. Harris (New York: MacMillan Co., 1960), p. 848.

especially crucial for the optimum development of a child's personality and intellect.[5]

Flanders believes that educators should be concerned with attempting to increase teachers' skills in making use of ideas expressed by pupils. He contends that this type of teacher behavior actually stimulates the recognition by pupils that they are free to express their ideas, thereby bringing about a clearer understanding between teacher and pupil which ultimately results in a better relationship.[6]

Campbell makes a plea that since technology has taken over some of the burdens of instruction, teachers should pay a great deal more attention to their interpersonal relationships with students.[7]

Glasser maintains that teachers must develop new educational strategies which will effectively engage students in the process of learning. He points out that all children need to succeed and that to begin to be successful, a good relationship must exist between children, and with the teacher. He enjoins

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[5]L. W. Sontag, and Jerome Kagan, "The Emergences of Intellectual Achievement Motives," American Journal of Orthopsychiatry, XXXIII (April, 1963), 532-535.

[6]Flanders, "Interaction Analysis and In-Service Training," p. 132.

[7]Ronald F. Campbell, "Teaching and Teachers--Today and Tomorrow," Education Digest, XXXV (November, 1969), 14.

teachers to develop warm, positive, personal relationships with students.[8]

But why do teachers differ in their relationships with children?

Gage, in his exhaustive review of the literature, stresses the importance of the teacher's frame of reference when conducting research on teacher-pupil relationships. He cites several writers who point to the teacher's frame of reference (those perceptual and cognitive processes on the part of the teacher) as the eventual determiner of the specific actions the teacher will take in relation to her students.[9]

Runkels' paradigm for educational research on teacher-pupil interactions typifies this concern suggested by Gage.

> The teacher brings to the classroom her own personal needs and goals developed during her own personal history. In combination with the particular classroom situation in which she finds herself, these lead to the teacher's choice of a goal involving the pupil. . . The goal chosen by the teacher is circumscribed by her frame of references, and so is the particular series of actions on which she embarks in order to approach the goal. These determinants lead to the teacher's act.[10]

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[8]Glasser, Schools Without Failure, pp. 12-20.

[9]N. L. Gage, "Paradigms for Research on Teaching," Handbook of Research on Teaching, ed. by N. L. Gage (Chicago: Rand-McNally and Co., 1960), pp. 94-141.

[10]Ibid., pp. 126-127.

Ryans, in attempting to characterize the competent teacher, suggests that many variables are related to the type of relationship that teachers establish with pupils.

> . . . we must take into account those qualities stemming from the teacher's personality, his interests, attitudes and beliefs, his behavior in working relationships with pupils and other individuals and the like.[11]

Shaw and Wright contend that one variable that is often cited as accounting for consistency in behavior is attitude.[12] Social psychologists have made the study of attitude a focus of investigation for many years because of their belief that attitudes can partially explain the behavior of individuals toward others.

> If the attitudes of a person toward a given object or class of objects is known, it can be used in conjunction with situational and other dispositional variables to predict and explain reactions of the person to that class of objects.[13]

Sears and Sherman support the idea that the attitudes of teachers can be a potential source for variation of teachers' behavior in classrooms.[14]

Felsenthal's investigation bore out this assumption. Trained observers categorized and analyzed teacher behavior

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[11]Ryans, Characteristics of Teachers, p. 3.

[12]Marvin E. Shaw and Jack M. Wright, Scales for the Measurement of Attitude (New York: McGraw-Hill, 1967), p. 1.

[13]Ibid.

[14]Pauline S. Sears and Vivian S. Sherman, In Pursuit of Self-Esteem (Belmont, California: Wadsworth Press, 1964), p. 15.

on two occasions for each of 20 elementary teachers as they taught reading classes. Teachers were divided into four groups according to scores on the Keslinger's Education Scale VII. She found that the pattern of classroom interaction was related to the attitudes of teachers.[15]

There are many and varied definitions of attitude stated in the literature. Shaw and Wright, after an extensive review of the literature attempted to extract as many of the commonalities as possible to put together the following definition. They define an attitude as:

> A relatively enduring system of evaluative, affective reactions based upon and reflecting the evaluative concepts or beliefs which have been learned about the characteristics of a social object or class of social objects.[16]

Sherif, Sherif, and Negerball contend that attitude formation and change are important because they have to do with the way people treat other people and groups and that attitudes are formed and changed in the context of interaction.[17]

Rokeach maintains that people change based on the degree of dogmatism they have. His contention is that change in beliefs comes about in relationship to the degree

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[15]Helen Felsenthal, "Sex Differences in Teacher-Pupil Interaction and Their Relationships with Teacher Attitudes and Pupil Reading Achievement," Dissertation Abstracts, XXX, Part 4-A (1970), 3781A-3782A.

[16]Shaw and Wright, Scales for Measurement of Attitude, p. 1.

[17]Carolyn Sherif, Muzafer Sherif and Roger Negerball, Attitude and Attitude Change (Philadelphia: W. B. Saunders Co., 1965), pp. 204-205.

of openness or closedness that the person possesses. In an attempt to test his theory of dogmatism, Rokeach developed the Dogmatism Scale, which purports to measure whether a person has an open or closed belief system.[18]

Many studies, while reporting the results of change, have done so without attempting to identify the teacher's belief system.

The attitudes of teachers toward their students, then, can be viewed as an important consideration affecting their actual working relationship with students in the classroom.

There are teachers meeting students daily who express less than positive attitudes about the learners with whom they work. Many of these teachers fail to develop warm, positive relationships with their elementary students.

Education is an ongoing process. Teachers too must continue to learn and grow. Often their skills and attitudes need to be modified if they are to keep current.

The elementary administrator faces a difficult situation when through the evaluation process, he identifies members of his staff whose relationships with children appear to be poor. If indeed attitude plays a vital role in determining that relationship, the administrator is placed in the difficult position of either helping the

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[18]Milton Rokeach, The Open and Closed Mind (New York: Basic Books, Inc., 1960).

teacher improve her attitudes, skills, and techniques of dealing with students, or simply tolerating the undesired shortcomings.

To simply accept the shortcomings is not feasible since the administrator has a prime responsibliity to help teachers improve. Miel believes that it is important that

> . . . an instructional leader recognizes that opportunities for teachers to set new insights and gain new information and skills is a necessary part of any thorough going change in curriculum instruction.[19]

Lippitt supports that position and suggests that most new teaching practices require significant psychological changes and skill acquisitions by the adaptor.[20]

These changes must be made while fully recognizing that an educational lag exists between theory and its translation into common practice in the classroom.

Shane and Yauch suggest that

> . . . this needless educational lag could probably be materially shortened if educational leadership were more widely aware of the findings and would devote considerable more energy in encouraging the study of this evidence by the teaching staff.[21]

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[19]Alice Miel, "New Pattern of In-Service Education of Elementary Teachers," The New Elementary School, ed. by Alexander Frazier (Washington, D.C.: Association Supervision Curriculum Development, 1968), p. 68.

[20]Ronald Lippitt, "Rolls and Processes in Curriculum Development and Change," in Strategy for Curriculum Change, ed. by Robert R. Leeper (Washington, D.C.: Association Supervision Curriculum Development, National Education Association, 1965), pp. 12-13.

[21]Harold G. Shane and Wilbur A. Yauch, Creative School Administration (New York: Holt and Co., 1957), p. 71.

Many teachers, it appears, have never been exposed to conclusive research findings, nor have they been introduced to new techniques to improve their skills in working with children. Even if they were, what effect would it have on their attitudes toward students?

One method of improving teacher attitudes, skills, and techniques is through an in-service education program. It should be noted, however, that the literature is nearly void of attempts to structure experiences that would enhance the attitudes of teachers who possess poor attitudes about their students. Yet the problem of changing attitudes is a real one to those principals and other school personnel who work with teachers on a day-to-day basis.

Amidon and Flanders recognize the need to appraise the teaching-learning situation in the classroom. They suggest that teachers need to study their own behavior in a systematic, objective manner in order to gain insight into their own pattern of influence with children.[22]

To this end Flanders developed a system of Interaction Analysis. This technique consists of classifying the verbal communication between teacher and pupil into a ten-category observational scale on a three-second interval basis. This provides a record of the sequence of verbal

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[22]Edmund J. Amidon and Ned Flanders, The Role of the Teacher in the Classroom: A Manual for Understanding and Improving Teacher Classroom Behavior (Minneapolis: Association for Productive Teaching, Inc., 1967), pp. 1-2.

events taking place during the observation, thus providing the teacher with feedback information relative to their verbal behavior in the classroom.[23]

Various Interaction Analysis techniques have been used by Flanders, Amidon, and others during in-service sessions with teachers, but the issue of the teachers' susceptibility to change has been ignored.

Bloom makes the point that for teachers to break away from habitual teaching practices requires a great deal more effort and involvement from the teacher than does the use of new or different evaluation instruments or the stating of new objectives.[24]

Glasser feels that change can best be achieved when teachers meet together to solve problems. "The teachers themselves must get involved with the need for changes and the desirability of new programs."[25]

Glasser has advanced the non-judgemental "classroom meeting" technique as a vehicle to bring about better teacher-pupil relationships. He suggests three types of classroom meetings to help solve the individual and group educational problems of a class and the school:

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[23]Ned A. Flanders, Interaction Analysis in the Classroom (Minneapolis College of Education, University of Minnesota, 1960).

[24]Benjamin S. Bloom, "Testing Cognitive Ability and Achievement," in Handbook of Research on Teaching, ed. by N. L. Gage (Chicago: Rand-McNally and Co., 1960), p. 390.

[25]Glasser, Schools Without Failure, p. 116.

(1) the social problem-solving meeting; (2) the open-ended meeting; and (3) the educational diagnostic meeting. When children experience the satisfaction of thinking and listening to others, they are more likely to enter into discussion to solve their own problems, according to Glasser.[26]

Purpose of the Study

It was the intent of this study to first identify elementary teachers who expressed poor attitudes about their students. An additional frame of reference explored was the degree of dogmatism held by each of the teachers.

An in-service program was developed which attempted to change the poor attitudes held by teachers about their students by involving those teachers in meaningful activities and tasks. It was felt that if teachers could be identified who possessed poor attitudes about learners, and if appropriate in-service activities could be developed that would improve those attitudes, both teacher and student would reap the benefits.

Assumptions

This study was undertaken with the following assumptions being made.

1. That the results of self-reporting attitude inventory are accurate estimates of the attitudes of teachers toward their students.

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[26] Ibid., pp. 122-131.

2. That the results of a self-reporting dogmatism scale are accurate estimates of the degree of openness and closedness that teachers possess.
3. That learning is conceived of as a change, due to experiences, in a person's way of thinking, feeling, or acting.
4. That active participation in meaningful activities will result in a high degree of learning.

The Problem

This study attempted to determine what effect a concentrated in-service program, geared to sensitizing elementary teachers of grades 1-6 to the needs of students, had on those attitudes of the teachers which deal with teacher-pupil relationships as measured by the Minnesota Teacher Attitude Inventory.

In addition, the study attempted to determine if any relationships exist between scores attained on the Rokeach Dogmatism Scale and the corresponding scores achieved by teachers on the Minnesota Teacher Attitude Inventory.

General Research Questions

The following general research questions were investigated during the course of this study. These questions are developed into specific hypotheses and are restated in testable form in Chapter III.

1. Do significant relationships exist among (a) teachers' scores on the Minnesota Teacher Attitude Inventory and (b) teachers' scores on the Rokeach Dogmatism Scale?
2. Do scores of teachers in the experimental group differ significantly from those in the control group as measured by the Minnesota Teacher Attitude Inventory after exposure to the experimental treatment?
3. Is there a relationship between changes in attitudes of teachers as measured by the Minnesota Teacher Attitude Inventory and their score on the Rokeach Dogmatism Scale after exposure to the experimental treatment?
4. Do teachers differ significantly in scores on the Minnesota Teacher Attitude Inventory post test when years of experience and grade level taught are examined?

This study took place in a period from December 1969 to June 1970. Teacher responses to a measurement of attitude and a measurement of dogmatism were examined. In addition, thirty-two teachers who scored low on the attitude measurement were used in an experimental study. Sixteen of these teachers were assigned to a control group and sixteen were assigned to an experimental group. Teachers in the experimental group were exposed to a concentrated in-service program.

Attempts were made to attain sufficient rigor to make the results scientifically acceptable while maintaining sufficient realism to make the results reasonably transferrable to educational situations in the field.

Definitions

For the purpose of this study, the following definitions were used:

Negative Attitudes Toward Students

Any teacher in the population of the study whose score on the Minnesota Teacher Attitude Inventory was lower than one-half a standard deviation from the mean of the total population of the project.

Attitude

A relatively enduring set of beliefs about an object or class of objects which predisposes a person to respond to that object or class of objects in a consistent manner.

Openness-Closedness

Open and closed are but extremes along a continuum representing a highly dogmatic, unchanging mind set to one which is tolerant and susceptible to change.

Overview

In Chapter II the pertinent literature related to the study is reviewed.

In Chapter III the design of the study, including a description of the population, sample, operational measures used, the testable hypotheses, and analysis techniques will be presented.

The findings of the study, derived from the data gathered and analyzed, will be contained in Chapter IV.

Chapter V will include a summary of the study along with the findings, conclusions, and recommendations.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this chapter is to review the literature which has bearing on the various aspects of this study.

The chapter is divided into three sections which represent those pertinent areas of the literature reviewed. Part I deals with attitudes and attitude change. Part II is concerned with the instrumentation used in the study, while Part III reviews appropriate in-service programs. A summary of the literature cited is also provided.

Attitude and Attitude Change

The concept of attitude has received a great deal of attention in the literature. Despite a plethora of writings, no single definition of attitude emerges as being acceptable to all theorists.

McGuire stipulates that five dimensions of disagreement exist among the many definitions of attitude. There is disagreement about: (1) the psychological locus of attitudes, (2) whether an attitude is a readiness to respond or if needed it is the response, (3) how attitudes

are organized, (4) whether their function is directive or motivational, and (5) the extent that attitudes are formed from previous experience.[1]

Shaw and Wright maintain that variations in definitions of attitude can be traced to just three basic sources. They attribute these variations to: (1) the issue of specificity versus generality in the determination of behavior, (2) the issue of whether or not attitude includes any predisposition to respond, and (3) the issue of the composition of an attitude.[2]

An examination of some of the definitions of attitude illustrate these differences.

Allport defines attitude as a

> Mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related.[3]

Sherif, Sherif, and Negerball define social attitude as

> . . . a set of evaluations formed toward an object or class of objects as the individual learns, in

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[1]William J. McGuire, "Nature of Attitudes and Attitude Change," in Handbook of Social Psychology, ed. by Gardner Lindzey and Elliot Aronson, Vol. III (Reading, Massachusetts: Addison-Wesley, 1968), pp. 202-285.

[2]Shaw and Wright, Scales for Measurement of Attitude, pp. 2-3.

[3]Gordon W. Allport, "Attitudes," in A Handbook of Social Psychology, ed. by Carl A Murchison (Worchester, Massachusetts: Clark University Press, 1935), p. 810.

> interaction with others, about his environment, including evaluations of other persons.[4]

Campbell states "an individual's social attitude is a syndrome of response consistency with regard to social objects."[5]

English and English maintain that an attitude is an "enduring learned predisposition to behave in a consistent way toward a given class of objects."[6]

Krech and Crutchfield define attitude as "an enduring system of positive and negative evaluations, emotional feelings, and pro and con action tendencies with respect to a social object."[7]

Asch writes that "attitudes are particularly enduring sets formed by past experience."[8]

Shaw and Wright in an attempt to synthesize the many definitions of attitude they encountered in their exhaustive review of the literature offer the following definition of attitudes:

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[5]Donald T. Campbell, "The Indirect Assessment of Social Attitudes," Psychological Bulletin, XLVII, No. 1 (1950), 31.

[6]Horace B. English and Ada C. English, A Comprehensive Dictionary of Psychological and Psychoanalytic Terms: A Guide to Usage (New York: McKay Co., Inc., 1958), p. 50.

[7]David Krech and Richard Crutchfield, Theory and Problems of Social Psychology (New York: McGraw-Hill, Inc., 1948), p. 177.

[8]Solomon E. Asch, Social Psychology (New York: Prentice-Hall, 1952), p. 585.

> A relatively enduring system of evaluative, affective reactions based upon and reflecting the evaluative concepts or beliefs which have been learned about the characteristics of a social object or class of social objects.[9]

The first source of difference in attitude definition as postulated by Shaw and Wright regards specificity versus generality in the determination of behavior. The issue revolves around whether or not attitudes have a specific referent. The more common point of view, as reflected by Hovland, Janis, and Kelley;[10] Krech, Crutchfield, and Ballachey;[11] and Sherif and Cantril;[12] consider attitudes to have a specific referent or a specific class of referent. Rokeach on the other hand postulates that attitudes represent a generalized mind set which acts as a determiner of behavior in situations in which an individual makes decisions.[13]

The second source of variation is found in the broad definitions which would include any predisposition to respond, as compared to a more narrow view which would

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[9] Shaw and Wright, Scale for Measurement of Attitudes, p. 3.

[10] Carl I. Hovland, Irving L. Janis, and Harold H. Kelley, Communications and Persuasion (New Haven: Yale University Press, 1963).

[11] David Krech, Richard Crutchfield, and Egerton Ballachey, The Individual and Society (New York: McGraw-Hill, Inc., 1962).

[12] Muzafer Sherif and Hadley Cantril, "The Psychology of Attitudes: Part I," Psychology Review, III (Fall, 1945), 295-319.

[13] Rokeach, The Open and Closed Mind.

restrict the use of the term attitude to the predisposition to respond only to social aspects of the environment. Social psychologists usually refer to attitude only when the referent object or event is of a social nature--Sherif, Sherif, and Negerball;[14] Campbell;[15] Shaw and Wright.[16]

The third source of variation in definition deals with the theoretical conception of the composition of attitudes. Allport stated that attitudes were "mental and neural states."[17] Krech and others conceptualize attitude as consisting of three components--affective, cognitive, and behavioral.[18]

Shaw and Wright prefer to limit the construct of attitude to an affective component which is based on cognitive processes.[19]

Knutson looks at attitude composition in a different fashion. He views attitudes as part of a larger domain.

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[14]Sherif, Sherif, and Negerball, Attitude and Attitude Change, pp. 22-30.

[15]Campbell, "The Indirect Assessment of Social Attitudes," pp. 31-32.

[16]Shaw and Wright, Scales for Measurement of Attitudes, p. 11.

[17]Allport, "Attitudes," p. 810.

[18]Krech, Crutchfield, and Bellachey, The Individual and Society.

[19]Shaw and Wright, Scales for Measurement of Attitudes, pp. 11-12.

> Attitudes may also be part of a larger psychological structure, in this way inter connected in various degrees with other attitudes, with values, or imbedded within an ideology.[20]

Rokeach agrees that attitudes are but a small part of a person's total beliefs. He differentiates between "belief systems" and attitudes.

> A belief system represents the total universe of a person's beliefs about the physical world, the social world and the self. It is conceived as being organized along several dimensions, and additional dimensions can be added as required by further analysis or empirical research. A belief system can further be analyzed in terms of sub-systems of varying breadth or narrowness. An attitude is one type of sub-system of beliefs, organized around an object or situation which is, in turn, embedded within a larger sub-system and so on.[21]

While Rokeach differentiates between beliefs and attitude, Brown and Webb caution that in a discussion of beliefs, semantics becomes involved. They point out that psychological constructs which predispose an individual to act upon his environment have been classified and designated as attitudes, needs, interests, and values and that, in fact, the terms "attitude" and "belief" have been used synonomously by different writers.[22]

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[20] A. Knutson, The Individual, Society and Health Behavior (New York: Russel Sage Foundation, 1965), p. 297.

[21] Milton Rokeach, Beliefs, Attitudes and Values (San Francisco: Jossey-Boss, Inc., 1968), p. 123.

[22] Bob Brown and Jeannine Webb, "Belief and Behavior in Teaching," Educational Leadership, XXVI (November, 1968), 211.

Rokeach also places different connotations to the terms "attitude" and "value." He feels that a value is a type of belief which is central to a person's total belief system, which represents abstract ideals about modes of conduct and ultimate personal goals. He sums up the differences between beliefs, attitudes, and values by classifying them according to their referent.

> An adult probably has tens or hundreds of thousands of beliefs, thousands of attitudes, but only dozens of values. A value system is a hierarchical organization--a rank ordering--of ideals or values in terms of their importance.[23]

Function of Attitude

Smith, Bruner, and White feel that a person's attitudes represent his major equipment for dealing with reality.

> . . . attitudes serve as mediators between the inner demands of the person and the outer environment, the material, the social and most immediately, the informational environment of the person.[24]

Katz describes four functions of attitudes: (1) the instrumental, adjustive, or utilitarian function, which he suggests is the basis of behavioristic learning theory, (2) the ego-defensive function whereby an individual shields himself from the realities of the world around him, (3) the value-expressive function in which

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[23]Rokeach, Beliefs, Attitudes and Values, p. 124.

[24]Brewster M. Smith, Jerome Bruner, and Robert White, Opinions and Personality (New York: John Wiley and Sons, Inc., 1956), p. 39.

the person expresses attitudes that he deems to be reflective of his personal values and his concept of self, and (4) the knowledge function, whereby the individual seeks clarity and consistency in his universe.[25]

Rokeach sees an attitude relating to an individual much like a theory used by the scientist.

> An attitude, like a theory, is a frame of reference, saves time because it provides us a basis for inductions and deduction, organizes knowledge, has implications for the real world, and changes in the face of new evidence.[26]

Theories of Attitude Change

In response to his own question of where people get the ideas that they value, Corey suggests three sources. He maintains that individuals get ideas from (1) what they have been told or from what they have read, (2) active research and experimentation, (3) careful critical examinations and re-examinations of their own experiences. People change from the interaction with any or all of these sources.[27]

Stern and others support Corey when they suggest that the environment and the individual interact and this produces change. "In the exchange between individuals and

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[25]Daniel Katz, "The Functional Approach to the Study of Attitudes," Public Opinion Quarterly, XXIV (Summer, 1960), 163-204.

[26]Rokeach, Beliefs, Attitudes and Values, p. 131.

[27]Steven Corey, Helping Other People Change (Columbus, Ohio: Ohio State University Press, 1963), pp. ix-xi.

environment both give to each other and to some degree both are affected and altered by the exchange."[28]

Much has been written regarding attitude change. Several theories have been posited for bringing about changes in the attitudes of people. A review of several authors writing in the area of attitude change suggests some common sources of agreement. The writers agreed that attitudes are formed through the basic principles of learning. They also agreed that while attitudes are relatively stable and long enduring they are not a basic, irreducible or unchangeable element within the personality.

Shaw and Wright summarize this point of view.

> . . . attitudes are learned; they are relatively stable; they have a specific referent; they vary in directions and intensity; and they possess varying degrees of interrelatedness and of scope.[29]

Bloom believes that while basic values most likely will remain stable, particular attitudes, views, and opinions that individuals hold may shift considerably over time.[30]

Ausubel suggests that personality development is typically characterized by both continuity and change, and while we may maintain some values and attitudes in adult

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[28]George G. Stern, Methods in Personality Assessment (Glencoe, Illinois: Free Press, 1956), p. 36.

[29]Shaw and Wright, Scales for Measurement of Attitudes, p. 1.

[30]Benjamin S. Bloom, Stability and Change in Human Characteristics (New York: John Wiley and Sons, Inc., 1964), p. 173.

life which we formulated in childhood, that ". . . nevertheless, these are largely supplanted in a generally changed gestalt."[31]

Shaw and Wright feel that if the attitude of a person toward an object is known, the principles governing attitude change can be utilized to manipulate the individual's reactions, thus creating change.[32]

Rosenberg, Hovland, and others point out that experimentation usually involves controlled manipulation of one variable while estimations are made of related changes in other variables. "Thus, most experimental work bearing on the interrelation of attitude components has comprised attempts to produce attitude change."[33]

The process of changing attitudes is not an easy one. Miller seriously questions the studies which indicate easy change in attitude.

> These ubiquitous laboratory findings are striking not so much because of their apparent generality, but rather because they contrast so vividly with what we know to be true of the real world. In our daily lives we are struck not by the ease of producing attitude change but by the rarity of it.[34]

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[31]David P. Ausubel, "Relationships Between Shame and Guilt in the Socializing Process," Psychological Review, LXII, No. 5 (1955), 378-390.

[32]Shaw and Wright, Scales for Measurement of Attitude, p. 1.

[33]Milton Rosenberg and Carl I. Hovland, Attitude Organization and Change (New Haven: Yale University Press, 1960), p. 8.

[34]Norman Miller, "Involvement and Dogmatism as Inhibitors of Attitude Change," Journal of Experimental Social Psychology, I (January, 1965), 121.

Various theories of attitude change have been reported in the literature. A short review of consistency theories, communication-persuasion theories, and task-experience theory will be presented in this section.

Historically, consistency theories are usually derived in some way from Heider's original formulation.[35]

Each of these theories postulates a need for consistency. Most often, the theories assume that the presence of inconsistencies produces tension and the individual rearranges his psychological world to produce consistency. Consistency theory includes those theories usually referred to as equilibrium, balance, and dissonance, or congruity theories.

Festinger first proposed the cognitive dissonance theory. He believed that each person strives toward consistency within himself and that his attitudes and opinions tend to exist in internally consistent clusters. He equates dissonance with inconsistency and consonance with consistency. His theory simply stated is: (1) the existence of dissonance (being psychologically uncomfortable) will motivate a person to attempt to reduce that dissonance and thus to gain consonance, (2) when dissonance is present, in addition to trying to reduce it, the person will

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[35]Fritz Heider, "Attitudes and Cognitive Organization," Journal of Psychology, XXI (September, 1946), 107-112.

actively avoid situations and information which would likely increase that dissonance.[36]

Dissonance theory states that the least resistant cognitive element will change in response to dissonance. If previous behavior patterns or attitudes are strongly held, newly presented information is likely to be the least resistant element and is likely to have little impact.

Kossaryian and Cohen found evidence that supported this theory. They identify four predominant means of reducing dissonance among individuals exposed to threatening information. The individuals: (1) changed previously developed behavior or attitudinal patterns; (2) denied or distorted the information; (3) minimized the importance of the issue; (4) added new information consonant with the previous behavior or attitudinal pattern.[37]

Osgood and Tannenbaum present a similar idea when they discuss the principle of congruity. "Changes in evaluation are always in the direction of increased congruity with the existing frame of reference."[38]

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[36]Leon Festinger, A Theory of Cognitive Dissonance (New York: Row, Peterson and Co., 1957), pp. 1-30.

[37]H. Kossaryian and J. Cohen, "Cognitive Dissonance and Consumer Behavior, California Management Review (Fall, 1965), pp. 55-64.

[38]Charles E. Osgood and Percy H. Tannenbaum, "The Principles of Congruity and the Prediction of Attitude Change," Psychological Review, LXII, No. 1 (1955), 42-55.

They proceed to show that under such circumstances there is a great tendency to change either the evaluation of the opinion involved or the source of the information in a direction which would reduce dissonance.

Consequently, if the source of information were positively evaluated and the opinion were negatively viewed, the person might well end up viewing the issue more positively and reacting less positively to the source. The particular outcome also depends in large measure on whether the evaluation of the issue or source is more firmly embedded in the person's cognition initially.

Rosenberg, Hovland, and others state that affective and cognitive components of attitudes are ordinarily organized in congruence with one another. If this congruence is disrupted by altering either of the components, a process of congruence restoration takes place and under certain conditions it can lead to attitude reorganization.[39]

Brehm and Cohen point out that an individual will experience dissonance and reduce it through attitude change if he simply commits himself to doing something disagreeable, even though he does not act upon his decision.[40]

The forced compliance paradigm refers to a situation where a person is induced to behave in a manner that

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[39]Rosenberg and Hovland, Attitude Organization and Change, pp. 11-12.

[40]Jack W. Brehm and Arthur R. Cohen, Explorations in Cognitive Dissonance (New York: John Wiley and Sons, Inc., 1962), pp. 106-108.

is contrary to his beliefs and attitudes. Kiesler, Collins, and Miller point out that the crucial theoretical statement applicable to the forced compliance situation is:

> The less the pressure (e.g., offered reward, threatened punishment, or greater choice) put upon the person to perform the act, the greater the dissonance.[41]

Theoretically then, the greatest attitude change will take place when a minimal amount of pressure is necessary to induce the person to engage in the activity.

Experimental studies regarding attitude change have focused frequently on the variety of factors leading to positive change toward the communicator's position. Most of these studies are designed to specify the conditions under which persuasive communications have been successful. Breer and Locke suggest that the body of thought dealing with communications and persuasion does not represent a theory in itself, although the use of communications and persuasion is embodied in some theories. One of these is the Social Judgement-Involvement approach to attitude. Whatever the specific conditions involved, it is assumed that subjects can be induced to change their attitudes by presenting them with new information which is then "averaged in" with attitudes already held.[42]

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[41]Charles Kiesler, Barry Collins, and Normal Miller, Attitude Change (New York: John Wiley and Sons, Inc., 1969), pp. 205-206.

[42]Paul E. Breer and Edwin A. Locke, Task Experience as a Source of Attitude (Homewood, Illinois: Dorsey Press, 1965), pp. 40-41.

Sherif and Sherif maintain that the Social Judgement-Involvement approach is based on the empirical findings from the psychological and social study of judgement. It deals with the involvement of the person's self or ego in an ongoing situation.

> It aims to specify the conditions in which an individual will be susceptible to attempts to change his attitude or be resistant to change even before anyone has attempted to alter his view.[43]

Sherif and Sherif further predict that the more the person is involved in the issue (the more important it is to him) the less susceptible he will be to short-term attempts to change his attitude.[44]

Miller and Lobe examined the responses of open- and closed-minded recipients to messages containing opinionated and non-opinionated statements attributed to a highly credible source. Results indicate that the opinionated messages were more persuasive than the non-opinionated ones for both open and closed recipients.[45]

In a related study Miller and Basehart examined the relationships of source trustworthiness to the relative persuasiveness of messages containing opinionated and

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[43]Carolyn Sherif and Muzafer Sherif, Ego Involvement and Change (New York: John Wiley and Sons, Inc., 1967), pp. 106-108.

[44]Ibid., p. 133.

[45]Gerald R. Miller and Jon Lobe, "Opinionated Language, Open and Closed Mindedness and Response to Persuasive Communication," Journal of Communication, XVII (December, 1967), 333-341.

non-opinionated statements. They found that the persuasive effectiveness of a message containing opinionated statements depends partly upon the initial trustworthiness of the source. When trustworthiness is low, an opinionated message produces less attitude change than a non-opinionated one, regardless of the degree of open and closed mindedness of the recipients.[46]

Breer and Locke advance an interesting theory of attitude change that they call task experience. It appears to embrace aspects of both persuasive-communication approaches and consistency theory. It addition, it involves a direct application of the reinforcement theory of learning, requiring desired behavior to first be elicited and then reinforced. It is their contention that in working on a specific task, an individual develops certain beliefs, values, and preferences about that task and that these cognitions are transferred to other facets of his life. "It is our contention that task experience provides much of the raw material out of which men construct their fundamental ideas about life."[47]

They also contend that those beliefs and values that will be the least sensitive to innovation are those

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[46]Gerald R. Miller and John Basehart, "Source Trustworthiness Opinionated Statements and Response to Persuasive Communication," Speech Monographs, XXXVII, No. 1 (1969), 2-7.

[47]Breer and Locke, Task Experience as a Source of Attitude, p. 6.

that represent abstractions. The more applicable the task is to everyday events, the more probable that positive results will be elicited.[48]

They link their theory strongly to learning theory.

> Those patterns of behavior which are instrumental to task success are most likely to be rewarded; once rewarded, they are likely to be repeated. Those (reinforcement theory) forms of behavior which end in failure have a low probability of being emitted again.[49]

In a study of equalitarianism and authoritarianism they used 52 subjects to test the hypothesis that attitude change was a function of task experience. The subjects, who ranged in age from 16-45, were students from the junior year of high school through the final year of graduate school. Subjects were pre and post tested. The experiment was introduced as a study designed to explore the relationships between leadership and performance. The object was to learn more about the effects of different kinds of leadership on group performance. A four-hour session was held. The findings pointed out that those who were rewarded for performing the task with a leader became more authoritarian, while those who were rewarded for performing without a leader became more equalitarian.[50]

Task experience differs from communication-persuasion approaches in that it is interested in the

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[48] Ibid., p. 20.

[49] Ibid., p. 34.

[50] Ibid., pp. 113-118.

origin of the attitudes. The individual learns by working on a task. The attitudes have their roots in task experience.

Instrumentation of the Study

A frequently used method of measuring attitudes requires the subject to indicate his agreement or disagreement with a set of statements relative to the attitude object. Shaw and Wright summarize the procedure:

> In short, the typical attitude scale measures the acceptance of evaluative statements about the attitude object. The attitude toward the object is inferred from the statements endorsed by the subject based upon the consensual evaluation of the nature of the characteristics attributed to the object by the acceptance of the statements.[51]

These types of scales are usually referred to as self-reporting techniques and have been used widely in the measurement of values, attitudes, and personality characteristics.

The present study employed the use of two self-reporting instruments: (1) the Minnesota Teacher Attitude Inventory and (2) the Rokeach Dogmatism Scale.

Minnesota Teacher Attitude Inventory

The Minnesota Teacher Attitude Inventory is one of the most widely used self-reporting instruments for measuring teacher attitudes. Cook, Leeds, and Callis developed the Minnesota Teacher Attitude Inventory after

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[51]Shaw and Wright, Scales for the Measurement of Attitude, p. 14.

investigations over a ten-year period. "It is designed to measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships."[52]

Examinees taking the instrument are presented with 150 statements concerning the nature and behavior of children in general, and pupils, in particular, and are asked to express their degree of agreement or disagreement on a five-point Likert type scale. Raw scores can vary from a plus 150 to a minus 150. High scores indicate permissiveness toward children and uncritical positive attitudes toward teaching; low scores suggest critical, authoritarian attitudes. Indeed, the authors contend that "items in the Inventory discriminate sharply between teachers who have and those who do not have good rapport with pupils."[53]

In the process of validating the Minnesota Teacher Attitude Inventory, teachers' scores on the instrument were correlated with three outside criteria rating teacher-pupil rapport. The first criterion employed was to have students rate their teachers. A reliability coefficient of .93 was obtained. The second criterion used was to have principals rate the teachers on their rapport with pupils.

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[52]Walter W. Cook, Carroll H. Leeds, and Robert Callis, Minnesota Teacher Attitude Inventory Manual (New York: Psychological Corporation, 1951), p. 3.

[53]Ibid., p. 4.

The reliability achieved, using a split-half method, was .87.

The rating of teachers by an observer was the third criterion used to determine the teacher-pupil rapport. The reliability reported was .92. When the three scores were combined with multiple regression weighting, a validity coefficient of .60 was obtained.[54]

Leeds subsequently conducted a longitudinal study over a fifteen-year span from 1952 to 1967 in which 1,200 Furman University students were used as subjects. The Minnesota Teacher Attitude Inventory was administered to education majors at the beginning of their formal courses in teacher education, upon graduation, and during their teaching career. The same rating techniques of teacher-pupil rapport were used as in the original standardization of the Minnesota Teacher Attitude Inventory. Pearson product moment correlation coefficients of .51 found between Minnesota Teacher Attitude Inventory scores obtained after at least one year of experience compares favorably to the .60 obtained in the original study. Leeds maintains that these findings are indicative of the concurrent validity of the Minnesota Teacher Attitude Inventory.[55]

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[54] Ibid., pp. 10-11.

[55] Carroll H. Leeds, "Predictive Validity of the Minnesota Teacher Attitude Inventory," Journal of Teacher Education, XX (Spring, 1969), 52-55.

The Minnesota Teacher Attitude Inventory has come under criticism from various sources.

Shaw and Wright in their discussion of various scales for the measurement of attitudes dismiss the Minnesota Teacher Attitude Inventory as a legitimate measure of attitudes since ". . . it appears to be a test for selecting good teachers rather than an attitude scale."[56]

Giebink challenges whether or not the Minnesota Teacher Attitude Inventory scores are related to teacher behavior at all, stating that various studies have shown only moderate relationships exist between the Minnesota Teacher Attitude Inventory and criteria measures of teacher behavior. His study involved 27 female elementary teachers in four schools. These teachers had a mean age of 30 with ten years of teaching experience. The Minnesota Teacher Attitude Inventory was administered to these teachers at the beginning of the second semester of a school year and again five weeks later. Each teacher was also observed in that period for twenty minutes on each of two occasions. Criteria for the observation was a type of interaction analysis. Giebink found no relationship between Minnesota Teacher Attitude Inventory scores and observed teacher behavior as classified by the following categories:

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[56]Shaw and Wright, Scales for Measurement of Attitude, p. 69.

(a) indirect teacher talk, (b) direct teacher talk, (c) student talk, (d) silence or confusion, (e) continued use of acceptance and praise by teacher, (f) continued use of direction and criticism by teacher.[57]

Brown and Webb argue that even though the Minnesota Teacher Attitude Inventory is a very popular measure of teacher attitude, attempts to identify significant relationships between Minnesota Teacher Attitude Inventory scores and teacher behavior have failed.[58]

Getzels and Jackson in their extensive review of the literature pertaining to the Minnesota Teacher Attitude Inventory summarize the most prevalent questions posed by those investigating the instrument. They found that investigators questioned which psychological factors the attitudes measured by the instrument represent, as well as the extent to which the results on the Minnesota Teacher Attitude Inventory are due to response sets. One of the greatest questions regarding the Minnesota Teacher Attitude Inventory that they reported centered around how liable the Inventory was to faking.[59]

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[57]John W. Giebink, "A Failure of the M.T.A.I. to Relate to Teacher Behavior," Journal of Teacher Education, XVIII, No. 2 (1967), 234-239.

[58]Brown and Webb, "Belief and Behavior in Teaching," p. 211.

[59]Jacob W. Getzels and Philip W. Jackson, "The Teacher's Personality and Characteristics," in Handbook of Research on Teaching, ed. by N. L. Gage (Chicago: Rand-McNally and Co., 1963), pp. 506-582.

The fact that the Minnesota Teacher Attitude Inventory comes under suspicion regarding fakeability does not make it unique. Indeed, Bloom states that the greatest concern that is expressed over any self-reporting instrument relates to the truthfulness of the response.

> Although some of the questions may get at deep seated aspects of personality in such a way that the subject has little awareness of what is being revealed, for the most part the questions are likely to be ones for which the subject can determine the favorable response. Thus, a major source of error may be the variations of "truthfulness" of the examinee's response.[60]

Extensive studies have produced conflicting findings regarding the susceptibility of the Inventory to faking. Callis[61] concurred with Stein and Hardy[62] that the Inventory was found to be only slightly fakeable.

Coleman maintains that the instrument is suspect to faking and cautions against its use in hiring teachers or accepting students for student teaching. His findings were based on a study where teachers were tested with the Minnesota Teacher Attitude Inventory and were re-tested a short time later. At the re-test subjects were specifically instructed to respond as they might if they were

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[60]Bloom, Stability and Change in Human Characteristics, p. 160.

[61]Robert Callis, "Change in Teacher Pupil Attitudes Related to Training and Experience," Educational and Psychological Measurements, X (Spring, 1950), 725.

[62]Harry L. Stein and James Hardy, "A Validation Study of the M.T.A.I. in Manitoba," Journal of Educational Research, L (January, 1957), 321-338.

candidates in a district known for a permissive attitude. He found that teachers were able to improve their scores.[63]

Rabinowitz supported Coleman's findings.[64]

Leeds answers the criticism of fakeability by stating that the Minnesota Teacher Attitude Inventory was constructed on the basis of experienced teacher response to the items and that the question of the validity of the Minnesota Teacher Attitude Inventory has come about by ". . . its unwarranted use with student teachers and teachers without experience."[65]

In addition, there is some evidence that self-reporting instruments are more valid with "poorer" teachers. Medley administered the Minnesota Multiphasic Personality Inventory to about 100 teachers who had scored high on the Minnesota Teacher Attitude Inventory and 100 who had scored low in an attempt to get some information about personality differences between teachers with high and low rapport with pupils. He found the largest difference was in the degree to which teachers tended to describe themselves as better than they were. He reports clear evidence that one characteristic of teachers who get high Minnesota Teacher

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[63]William Coleman, "Susceptibility of the M.T.A.I. to Faking, with Experienced Teachers," Education Administration Supervision, XL (April, 1954), 234-237.

[64]William Rabinowitz, "The Fakeability of the M.T.A.I.," Educational Psychological Measurements, XIV (Winter, 1954), 657-664.

[65]Leeds, "Predictive Validity of the M.T.A.I.," p. 51.

Attutude Inventory scores is that when a high-scoring teacher answers a question on a paper and pencil test, he is likely to say what he thinks is most acceptable or desirable rather than describe his personality more accurately. Medley also feels that the Minnesota Teacher Attitude Inventory has high correlation with teacher-pupil rapport.[66]

The question of the effect of other factors obtained on the Minnesota Teacher Attitude Inventory has also been investigated.

Beamer and Ledbetter report that the Minnesota Teacher Attitude Inventory scores of preservice and beginning teachers are considerably higher, on the average, than those of teachers with experience.[67]

After two years of teaching, Day found that Minnesota Teacher Attitude Inventory scores became stabilized at about the level found prior to teacher preparation. He attributes such change in attitudes as rising from the interaction between pupils and teachers and not just the passing of time. Similarly, he also found that graduates

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[66]Donald M. Medley, "Teacher Personality and Teacher-Pupil Rapport," Journal of Teacher Education, XII (March, 1961), 152-156.

[67]George C. Beamer and Elaine W. Ledbetter, "The Relationship between Teacher Attitudes and the Social Services Interest," Journal of Educational Research, L, No. 9 (1957), 655-666.

who prepared for but who did not enter teaching shifted less in attitudes than those who entered teaching.[68]

The effect of experience is also shown in the three-year longitudinal study of teacher scores on the Minnesota Teacher Attitude Inventory conducted by Rabinowitz and Rosenbaum. They found that as experience of the teacher increased, concern for pupil freedom decreased. In addition, the establishment of an orderly classroom and emphasis on academic standards also became more important to teachers as they increased in experience.[69]

Cooks, Leeds, and Callis maintained that no significant differences were found when teachers in the field sample described as superior, inferior, or unselected had their scores compared according to sex, marital status, or size of the school district in which they taught. They did find, however, that teachers below forty years of age scored significantly higher than those older than forty, and teachers in grades 1-3 scored higher than teachers in grades 4-6. Similarly, they found that teachers who had

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[68]H. P. Day, "Attitude Changes of Beginning Teachers after Initial Teaching Experience," Journal of Teacher Education, X, No. 3 (1959), 326-328.

[69]William Rabinowitz and Irving Rosenbaum, "Teaching Experience and Teacher's Attitudes," Elementary School Journal, LX (March, 1960), 313-319.

courses in mental hygiene scored higher than those who had not had a course.[70]

The effect of a class in mental hygiene was not substantiated by Rocchio and Kearney. In a survey of 1,175 teachers, they compared Minnesota Teacher Attitude Inventory scores of those who had taken a mental hygiene course in college as opposed to those who had not. They found that teacher attitudes were not affected by having a course in mental hygiene.[71]

While specific attempts to link Minnesota Teacher Attitude Inventory scores with classroom behavior as measured by some type of interaction analysis have appeared to be fruitless, other studies have linked the Minnesota Teacher Attitude Inventory scores with important variables.

Morrison and Rosomer contend that "the total score evidently involves a syndrome and those scoring low could be labeled authoritarian."[72] They also point out that the Minnesota Teacher Attitude Inventory score represents several largely independent consistencies and should not be looked upon as measuring a single trait.[73]

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[70]Cook, Leeds, and Callis, Minnesota Teacher Attitude Inventory Manual, p. 12.

[71]P. D. Rocchio and D. C. Kearney, "Does a Course in Mental Hygiene Help Teachers?" Understanding the Child, No. 25 (1956), 91-94.

[72]W. Lee Morrison and R. C. Rosomer, "Personality Structure and Dimensions of Teacher Attitude," Journal of Experimental Education, XXXVI, No. 2 (1967), 58.

[73]Ibid., pp. 55-58.

The same authors report other findings of theirs which indicate that students who performed poorly on the Minnesota Teacher Attitude Inventory tended to be (1) more traditional in their beliefs, (2) more anxious, and (3) less intelligent than those students scoring higher. They used 110 junior, senior, and graduate students in the Department of Education and Psychology at Western Texas State College in 1965 as subjects.[74]

A study by Davies explored the relationships between attitudes, personality characteristics, and patterns of teacher influence. Fifty-one secondary teachers were administered the Minnesota Teacher Attitude Inventory. Davies assumed that the verbal statements of teachers were a reliable sample of classroom behavior. She hypothesized that teachers use more indirect influence in the classroom when they score high on the Minnesota Teacher Attitude Inventory. She concluded that there were no differences between sub-groups of indirect or less indirect teachers in relationship to attitudes as measured by the Minnesota Teacher Attitude Inventory, though a trend existed.[75]

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[74]W. Lee Morrison and R. C. Rosomer, "Traditional Classroom Attitudes, the A.C.T., and the 16 P.F.," Journal of Educational Research, LX, No. 7 (1967), 326-329.

[75]Lillian S. Davies, "Some Relationships between Attitudes, Personality Characteristics and Verbal Behavior of Selected Teachers," Dissertation Abstracts, XXII, Part IV (1962), 3943.

Kingston and Newsome reported that teachers who scored high on the Minnesota Teacher Attitude Inventory were also likely to score low on a scale measuring authoritarian personality characteristics.[76]

Based upon the similarity of teachers and camp counselors in tasks relating to role relationships, Summers, Shuster, and Shuster studied 22 camp counselor trainees in a course in recreation and park administration. They administered the Minnesota Teacher Attitude Inventory to them and arranged for each trainee to be observed by three different evaluators. They found that Minnesota Teacher Attitude Inventory responses were significantly related to the observation of the counselor's democratic and authoritarian leadership styles.[77]

Rokeach Dogmatism Scale

In a study of prejudice as a sociopsychological phenomenon, Adorno and others constructed a test of a personality factor called authoritarianism, which is sometimes referred to as the F scale. It purported to measure the many characteristics of an individual which may be

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[76]A. J. Kingston and G. L. Newsome, "The Relationship of Two Measures of Authoritarianism to the M.T.A.I.," Journal of Psychology, XLIX (March, 1960), 333-338.

[77]Gene F. Summers, Arnold Shuster, and Susan Shuster, "The M.T.A.I. and Counselor-Camper Interaction: A Note on Predictive Validity," Educational Psychological Measurement, XXIX, No. 4 (1969), 999-1004.

associated with acceptance or rejection of evidence in messages.[78]

McGee also studied authoritarianism and its relationship to the classroom practices of teachers. He used the F scale to measure the tendency toward authoritarianism of 184 public school elementary and secondary teachers. He also observed the classroom behavior of those teachers in an effort to detect authoritarian trends in observable classroom behavior. He tested the assumption that the classroom behavior of a teacher reflects that teacher's tendency toward authoritariansim. He concluded that classroom behavior can be predicted with a fair degree of accuracy by using scores on the F scale.[79]

As an outgrowth of the studies on authoritarianism, Rokeach in his book, The Open and Closed Mind, developed the concept of dogmatism, which he defined as "the resistance to change of a total belief system."[80]

Rokeach postulates that individuals possess basic characteristics which determine the extent to which that person is open minded or closed minded.

> This leads us to suggest a basic characteristic that defines the extent to which a person's system is open

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[78]Theodor W. Adorno, The Authoritarian Personality (New York: Harper Row, 1950), p. 1.

[79]Henry M. McGee, "Measurement of Authoritarianism and Its Relation to Teacher's Classroom Practices," Genetic Psychology Monographs, LII (February, 1955), 86-146.

[80]Rokeach, The Open and Closed Mind, p. 183.

> or closed; namely, the extent to which the person can receive, evaluate and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside.[81]

Rokeach contends that the closed mind indicates an unwillingness to form new systems unless the new beliefs do not have to be reconciled with old ones. Open persons have the ability to integrate new ideas and the subjects work them through cognitively. The essence of the difference in open and closed persons dealing with the formation of new systems is the ability of the open person to synthesize or integrate new ideas.[82]

In order to test his theory, Rokeach developed the Dogmatism Scale as a measurement of mind set which operates in most decision-making situations. The Dogmatism Scale purports to examine a person's belief system without becoming entangled in specific referents. "We consider it to be first and foremost a measure of the extent to which the total mind is an open mind or a closed one."[83]

While dogmatism is usually considered synonymous with "closed," Rokeach points out that ". . . open and closed are but extremes along a continuum."[84]

The scale was constructed in a basically deductive fashion. Various characteristics of open and closed

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[81] Ibid., p. 57.

[82] Ibid., pp. 398-399.

[83] Ibid., p. 397.

[84] Ibid., p. 5.

systems were scrutinized. Statements designed to tap those characteristics were then constructed.

> Our assumption was that if a person strongly agrees with such statements it would indicate he possesses one extreme of the particular characteristic being tapped, and if he strongly disagrees, that he possesses the opposite extreme.[85]

There have been a number of revisions of the Dogmatism Scale since it was originally devised. Each revision, in an effort to give greater reliability to the instrument, was brought about as the result of rather extensive use of item analysis procedures. Form E, used in this study, was tested on 528 representative subjects from all walks of life. The reliability coefficient from various groups ranges from .68 to .93.[86] The form contains 40 items. In an effort to reduce the time it takes to administer the Scale, Troldahl and Powell collected data from two field studies using ten, fifteen, and twenty of the items contained in Form E. They found that the 20-item version yielded a split-half reliability of .79 of the original version.[87]

Simons and Berkowitz inventigated the possibility that a leftist bias existed in the Rokeach Dogmatism Scale.

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[85] Ibid., p. 72.

[86] Walter T. Plant, "Rokeach's Dogmatism Scale as a Measure of General Authoritarianism," Psychological Reports, VI, No. 1 (1960), 164.

[87] Verling E. Troldahl and Fredric A. Powell, "A Short Form Dogmatism Scale for Use in Field Studies," Social Forces, XLIV (December, 1965), 211-214.

They felt it was important that the Scale should measure dogmatism rather than a political ideology, and since the authors own validation studies yielded lower scores for liberals than for any other group, the bias was suspected.

One hundred twenty-four college students were used in their study. Each subject took the scale five times: once to describe their own beliefs and once each to estimate how an extreme leftwinger, liberal, conservative, and extreme rightwinger would answer the questions.

Analysis of the data showed that liberals did score lower on dogmatism than conservatives. Additional analysis, however, suggested that the scores reflected real differences in dogmatism rather than to imply any glaring flaws in Rokeach's scale. They concluded that no evidence was found for a leftist or liberal bias and construed this as further evidence of the construct validity of the Dogmatism Scale.[88]

In a related study, Rutledge used a Q technique factor analysis on the Scale to question the assumption of a unitary basis for the belief-disbelief system. In a rather limited study of 29 students enrolled at the University of Arizona, he concluded that factor patterns are the basis for classifying persons into groups, rather than one score which signifies the amount of dogmatism.

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[88]Herbert W. Simons and Nancy Berkowitz, "Rokeach's Dogmatism Scale and Leftist Bias," Speech Monographs, XXXVI, No. 4 (1969), 459-463.

He maintains the response patterns suggest three factors: (1) open minded, tolerant, nondogmatist, (2) people who have a profound and generalized fear of life, and (3) authoritarian persons who believe in one cause.[89]

Several studies have used the Dogmatism Scale as a measure of authoritarianism to investigate other variables.

In a study conducted by Kleck and Wheaton, it was concluded that dogmatic subjects did show less recall of inconsistent information and a greater tendency to evaluate consistent information than did open subjects, thus concurring with Rokeach's contention.[90]

In a study conducted with preservice teachers, Hanny concluded that teachers who are highly dogmatic as measured by the Rokeach Dogmatism Scale and who score low on the Teacher Situation Reaction test can be taught Interaction Analysis successfully. They are then able to use this system to control their behavior and use desirable verbal behavior that affect classroom climate when they teach under simulated conditions.[91]

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[89]Jay L. Ruthledge, "Q Technique Factor Analysis of Rokeach Dogmatism Scale," Educational and Psychological Measurement, XXIX, No. 2 (1969), 453-459.

[90]Robert Kleck and Jerry Wheaton, "Dogmatism and Responses to Opinion-Consistent and Opinion-Inconsistent Information," Journal of Personality and Social Psychology, V, No. 2 (1967), 249-252.

[91]Robert Joseph Hanny, "The Relationship between Selected Personality Characteristics and Teacher Verbal Behavior" (unpublished Ph.D. dissertation, Ohio State University, 1966), pp. 139-142.

Plant, Telford, and Thomas describe persons with closed or dogmatic systems as being more impulsive, defensive, conventional, and stereotyped in their thinking than were their open-minded counterparts.[92]

Similarly, Piers reported that the authoritarian tendencies of teachers are directly related to the type of teacher-pupil relationship behaviors noted in the classroom.[93]

Alter and White reported that the results of data from their study indicate that women score consistently lower than men on the Dogmatism Scale.[94]

Gill, King, and Wilburn found that liberal subjects scored significantly higher on the Minnesota Teacher Attitude Inventory than did dogmatic subjects.[95]

Wittmer and Webster investigated whether or not teaching experience in any way facilitates or impedes counseling effectiveness by looking at the degree of dogmatism of counselor trainees with and without teaching

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[92]Walter T. Plant, Charles W. Telford, and Joseph A. Thomas, "Some Personality Differences between Dogmatic and Non-Dogmatic Groups," The Journal of Social Psychology, LXVII (October, 1965), 67-75.

[93]Ellen V. Piers, "Effects of Instruction on Teacher Attitudes: Extended Control Group Design," Psychological Abstracts, XXX (1956), 149.

[94]Richard D. Alter and Jack B. White, "Some Norms for the Dogmatism Scale," Psychological Reports, XIX (December, 1966), 967-969.

[95]Newell T. Gill, Roy King, and Ron G. Wilburn, "A Helping Relationship Experience in Teacher Education," Journal of Experimental Education, XXXVII, No. 2 (1968), 31.

experiences prior to a practicum experience. Forty-nine students at the University of Florida were administered Form E of the Dogmatism Scale. They found that counselor trainees with teaching experiences were significantly more dogmatic than counselor trainees without teaching experiences. They also found that dogmatism did tend to increase with age.[96]

Kirk's study supports the contention that older teachers tend to be more closed, but she concluded that it is not clear as to what role teaching experience played in the process.[97]

A study by Anderson concurs that the longer the teacher is with the school, the more likely it is that she will be closed. He suggests that it may be possible to reduce threat by giving all teachers considerable help in areas like room organization, discipline techniques, and structuring of the learning environment in an attempt to slow down the change toward closedness.[98]

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[96]Joe Wittmer and Gerald Webster, "The Relationship between Teaching Experience and Counselor Trainee Dogmatism," Journal of Counseling Psychology, XVI, No. 6 (1969), 499-504.

[97]Treva B. Kirk, "Behaviors of Teachers New to a Building in Relation to the Climate of the School and the Dogmatism of the Teacher" (unpublished Ph.D. dissertation, Michigan State University, 1965), p. 228.

[98]James Anderson, "The Relationships of Teacher Belief Systems to Teacher and Pupil Factors Related to School Goal Cathexis" (unpublished Ph.D. dissertation, Michigan State University, 1969), p. 111.

Gill, King, and Wilburn summarize the importance of mind set. They contend that perhaps the variable of open mindedness needs the most attention in teacher education since education is a process of communication. Since the teacher is both a receiver and sender of information, she must have an awareness of how the child perceives a problem in order to insure that the transmission of information is relevant to the child's own level of awareness.[99]

In-Service Programs

The concept of conducting in-service activities for teachers is widely accepted. While a multitude of aims, objectives, and activities are carried out in the name of in-service education, many authors feel that the changing of teacher attitudes is a vital aspect of any such program.

Rubin maintains that in-service education has multiple goals.

> In its simplest sense, in-service education seeks 3 ends: the extension of learning in general and pertinent subject matter knowledge in particular; the acquisition of new techniques of teaching; and a shaping of attitudes and purpose.[100]

Herrick agrees and suggests that in the long run, the effectiveness of the program should be evaluated by

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[99]Gill, King, and Wilburn, "A Helping Relationship Experience in Teacher Education," p. 32.

[100]Louis J. Rubin, "A Strategy in Curriculum Change," Educational Leadership, XXI, No. 5 (1964), 279.

the nature and quality of changes in people as individuals and professionals.[101]

Coffey and Golden indicate four areas of change for in-service teachers to be considered. They include changes in (1) knowledge and skill, (2) relations of individuals to the group, (3) attitudes and values, and (4) the feelings, motives, and aspirations as internalized by individuals.[102]

Most writers agree with Cook that "In-Service education programs will be successful only if they serve to achieve among the members of the professional staff an opportunity to grow and improve in their roles as teachers."[103]

The key to successful programs appears to be hinged on the degree of involvement or active participation by

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[101]Virgil E. Herrick, "The Evaluation of Change in Programs of In-Service Education," In-Service Education, Fifty-sixth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1957), p. 311.

[102]Hubert S. Coffey and William P. Golden, Jr., "Psychology of Change within an Institution," In-Service Education, Fifty-sixth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1957), pp. 67-102.

[103]Thomas George Cook, "A Study of In-Service Education Programs for Classroom Teachers Utilizing Instructional Television in Selected Public Schools in Michigan" (unpublished Ph.D. dissertation, Michigan State University, 1964), p. 149.

members of the staff. This was cited by Bigelow,[104] Ogeltree and Edmonds,[105] Moffitt,[106] and Childress.[107]

The question of how to involve teachers in successful experiences is widely treated in the literature.

Campbell and others stress the importance of teachers participating in the planning of in-service activities and suggest that in-service programs planned solely by administrators are headed for failure.[108]

This position is supported by Gerheim whose survey showed that teachers accepted and valued those in-service programs that were carefully planned, locally and cooperatively, while they tended to reject programs which were poorly planned and administratively imposed.[109]

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[104]Eugene B. Bieglow, "A Survey, Analysis and Proposed Program of In-Service Education in Selected School Districts in Six Mid-western States," Dissertation Abstracts, XXX, Part 4-A (1970), 3821A-3822A.

[105]James R. Ogeltree and Fred Edmonds, "Programming for In-Service Growth," Educational Leadership, XXI, No. 5 (1964), 288-291.

[106]John C. Moffitt, In-Service Education for Teachers (Washington, D.C.: Center for Applied Research in Education, Inc., 1963), pp. 92-103.

[107]Jack R. Childress, "In Service or Continuing Education for Teachers," Journal of Education, MXLVII, No. 3 (1965), 40.

[108]Ronald Campbell, John E. Corbally, and John Ramseyer, Introduction to Educational Administration (Boston: Allyn and Bacon, Inc., 1958), p. 209.

[109]Mearl F. Gerheim, "Teachers Evaluation of the Nature and Effectiveness of In-Service Teacher Education in Selected School Districts" (unpublished Ph.D. dissertation, University of Pittsburg, 1959), pp. 265-266.

Corey, while emphasizing planned programs in contrast to independent attempts by teachers to improve themselves, also maintains that it is not feasible to depend entirely on the initiative of individuals to launch upon improvement programs.[110]

Many times, the teachers who are in greatest need of updating are the least willing to participate in an in-service education program.

Indeed, Childress suggests that if major changes in attitudes, methods, and subject matter acquisition are to be accomplished, then a definite obligation on the part of teachers to participate in in-service activities must be present. He maintains that participation in an in-service program is a professional responsibility and can no longer be looked upon as a self choice or self selection activity. He suggests that involvement in in-service activities may well need to be done on an assigned basis.[111]

Miel agrees. "To continue to learn on the job is a professional necessity that cannot be left to the chance of purely volunteer arrangements."[112]

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[110]Stephen Corey, "Introduction," In-Service Education, Fifty-sixth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1957), p. 1.

[111]Childress, "In-Service or Continuing Education for Teachers," pp. 37-39.

[112]Alice Miel, "New Patterns of In-Service Education for Elementary Teachers" (from a speech taped at the Joint Conference Department Elementary School Principals Association Supervision Curriculum Development, Hotel Chase Park Plaza, St. Louis, Missouri, January 13-15, 1967).

Smith and others support this position and emphasize that school districts should follow the lead of industry and request that certain teachers take special training.[113]

The literature in professional education has been concerned with the relationship existing between continued development of staff in in-service activities and improvement of the instructional program.

Stoddard as early as 1939 emphasized that the fusing of theory and practice in the classroom is enhanced by a continuous program of in-service education.[114]

Openshaw agrees that in-service activities must have meaning for the teacher and be applicable to her daily contacts with students. "The in-service program must extend into the day-by-day contacts the teacher has with children and youth in the classroom and with his co-workers in the school environment"[115]

Gerheim concluded that teachers want and need to participate in programs that study problems and issues with which they are confronted in their daily task.[116]

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[113]Smith Hamlin, "The Schools and Teacher Training," Journal of Secondary Education, XXXVI (February, 1961), 224-230.

[114]Alexander J. Stoddard, "The Growth of Teachers In-Service," Educational Record, XX, No. 4 (1939), 501.

[115]Karl Openshaw, "Attitudes for Growth," Educational Leadership, XXX, No. 2 (1962), 90-92.

McFeaters' analysis of research led her to conclude that the most likely type of in-service program to be successful would be those tailored to local situations and designed to improve the teachers in order to provide the best possible learning situation for children.[117]

A study by Taylor seems to bear this out. He analyzed the plans of 218 teachers via a questionnaire regarding their plans for additional formal education and further preparation. Over 70 percent intended to take additional work. Classroom control and student motivation were listed most frequently as the most important problems they faced.[118]

There were 1,551 teachers in randomly selected Connecticut schools who were sent a questionnaire relating to in-service education by Hempel. He was attempting to discover relationships between attitudes of teachers toward in-service and also their knowledge of agreement among educational psychologists concerning learning theory. His results showed that only slightly more than half the responding teachers felt a need for further in-service work. He concluded that knowledge of learning theory may be a

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[117]Mary M. McFeaters, "A Critical Analysis of Selected Research Literature on In-Service Teacher Education," Dissertation Abstracts, XIV, No. 8 (1954), 1340.

[118]Bob L. Taylor, "The In-Service Education Needs of New Teachers," California Journal of Educational Research, XII (November, 1961), 221-223.

factor affecting a teacher's attitude toward in-service education. There appeared to be a tendency for those who knew more about learning theory to hold more desirable attitudes toward in-service education.[119]

Even if the problem of participation is solved, decisions still need to be made relative to the structure of the in-service program.

Various models of in-service education programs have been used ranging from conference to workshops.

Childress sees the value in conferences and conventions as in-service opportunities but warns that they are stimulators for further education and should not be considered as ends in themselves.[120]

The suggestion that teachers observe each other has been made by DeVita. He claims that this is a valuable and worthwhile experience which may lead to action research.[121]

Borgealt lends support to DeVita. In his exploratory study of 1,081 teachers in 344 buildings, he found, via a questionnaire, that both elementary and secondary

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[119]Carl H. Hempel, "Attitudes of a Selected Group of Elementary School Teachers Toward In-Service Education," Dissertation Abstracts, XXI, Part 4 (1961), 3684.

[120]Childress, "In-Service or Continuing Education for Teachers," p. 37.

[121]Joseph DeVita, "A Stimulating Technique: Teachers Observe Other Teachers," Clearing House, XXXIX, No. 9 (1963), 549-550.

teachers endorsed interclassroom visitations and demonstrations as one of the top two in-service practices.[122]

The workshop has been found to be a highly successful and well-accepted in-service activity. Hempel,[123] Moffitt,[124] Allen,[125] and Gerheim[126] all point to the workshop as a productive experience. Its success, more often than not, depends on the way in which the various participants relate to each other. Moffitt sums it up by stating: "The workshop emphasizes informality and establishes good rapport and interrelatedness."[127]

A study by Mitchell related the effects of a workshop on classroom practices. He concluded that the workshop was a rich experience which could provide teachers with abundant opportunities to obtain the help they needed. He also found that teachers used more and varied materials in their teaching after involvement in a workshop.[128]

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[122]Alan Borgealt, "Teacher Perceptions of In-Service Education Activities: An Exploratory Study" (unpublished Ph.D. dissertation, University of Iowa, 1969), pp. 158-159.

[123]Hempel, "Attitudes of a Selected Group of Elementary School Teachers Toward In-Service Education," p. 3684.

[124]Moffitt, In-Service Education for Teachers, pp. 26-27.

[125]Frank E. Allen, "In-Service Education," Nation's Schools, XLVIII, No. 3 (1951), 45.

[126]Gerheim, "Teachers Evaluation of In-Service."

[127]Moffitt, In-Service Education for Teachers, p. 26.

[128]Forest C. Mitchell, "The Effect of Participation in a Summer Workshop upon Selected Classroom Procedures" (unpublished Ph.D. dissertation, University of California, 1951).

While the workshop is widely endorsed as a model for in-service programs, a number of studies show conflicting results regarding the change of attitudes and practices of teachers after specific in-service experiences.

Wess studied 22 elementary teachers in grades 2-6 involved in a special Title III E.S.E.A. funded program designed to improve mathematics instruction. He wanted to see if attitudes toward mathematics and students would change after the program. When the mean scores between pre and post test scores of the Minnesota Teacher Attitude Inventory, which was administered to the teachers, were analyzed, he found no significant differences. Similarly, no significant differences were found between pre and post test scores regarding attitudes of teachers toward mathematics.[129]

On the other hand, Haynes involved 34 upper elementary methematics and science teachers in an in-service course designed to assist them in understanding, motivating and working more effectively with slow learners. Control and experimental groups were administered the Minnesota Teacher Attitude Inventory on a pre and post test basis. Analysis of data showed a statistically significant improvement on the part of the experimental group at a .01 level.

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[129]Roger Wess, "An Analysis of the Relationship of Teacher Attitudes and Achievement in Mathematics" (unpublished Ph.D. dissertation, University of South Dakota, 1969), pp. 126-130.

No significant change was observed in the control group. Haynes concluded that attitudes of experienced math and science teachers could be changed significantly as measured by the Minnesota Teacher Attitude Inventory through in-service education, although the change in attitude was not related to age, years of experience, nor marital status.[130]

Brandou examined teaching practices of elementary teachers exposed to in-service work conducted to improve the teaching of science using a workshop approach. Secondary science teachers were used as resource people. He found significant changes in teaching practices reported by the participating group after the in-service work had concluded. Upper-grade teachers were deemed to have benefitted most from the experience. Length of experience did not appear to affect the reactions of elementary teachers to the in-service program.[131]

Dossett also found the workshop to be an effective approach to in-service education. She found that the use of an in-service workshop in 1963-64 sponsored by the Missouri State Department of Education under Title III,

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[130]Robert C. Haynes, "The Role of In-Service Education in Attitudinal Change for Teachers of Slow Learners in Math and Science" (unpublished Ph.D. dissertation, George Peabody, 1969), pp. 65-68.

[131]Julian Robert Brandou, "A Study of an Experimental Program for the In-Service Science Education of Elementary School Teachers" (unpublished Ph.D. dissertation, Michigan State University, 1963), pp. 99-129.

N.D.E.A., was effective in improving the attitude of the participants toward math.[132]

Even though some educators point with pride to the achievements made during in-service programs, most agree that changes in education usually come about slowly.

Lippitt postulates that part of the explanation for the slow rate of change in the public school lies with absence of a change agent position in the public schools. He contrasts this with the extension agent in agriculture. Apparently school districts are attempting to balance this deficiency through the use of consultants.[133]

Miel found that the trend seems to show an increasingly large number of consultants being used in in-service work. In her survey, the use of consultants showed the greatest increase when the in-service practices of 1956 and 1966 were compared. A perusal of the literature also finds more programs using consultants.[134]

Boyd involved 128 teachers in grades 4-6 in Texas in a seven-month program attempting to measure the relative

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[132]Mildred J. Dossett, "An Analysis of the Effectiveness of the Workshop as an In-Service Means for Improving Math Understandings of Elementary School Teachers" (unpublished Ph.D. dissertation, Michigan State University, 1964), pp. 154-160.

[133]Lippitt, "Rolls and Processes in Curriculum Development and Change," p. 13.

[134]Miel, "New Patterns of In-Service Education of Elementary Teachers," pp. 78-79.

effectiveness of in-service education programs relating to the teaching of arithmetic. Consultants were used with half the participating teachers. They spent a total of 48 days working independently with teachers and with small groups of students on problems relating to the program. He found no differences in changes in math achievement and achievement in selected aspects of math teaching methods between teachers who had consultant help and those who didn't.[135]

Gerheim found that teachers favored consultants and resource personnel who helped them learn about children rather than those who helped in teaching children.[136]

Haan concludes that a major reason for the relative ineffectiveness of consultants in the classroom has been their inadequate development of consultative skills. She proposes that these people learn more about group processes and approaches to human relation problems.[137]

Flanders reported on a project completed by Bowers and Soar which involved 54 elementary teachers in human relations training. One objective of the study was to

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[135]Claude C. Boyd, "A Study of the Relative Effectiveness of Selected Methods of In-Service Education for Elementary School Teachers," Dissertation Abstracts, XXII, No. 10 (1961), 3531-3532.

[136]Gerheim, "Teachers Evaluation of In-Service," p. 268.

[137]Audrey Haan, "The Teaching Complex: Focus of an In-Service Education," Educational Leadership, XXI, No. 5 (1964), 285-287.

increase teacher sensitivity to the factors causing pupil behavior. Teachers were classified on the basis of personality and attitude as measured by the Minnesota Teacher Attitude Inventory, the Minnesota Multiphasic Personality Inventory, and Bowers Teacher Opinion Inventory. Twenty-five teachers were assigned to the experimental group and 29 to the control group.

The program consisted of half-day sessions, five days a week for a three-week period. The activities emphasized active participation in developing new concepts by identifying possible teacher roles and practicing the skills required by the new teacher roles. Control group members were involved in a number of activities designed to reduce a possible Hawthorne effect.[138]

Flanders in commenting on the results of the study claimed that not all teachers would benefit from the training. "In general, teachers whose personality measures initially were correlated with more effective classroom practices, in turn, gained most from the training."[139]

Cantrell conducted an in-service program on behavior modification principles for 36 special education teachers of grades 1, 2, and 3. When he analyzed the results of the Minnesota Teacher Attitude Inventory tests

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[138]Ned Flanders, "Teacher Behavior and In-Service Program," Educational Leadership, XXI, No. 1 (1963), 25-26.

[139]Ibid., pp. 26-27.

administered to both the control and experimental group, he found no significant difference in attitude gains of the two groups.[140]

Hill utilized interaction analysis techniques in an in-service activity held with 35 teachers from three elementary and two secondary schools. Each teacher received up to ten hours of instruction. He found an increase in teacher acceptance of student ideas after exposure to interaction analysis.[141]

Storlie investigated the relationship between selected characteristics of teachers and change in verbal behavior following an in-service course in interaction analysis. Fifty-one secondary teachers from suburban schools volunteered to participate in a ten-week program. Storlie hypothesized that teachers who scored high on the Minnesota Teacher Attitude Inventory would increase their use of indirect influence on students more than teachers who scored low on the Minnesota Teacher Attitude Inventory. Each teacher was observed four to six hours before and after the ten-week program. No significant differences were found between high and low scores on the measures of

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[140]Robert Cantrell, "Efficacy of In-Service Training of Teachers in Operant Techniques," Dissertation Abstracts, XXX, Part 4-A (1970), 4301-A.

[141]William Hill, "The Effects on Verbal Teaching Behavior of Learning Interaction Analysis as an In-Service Education Activity," Dissertation Abstracts, XXVII, Part III (1967), 2084-A.

teacher characteristics. However, extreme scorers did increase in indirect influence more than those not at the extreme at the .05 level. Storlie concluded that it is possible to produce changes in teacher verbal behavior by means of in-service programs based on interaction analysis.[142]

Moritz utilized a human relations laboratory in an in-service education program. His study involved 26 teachers, 13 in a control group and 13 in an experimental group. He questioned whether the attitudes of teachers toward students as measured by the Minnesota Teacher Attitude Inventory improve significantly by exposure to a human relations laboratory. The treatment for the experimental group consisted of a one-weekend workshop devoted to t-group training. He found a significant difference at the .10 level between the experimental group and control group on the post test scores of the Minnesota Teacher Attitude Inventory. He concluded that teachers who participated in the weekend workshop improved significantly in positive attitudes toward students. Then, six semi-monthly skill-building sessions followed. When those same teachers

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[142]Theodore Storlie, "Selected Characteristics of Teachers Whose Verbal Behavior is Influenced by an In-Service Course in Interaction Analysis" (unpublished Ph.D. dissertation, University of Minnesota, 1961), pp. 182-188.

were tested after three months of skill building, he found that the improvements were not maintained.[143]

Sr. Gabrielle conducted a study of preservice teachers who had completed student teaching as compared to psychology minors. She found that the psychology minors had a significantly higher mean score regarding attitudes toward children. She pleaded for greater exposure to psychology so teachers would be more sensitive to student needs, feelings, and patterns of development.[144]

Dugan agrees. "The teacher should be a sensitive person who recognizes and understands the needs of the child, the adult and the community."[145]

Flanders also supports the idea of being concerned with mental health. While teachers are not therapists, they do deal with the needs, emotions, and conflicts of children.

> Teachers share with therapists the need to establish rapport with the total class and with individual students, to understand student feelings and attitudes and to make constructive use of emotional energy in order to accomplish work.[146]

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[143]Floyd C. Moritz, "A Human Relations Laboratory as an In-Service Education Program" (unpublished Ph.D. dissertation, Arizona State University, 1969), pp. 91-98.

[144]Sr. L. Jean Gabrielle, "Do Teachers Need More Preparation in Psychology?" Journal of Teacher Education, XIX, No. 1 (1968), 53-57.

[145]Ruth R. Dugan, "Personality and the Effective Teacher," Journal Teacher Education, XII, No. 3 (1961), 335-337.

[146]Fed A. Flanders, "Teacher Pupil Contacts and Mental Hygiene," Journal of Social Issues, XV, No. 1 (1959), 30.

Bocks undertook the task of introducing teachers to relevant research regarding the effects of non-promotion on first-grade students. His study involved examining the relationships between changes in belief about non-promotion and teacher scores on the Minnesota Teacher Attitude Inventory of 37 first-grade teachers who were introduced to the research during three one-hour in-service meetings.

Bocks found that the beliefs of some teachers about non-promotion did change subsequent to the introduction of research evidence about non-promotion, although the changes were not statistically significant.

While Bocks' study did not suggest what might be done to help a teacher change so that she would score differently on the Minnesota Teacher Attitude Inventory, he did recommend that public schools expand their in-service education program so that teachers would be practicing in accord with current research evidence. He also concluded that more is necessary than merely presenting research evidence if substantial changes are to occur in the beliefs and behavior of teachers.[147]

Summary of Literature

The following conclusions were drawn from a review of the literature associated with the study.

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[147]William M. Bocks, "The Relationship of Teacher Characteristics to Belief Changes Following Introduction of Non-Promotion Research Evidence" (unpublished Ph.D. dissertation, Michigan State University, 1966), pp. 84-96.

1. Attitudes are relatively stable, but can be changed through the application of the basic principles of learning.
2. The Minnesota Teacher Attitude Inventory, while criticized by some writers, still appears to be a valid instrument with which to assess the attitude that teachers hold toward students.
3. The Rokeach Dogmatism Scale is a worthwhile instrument to measure the degree of openness or closedness that a person possesses.
4. In-Service education programs, to be effective, must be meaningful to teachers. More successful endeavors have been those where teachers are helped in areas that have a high degree of applicability in their daily contacts with children.
5. Consultants who are well trained in group dynamics and human relations can be utilized to improve the quality of in-service activities.
6. A need exists to develop in-service programs that sensitize teachers to the needs of children. Programs that have attempted to give teachers new skills and techniques in dealing with children have met some success.

With these conclusions in mind, the research design and in-service program described in Chapter III was developed.

CHAPTER III

DESIGN OF THE STUDY

This chapter contains a description of the design of the study involving selected elementary classroom teachers from the Warren Woods Public Schools, Warren, Michigan during the 1969-70 school year.

Setting for the Study

The Warren Woods District is located in the south-east section of the City of Warren, covering an area of five square miles. It is one of six school districts that service the northern Detroit suburb of Warren.

The school district has witnessed a rapid growth pattern over the past ten years. During that period, it has changed from a rural two-school district servicing 650 students to its present suburban district status of eleven elementary schools, two junior high schools and a senior high school. During the 1969-70 school year 5,875 students were enrolled in Kindergarten through sixth grade, with a combined student population of 8,900 attending Kindergarten through twelfth grade.

The socio-economic status of the district residents ranges from upper lower class to upper middle class.

Ninety-two percent of the homes in the area were constructed within the past ten years. Present market value of homes in the area ranges from $24,000 to $45,000.

The residents are employed basically as white collar workers with some semi-professional and a few professional people residing in the school district--due in part to its proximity to General Motors Technical Center. Unskilled laborers constitute only a small segment of the work force.[1]

Subjects

The eleven elementary schools operating in 1969-70 utilized a total of 235 elementary teachers. Of that total, 211 were regular elementary classroom teachers in Kindergarten through sixth grade. The average age of the elementary teachers in the district was 26.7 years and they had an average of 3.8 years of teaching experience.

The elementary teachers were predominantly female, with only 15 of the 211 classroom teachers being male. All elementary teachers were white.

The elementary staff were recruited from 40 different colleges and universities in Michigan and ten other states.[2]

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[1] Warren Woods Public Schools, Recruiting Handbook (1969), pp. 2-7.

[2] Ibid., pp. 9-10.

Sample Selection

In December, 1969, one hundred ninety-two elementary classroom teachers of grades one through six in the Warren Woods Public Schools were administered the Minnesota Teacher Attitude Inventory at a regular staff meeting held in all the schools. Kindergarten teachers and special teachers of art, music, and special education were not included in the pretesting. The intent of these exclusions was to place some controls on the type subject selected. Only teachers meeting the same students for a full day were desired subjects for the study.

The teachers were informed by their building principals and through an explanatory letter (Appendix A) that the district had been asked to participate in a survey being conducted through Michigan State University to determine teacher opinions about students. Their cooperation was sought in answering the survey. The Minnesota Teacher Attitude Inventory (Appendix B) was attached, with the title deleted so that the instrument was not readily identifiable.

A personal data sheet was included (Appendix C) which sought information such as age, marital status, years of teaching experience, grade taught and degree issuing institution of each subject completing the survey. The rationale used in asking for the information was so that the researcher could report his findings more definitively.

Since the review of literature regarding the Minnesota Teacher Attitude Inventory suggests that the instrument is more valid when answered anonymously, teachers were instructed both verbally and in the printed directions not to include their name.

Each principal was asked to identify his staff from the data sheets. If he was unable to make positive identification, personnel records were consulted. All staff were identified.

The Minnesota Teacher Attitude Inventory was scored for each of the 192 teachers taking the Inventory. The mean score for the population was 33.4, with a standard deviation of 29.9. The distribution of pretest scores is contained in Table 1. The Minnesota Teacher Attitude Inventory purports to measure those attitudes of teachers that determine their ability to establish interpersonal relationships with students. Teachers whose scores on the Inventory were more than one-half a standard deviation below the mean of the total population were defined as having poor interpersonal relationships with learners. There were 51 teachers whose scores fell into that range and these were the subjects considered for placement in the study.

Additional limitations were also placed on selection criteria. The review of literature on the Minnesota Teacher Attitude Inventory yields strong suggestions by

TABLE 1.--Minnesota Teacher Attitude Inventory--Pretest Distribution of Scores

Score X	Frequency f	Score X	Frequency f	Score X	Frequency f	Score X	Frequency f
-72	1	+ 9	1	+37	1	+64	2
-40	2	+10	4	+38	1	+65	3
-30	2	+11	2	+39	2	+66	2
-28	1	+13	1	+40	5	+67	3
-22	1	+15	3	+41	1	+69	3
-20	2	+16	3	+42	1	+70	2
-19	2	+17	2	+43	3	+71	3
-18	2	+18	5	+44	2	+72	1
-17	1	+19	1	+46	2	+73	2
-16	1	+20	4	+47	5	+74	2
-14	1	+21	4	+48	1	+75	1
-10	1	+22	2	+49	1	+77	1
- 6	1	+24	1	+50	2	+78	1
- 3	2	+25	5	+51	1	+79	1
- 2	1	+26	3	+52	1	+81	1
- 1	2	+27	4	+53	3	+82	1
+ 0	4	+28	3	+54	5	+83	3
+ 1	1	+29	5	+55	1	+85	1
+ 3	1	+31	3	+56	2	+87	1
+ 4	1	+32	5	+58	1	+92	1
+ 5	1	+33	4	+59	1	+94	1
+ 6	2	+35	5	+62	3	+101	1
+ 7	2	+36	3	+63	2		

N = 192 $\bar{x}$ = 33.4 σ = 29.9

the authors that the instrument be restricted in its use to teachers with experience. Differentiated norms have also been developed related to the academic background of teachers. Consequently, the following teachers, though they took part in the pretest were excluded from participation in the in-service project: (1) teachers who had less than one year of teaching experience and (2) those not possessing a Michigan Elementary Provisional Certificate or a Permanent Michigan Elementary Certificate. The intent of these exclusions was to narrow the variables involved. Only teachers who had at least a full year of experience in the classroom and had similar academic and certification backgrounds were considered for placement in the project.

The subjects scoring more than one-half a standard deviation below the mean of the population were listed in rank order by scores on the Minnesota Teacher Attitude Inventory. A random table was entered and used to select tentatively 16 teachers to comprise a control group and 16 teachers to participate in the experimental group. Extra names were drawn from the random table in the event a subject refused to participate in the project.

The decision to limit the study to 32 subjects was arrived at arbitrarily by the writer. It was based on the availability of personnel to service the project and in light of budget considerations, since the project was to be conducted completely on a released time basis.

Since the study's intent was to measure the degree of dogmatism held by the subjects and to analyze changes in attitudes related to dogmatism, all elementary staff were asked to complete the Rokeach Dogmatism Scale - Form E. In February, 1970, the writer asked elementary teachers in the district to complete the Scale as part of a research project he was conducting. Each teacher received a letter (Appendix D) and an unidentified copy of the Dogmatism Scale to complete and return (Appendix E). Teachers who had been tentatively placed in the experimental and control groups were issued coded answer sheets so that positive identification could be made easily. All teachers in the two groups returned completed Dogmatism Scales.

Other teachers were identified through the information gained from the data requested from them which appeared on the last page of the Dogmatism Scale. A total of 180 teachers were identified and matched with their respective scores on the Minnesota Teacher Attitude Inventory. There was a loss of 12 subjects due to incomplete data being given or because of personnel turnover.

The distribution of scores on the Rokeach Dogmatism Scale is included in Table 2. Possible scores range from 40 to 280.

Teachers selected for the experimental group were notified by the project director by letter that they had

TABLE 2.--Rokeach Dogmatism Scale Scores--Distribution for Population

Score	Frequency	Score	Frequency	Score	Frequency
52	2	106	4	140	8
56	1	108	3	142	4
66	5	110	7	144	2
68	2	112	10	146	4
72	3	114	9	148	3
78	3	116	6	150	2
80	1	118	1	152	5
86	1	120	6	154	1
88	4	122	2	156	2
90	3	124	2	158	2
92	1	126	10	162	1
94	5	128	4	166	2
96	4	130	10	168	1
98	2	132	4	178	1
100	11	134	2	180	3
102	4	136	1	182	1
104	3	138	3		

been randomly chosen to participate in a series of in-service seminars and related activities to be conducted by the Special Services division of the district (Appendix F). The expressed intent of the seminars was to gather teacher reaction to some of the newer techniques and procedures being advocated for use in the elementary classroom. No mention was made of the Minnesota Teacher Attitude Inventory nor the Rokeach Dogmatism Scale.

In addition, subjects were informed that all sessions would be held on released time and that their prime responsibility would be to use and react to the materials and ideas presented, in an effort to help

formulate decisions regarding the usefulness of the ideas and whether or not all staff ought to be exposed to the seminars as part of the district's regular in-service program.

All of the original 16 staff chosen for the experimental group agreed to participate.

Format of the Project

The in-service program was held during the period from early March, 1970, through early June, 1970, and was divided into three phases: Phase I, Seminars; Phase II, Small Group Work; and Phase III, Individual Visitations and Consultations.

A brief description of the three phases which constituted the format for the In-Service Experience of the 16 members of the experimental group is included. The specific content and experiences for these phases are described later in this chapter.

Phase I--Seminar Sessions

Seminar Sessions included specific topics selected to sensitize participants to the needs of learners and to give the subjects tools with which to increase their skills in developing interpersonal relationships with students.

Seminar Sessions were theoretical and emphasized research, literature, or positions relating to the needs

of students or approaches suggested for use in the classroom. Phase I also included discussion of the information through group interaction guided by the presentor.

All of the subjects in the experimental group attended the seven sessions held approximately every two weeks during the duration of the project. The meetings were conducted on released time and were two hours in length.

Phase II--Small Groups

Small groups were designed to stimulate practical implementation of the ideas presented in the seminars and to facilitate personal involvement in the materials.

Since the expressed purpose of the in-service project was to have the subjects use and react to the various ideas and materials presented, the small groups were designed to give participants specific aid in putting the ideas and materials to use in their classrooms.

Four small work groups were established, each consisting of four project participants and a resource person whose function was to stimulate discussion and participation. These people were designated as consultants. The consultants were all non-supervisory members of the Warren Woods Public Schools who had previous training in group dynamics. They were employed as social workers or diagnosticians. They received training in specific seminar content in meetings organized by the researcher.

The consultant's function was to clarify material and ideas and to give participants specific aid in utilizing the materials and ideas presented in seminars.

The small groups met once after each of the seminar sessions. Each small group meeting was an hour in length.

Each consultant was assigned to work with each small group for a similar period of time. This rotation was planned to insure exposure of each participant to each consultant so that possible differences in post-test scores could not be attributed to consultant assignment.

Phase III--Individual Visitations and Consultations

Each subject received regular visits from, and help follow-up conferences with, their assigned small group consultant during the course of the project.

The consultant joined the teacher in the classroom to help implement ideas presented at the seminar and small group sessions, or simply to observe the class and discuss it with the teacher.

Two classroom visits of 30 to 45 minutes in length were scheduled with each subject between each set of seminar sessions. Ten such individual visits occurred with each participant. A conference following each visit was held between consultant and participant. They ran approximately 30 minutes in length.

Participants were involved directly in seminars, small group work, visitations, and consultations for a minimum of 31 hours during the duration of the in-service project.

Post Test

Several days after the final seminar session was completed all elementary classroom teachers in grades one through six again were administered the Minnesota Teacher Attitude Inventory at a regular staff meeting. The same procedures used in the pretest administration were followed. In addition, teachers were informed that the researcher was conducting a follow-up study related to the opinions of teachers about students and that their participation would be appreciated.

Only the data for experimental and control group subjects were scored and analyzed.

Other Evaluations

At the conclusion of the in-service project, all participants in the experimental group were asked to respond to an evaluation instrument covering all segments of the in-service experience (Appendix G).

Research Hypotheses

The following research hypotheses, stated in null terms, were investigated in this study. The level of confidence was set at .05.

Null Hypothesis 1: There is no significant relationship between teachers' scores on the Rokeach Dogmatism Scale and the Minnesota Teacher Attitude Inventory.

Null Hypothesis 2: There will be no significant relationship between the pre and post-test scores on the Minnesota Teacher Attitude Inventory of subjects in the experimental and control groups.

Null Hypothesis 3: There will be no significant relationship between the scores of subjects on the Minnesota Teacher Attitude Inventory post test and their scores on the Rokeach Dogmatism Scale - Form E.

Null Hypothesis 4: There will be no significant relationship between the post-test scores of subjects on the Minnesota Teacher Attitude Inventory and their number of years of teaching experience.

Null Hypothesis 5: There will be no significant relationship between the post-test scores of subjects on the Minnesota Teacher Attitude Inventory and the grade level taught.

Null Hypothesis 6: There will be no significant differences in the post-test scores on the Minnesota Teacher Attitude Inventory of teachers in the experimental and control groups.

Statistical Treatment Used

The data were analyzed using two different statistical procedures.

Hypothesis 1 was analyzed through the use of correlation, in an effort to determine whether teacher attitudes on the Minnesota Teacher Attitude Inventory can be predicted from scores on the Rokeach Dogmatism Scale - Form E.

One hundred ninety-two teachers were administered both the Minnesota Teacher Attitude Inventory and the

Rokeach Dogmatism Scale - Form E. All teachers' Minnesota Teacher Attitude Inventory scores were identified. Only 180 of the teachers taking the Rokeach Dogmatism Scale - Form E could be identified and matched with their corresponding Minnesota Teacher Attitude Inventory scores. Consequently, 180 computer cards were prepared, each containing an identification number, the subject's Rokeach Dogmatism Scale scores and his Minnesota Teacher Attitude Inventory score. The BASTAT computer program was used to determine whether a correlation existed between scores on the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E.

Hypotheses 2 through 6 were analyzed through the use of a four-way analysis of co-variance.

The dependent variable was the subject's post-test score on the Minnesota Teacher Attitude Inventory. Four co-variants were identified. They were: (1) the pretest score on the Minnesota Teacher Attitude Inventory; (2) the Rokeach Dogmatism Scale score; (3) the years of teaching experience; and (4) the grade level taught.

The design had one factor with two levels. The in-service training was the factor identified in the study. The two levels were composed of: (1) the experimental group and (2) the control group.

Information on each of the 32 subjects (16 in the control group and 16 in the experimental group) was placed

on computer cards. Each card contained the following information: (1) subject's identification number; (2) whether he was a member of the experimental or control group; (3) post-test score on the Minnesota Teacher Attitude Inventory; (4) pretest score on the Minnesota Teacher Attitude Inventory; (5) score on the Rokeach Dogmatism Scale; (6) years of teaching experience; and (7) grade level taught.

The Finn computer program was utilized to aid in the computations dealing with the data. An analysis of co-variance, which is a regression analysis, was used.

Additional Analysis

The evaluation of all aspects of the in-service project on the part of the 16 experimental participants was also examined, but in a non-statistical fashion. The results of this information are also included in an appropriate section of Chapter IV. The intent of its inclusion was to attempt to identify aspects of the in-service program which teachers viewed to be more valuable to them. In addition, teacher ratings of the various aspects of the in-service experience is viewed in relationship to changes in teacher attitude and to the degree of dogmatism held by the experimental subjects.

The In-Service Experience

The in-service experience was designed to actively involve teachers in tasks and experiences which would sensitize them to the needs of their students.

One of the expressed purposes of the project was to have teachers try ideas and techniques in their classrooms even though they might not be in agreement with them, in an effort to evaluate the effectiveness of the techniques. Every effort was made to make the tasks non-threatening by asking participants initially to evaluate techniques and not their own practices.

Consultants were utilized as supportive, positive resource people. The task fell to them to continually focus the participants' attention on the students in their classrooms.

The project assumed that involvement was a requisite for behavior change and so teachers were asked to become actively involved in each phase of the project.

The activities of the project centered first on students and their mental health needs. The importance of self esteem and involvement were stressed. Only in the latter portion of the project were teachers literally forced to look at their own behavior when the topic of interaction analysis was introduced.

The objectives of the project were pursued through a combination of three types of experiences listed earlier,

that is, Seminar Sessions, Small Group Work, and Individual Classroom Visitations and Consultation.

The objectives and activities of the in-service experience are stated here in the sequence in which they occurred.

Seminar Session I

The following objectives were established for session one.

A. To introduce the participants to each other.

B. To explain the nature and scope of the sessions and activities.

C. To outline the responsibility that the participants would share.

D. To introduce the group to William Glasser's philosophy of the importance of success experiences and positive identity for students in school.

The following activities and materials were utilized to achieve the desired goals.

A. To introduce the participants to each other:

(1) Participants received a roster of everyone involved in the project, listing their names, position, and school assignment.

(2) After a brief welcome by the project director, the group was paired off in a random fashion for a 15-20 minute period to get acquainted in an interview session.

(3) Participants were then responsible to introduce each other to the group, stressing personal data not related to school per se that they gained from the interview. Both teachers and consultants participated in this activity.

B. To explain the nature and scope of the sessions and activities:

(1) Rationale for the in-service project was explained. It was stated that its purpose was to explore the effectiveness of new techniques to be used in the classroom. It was the intent also to determine whether the materials and ideas presented had enough value to merit the district ultimately exposing more teachers to them through its in-service program. It was stressed that the material in the project would focus on ways of dealing with student behavior as opposed to subject area content.

(2) The types of experiences that the participants would be involved in were outlined and briefly explained (i.e., classroom meetings, interaction analysis).

(3) The structure of the project was outlined, with seminars, small group work, and visitations and consultations briefly explained.

C. To outline the responsibility that the participants would share:

(1) Participants were informed that they were obliged to attend all sessions and that they would be held on a released time basis.

(2) Teachers were instructed that specific tasks to be performed in the classroom would be asked of them (classroom meetings, analysis of behavior, self esteem instruments, analysis of teaching style).

(3) Participants were informed that they were not expected to embrace the various philosophies or techniques that were presented, but that accompanying tasks had to be completed in order that they be able to offer an honest evaluation of its effectiveness and use.

(4) Teachers were advised that the consultants would visit their classrooms on a prearranged plan to help them in fulfilling the performance of the tasks.

(5) Participants were informed that they would be expected to evaluate all aspects of the session verbally and/or in writing.

(6) Participants were assured that their candid observations were sought and that information would be held in confidence.

D. To introduce the group to William Glasser's philosophy of the importance of success experiences for students in school:

(1) A brief background on Dr. William Glasser was given by the project director regarding Glasser's professional accomplishments and his work with delinquent students. Material was gleaned from his two books, Reality Therapy[3] and Schools Without Failure.[4]

(2) A tape of a talk given by Glasser at the National Department of Elementary School Principals Convention in Las Vegas, Nevada was played.

(3) A discussion regarding the merits of Glasser's outlook was led by the project director.

(4) Handouts of two book reviews on the book Schools Without Failure were distributed.

Small Group Work I

The objectives of Small Group Work Session I paralleled those of Seminar Session I. The following activities and materials were used.

(1) Small group participants were introduced to each other by consultant.

(2) Consultants and group members worked out arrangements for consultants to visit the

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[3]William Glasser, Reality Therapy (New York: Harper and Row, 1965).

[4]William Glasser, Schools Without Failure (New York: Harper and Row, 1969).

classroom in order to become better acquainted with participants and class.

(3) Discussion centered on Glasser's Seven Steps to Involvement which are basic to his idea of humanizing education. A mimeographed sheet containing the seven steps was distributed and discussed.

(4) Positive and negative reactions to Glasser were encouraged.

(5) Teachers were asked to think over whether or not Glasser's philosophy at first glance was realistic in terms of their own classrooms.

Individual Visitations and Consultations I

No formal visitations or consultations took place after the initial sessions. The intent of this strategy was so that participants would not feel overwhelmed or defensive since the seminar and small group sessions had been only exploratory in nature. Each consultant did, however, drop in to each of the four teachers assigned them in an effort to build rapport and acquaint themselves with the teacher in the classroom and with the needs of the students.

Informal chats after the visits centered around the consultant seeking information about students and setting the stage for further activities in the project.

Seminar Session II

The objectives of Session II were to:

A. Review Glasser's philosophy.

B. Introduce the importance of self esteem as espoused by Coopersmith.

C. Examine the Self Esteem Instrument and the related Behavior Scale as tools for use in the classroom.

The following materials and activities were used in this session to achieve the desired objectives.

A. Review Glasser's philosophy:

(1) Consultants were used as reporters from their small groups and related the feelings of their groups toward Glasser. They often turned to participants to make relevant points.

(2) Glasser's basic philosophy was reviewed and his criticism of schools was outlined again. Discussion centered on whether or not Glasser provided teachers with a new way of looking at students. Since his basic premise revolves around the importance of success and positive identity, the area of self esteem was introduced.

B. Introduce the importance of self esteem as espoused by Coopersmith:

(1) The basic concepts of self esteem as put forth by Coopersmith in his book Antecedents of Self Esteem[5] were presented to the group by one of the consultants.

C. Examine the Self Esteem Instrument and the related Behavior Scale as tools for use in the classroom:

(1) The Self Esteem Inventory and the Behavior Scale, as measures of estimating self esteem and its relationship to behavior, were introduced.

(a) Its background and structure were explained.

(b) Copies were distributed to each participant.

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[5]Stanley Coopersmith, Antecedents of Self Esteem (San Francisco: W. H. Freeman and Co., 1967).

Small Group Work II

The focus of Small Group Work II was on the Self Esteem and Behavior Scale instruments and their possible use in the classroom. The following goals were established:

A. To determine whether the administration of the instrument has any benefit for teachers.

B. To familiarize teachers with the mechanics of administering the test and of the feeling involved in taking it.

C. To help teachers see that academic performance in school is not always indicative of a student's feelings about himself.

D. To help teachers examine the relationship of self esteem to behavior.

The following activities and materials were utilized:

(1) The Self Esteem Inventory was distributed to each teacher and they were asked to complete it.

(2) Self-scoring keys were distributed. Teachers were asked to check their own and not to reveal scores, unless they cared to.

(3) They were asked to discuss any feelings they had while they took the exam and to speculate on children's reactions to the test.

(4) Teachers were distributed enough copies of the test and scoring key for their classes. Upper grades 4-6 were given the long form which is self reporting, while grades 1-3 were distributed the short form which is read to the students by the teacher. Specific directions on how to administer it to children as well as approaches to use in introducing it were discussed.

(5) The following teacher tasks were identified.

(a) Prior to giving the Self Esteem Inventory, they were to jot down the names of three or four students whom they thought would score very high on it and three or four who would score very low and why. This information was for teacher use only.

(b) Administer the test to students.

(c) Score the test.

(d) After scoring, compare score to prediction list. Teachers were asked to determine whether they found any surprises. Why? Did the exercise give them any insight into the children in their classes.

(e) Each teacher was asked to complete the Behavior Scale on the two highest and two lowest children on the Inventory.

Individual Visitations and Consultations II

The individual visitations and consultations continued to focus on self esteem. Consultants visited classes to help teachers administer the Inventory in some instances and in others simply to observe. Consultations keyed in on relating the results of the Behavior Scale on the two highest and two lowest students to the apparent needs of these students and how they were being dealt with in the classroom. Discussions centered on the varying needs of students and how teachers could aid in positive identification.

Seminar Session III

The objectives of Seminar Session III were to:

A. Have teachers report their findings on the Self Esteem Inventory and Behavior Scale task and to discuss their use in the classroom.

B. Introduce Glasser's Classroom Meeting Techniques as a way of implementing Glasser's philosophy of involvement.

The following materials and activities were used to achieve the desired goals:

A. Have teachers report their findings on the Self Esteem Inventory and Behavior Scale task and to discuss their use in the classroom.

(1) Individuals reported their experiences in giving the Self Esteem Inventory and using the Behavior Scale.

(2) Discussion on discrepancies between teacher estimates of self esteem and actual scores took place. Possible reasons for discrepancies were given and discussed.

(3) Responses were charted regarding the teacher's evaluation of their value.

B. Introduce Glasser's Classroom Meeting Techniques as a way of implementing Galsser's philosophy of involvement.

(1) The concept of Classroom Meetings was presented to the group by one of the consultants.

(2) Mimeographed excerpts of Chapters 10, 11, and 12 of Glasser's Schools Without Failure[6] containing his basic ideas were distributed and highlighted.

(3) Differences between non-judgemental classroom meetings and more traditional class discussions were pointed out.

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[6]Glasser, Schools Without Failure, pp. 122-185.

(4) Teachers were given the task of conducting at least two classroom meetings before the next seminar session.

Small Group Work III

The objectives of Small Group Work Session III were to:

A. Review the concept of Classroom Meetings.

B. Give teachers specific ideas on how to approach the concept with their classes.

C. Give teachers specific aid in how to conduct the classroom meeting.

The following materials and activities were utilized to help achieve the goals set up for Small Group Work Session III:

A. Review the concept of Classroom Meetings.

(1) Three types of classroom meetings were reviewed, viz., Social Problem Solving meetings, Open-Ended meetings and Educational Diagnostic meetings.

(2) The concept of the meetings being non-judgemental on the part of teachers was stressed and explained.

B. Give teachers specific ideas on how to approach the concept with their classes.

(1) Discussion took place on how to approach the idea with students. Participants offered ideas as well as consultants.

(2) Some specific ideas for meetings to be used as "starters" were suggested by the consultants. They closely paralleled those suggested by Clark Moustakas in his book The Authentic Teacher.[7] Excerpts

[7]Clark Moustakas, The Authentic Teacher (Cambridge, Massachusetts: Howard A. Doyle Publishing Co., 1967), pp. 110-201.

from Chapters 5 and 6, "Mental Health Approaches in the Early Elementary Grades" and "Interpersonal Relationships in the Later Elementary Grades," were distributed for ideas and discussed.

C. Give teachers specific aid in how to conduct the classroom meeting.

(1) Suggestions were made as to length, frequency, and topics for classroom meetings.

(2) Circular seating arrangement, without desks, was suggested to give idea of involvement.

(3) Specific group discussion techniques were offered.

(a) Ideas on how to get meetings started were offered.

(b) Suggestions of how to keep meetings going were made.

(c) Ways of involving many students were introduced.

(d) Methods of closing meetings and summarizing ideas were given.

Individual Visitations and Consultations III

Each consultant visited the teachers assigned to their small group at least two times between Seminar Session III and Seminar Session IV. The objectives of these visits were to:

A. Aid teachers in implementing classroom meetings.

B. Helping teachers analyze behavior of students.

C. Planning programs for students based on the results of classroom meetings.

These objectives were undertaken by using the following activities and materials:

(1) Consultants visited classrooms and helped teachers start meetings if the teacher requested them. In some instances, they actually conducted a meeting for a teacher who felt uncomfortable or unsure. In other instances, they were strictly observers.

(2) Consultants discussed apparent mental health needs of students as a result of behavior of students in meetings and their relationship with fellow students and teachers.

(3) Consultants and teachers discussed ways of dealing differently with some students identified as having possible problems as brought out by the meetings.

(4) Consultants and teachers discussed possible changes in procedures and techniques used in the classroom based on classroom meeting discussion.

Seminar Session IV

The objectives of this seminar session were to:

A. Give teachers further insights into use of classroom meetings.

B. Tie together the classroom meetings and self esteem information.

The following materials and activities were used to achieve the desired goals:

A. Give teachers further insights into use of classroom meetings.

(1) Video tapes of two classroom meetings were shown to the groups. One tape dealt with a fifth grade class discussion on the use of drugs, while the other dealt with a meeting with first graders on problems they had in school.

(2) Discussion was led by a classroom teacher who had been an elementary counselor and who had conducted the meetings.

(a) Various group discussion techniques were explored.

(b) The teachers' personal experiences with classroom meetings were discussed.

B. Tie together the classroom meetings and self esteem information.

(1) Discussion relating self esteem and classroom meetings was held.

(2) Teachers were asked to conduct at least two more meetings, paying particular attention to the behavior and involvement of those two students whom they had completed Self Esteem Behavior Scales on.

Small Group Work IV

The focus for this small group session was on the problems teachers faced in conducting classroom meetings. Consultants acted as stimulators in order that the group would share successes and experiences that the teachers viewed as less than successful.

Ways of incorporating the classroom meeting as a regular facet of the classroom routine were discussed.

Individual Visitations and Consultations IV

Each consultant visited each teacher assigned to his group twice between Seminar Sessions IV and V. Consultations took place afterward.

The basic emphasis on these visits and consultations was on keying in on children who had scored low on the Self Esteem Inventory. Teachers and consultants analyzed behavior in the meetings and compared it to the Behavior Scale. Specific techniques for dealing with the children were suggested by the consultants.

Seminar Session V

The objectives of the fifth seminar session were to:

A. Introduce participants to the history and development of interaction analysis.

B. Explore rationale for using interaction analysis in the classroom.

C. Begin to train teachers to code their own behavior in the classroom.

The following materials and activities were employed to seek the stated objectives:

A. Introduce participants to the history and development of interaction analysis.

A review of the history and development of interaction analysis was given by a resource person who had used the material extensively in a recent doctoral study.

B. Explore rationale for using interaction analysis in the classroom.

Research studies by Withall,[8] Hughes,[9] Perkins,[10] and Amidon and Flanders[11] were presented supporting the contention that the verbal pattern of teachers has an effect on the classroom climate.

C. Begin to train teachers to code their own behavior in the classroom.

(1) The ten categories of Flanders' Interaction Analysis were presented and explained.

(2) Beginning tapes were played and coded by the participants.

(3) Comparisons--discussion of differences in coding took place.

(4) Teachers were given the task of taping themselves for a ten-minute period during some phase of their instructional program. They were asked to try to code themselves for the purpose of practicing the coding procedure.

Small Group Work V

The purpose of Small Group Work Session V was to continue the exploration of interaction analysis.

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[8]John Withall, "The Development of a Technique for the Measurement of Social-Emotional Climate in Classrooms," Journal of Experimental Education, XVII (March, 1949), 347-361.

[9]Marie M. Hughes, "What Is Teaching? One Viewpoint," Educational Leadership, XIX (January, 1962), 252-259.

[10]Hugh V. Perkins, "Climate Influences Group Learning," Journal of Educational Research, XLV (October, 1951), 115-119.

[11]Edmund J. Amidon and Ned Flanders, "The Effects of Direct and Indirect Teacher Influence or Dependent-Prone Students Learning Geometry," Journal of Educational Psychology, LII (May, 1961), 286-291.

The following materials and techniques were used:

(1) A second training tape was utilized to teach coding skills further.

(2) Suggestions were given for teacher taping sessions.

Individual Visitations and Consultations V

Two classroom visitations were made by each consultant to his small-group members between Seminar Sessions V and VI.

Aid was given in taping and helping to code the verbal responses of teachers if asked. Consultants taught short lessons, taped, and coded them in an effort to provide teachers with non-threatening practice sessions.

Discussion of methods of working with individual children and with the total class was continued. Classroom meetings were attended by consultants. The concept of involving students was stressed.

Seminar Session VI

The objectives of this session were to:

A. Continue teaching the coding method used by Flanders.

B. Discuss the value of its use in classrooms.

C. Assign a task using interaction analysis in the classroom.

The following activities and materials were used:

A. Continue teaching the coding method used by Flanders.

(1) Additional training tapes were used by the resource person to teach the coding procedure.

(2) Explanation and use of the matrix to analyze verbal patterns were given.

B. Discuss the value of its use in classrooms.

(1) Discussion took place relative to possible uses of interaction analysis in the classroom.

C. Assign a task to use interaction analysis in the classroom.

(1) Each teacher was asked to prepare a 20 minute lesson with specific objectives. They were asked to tape the session, code it, and analyze the tape in terms of the objectives stated.

Small Group Work VI

Small group work sessions centered on discussing the limited experience that teachers had with interaction analysis. Additional work was done on ways of interpreting the matrix.

Aid was given in writing a lesson and objectives.

Individual Visitations and Consultations VI

Each teacher was visited on two occasions by their assigned consultant between Seminar Sessions VI and VII.

Emphasis was placed on aiding teachers in the coding and interpreting of their lessons. Consultants attempted to underscore the importance of verbal behavior on the total climate in the classroom and on the impact

it had on individual children. The teachers' reactions to problem-children responses were highlighted.

Seminar Session VII

The objectives of this session were threefold:

A. To explore the value of interaction analysis as seen by the participants.

B. To discuss any aspects of the in-service project that the participants wished to bring up.

C. To summarize the purpose and the activities of the project.

The following materials and activities were used:

A. To explore the value of interaction analysis as seen by the participants.

(1) Two participants wished to share a tape of a classroom meeting which each had conducted. Participants were asked to code it.

(2) The techniques used and possible alternative courses of action were discussed.

B. To discuss any aspects of the in-service project that the participants wished to bring up.

(1) Participants wished to discuss how, when, and why self esteem inventories, classroom meetings and interaction analysis could be used in classrooms on a regular basis.

(2) Questions were raised about contingency contracting with students relative to behavior. Subsequent handouts on the subject were promised. One consultant compared the contingency-contracting approach to Glasser's philosophy, noting the many similarities.

C. To summarize the purpose and the activities of the project.

(1) The project director summarized the purposes and activities of in-service programs as stated in Session I.

(2) Each participant was thanked for their cooperation during the course of the project.

Small Group Work VII

The small groups did not meet formally. Instead each small group took the time to fill out a detailed evaluation form (Appendix G) which dealt with all aspects of the project. They were informed that this was the final phase of the program.

Summary

This chapter has attempted to describe the setting and selection techniques used in this study. The null hypotheses to be tested and reported in Chapter IV were also stated, along with the description of the statistical treatment that will be used with the data.

Finally, a synopsis of the in-service experience was presented in an attempt to describe the objectives, content, and activities that took place during the actual in-service program.

Chapter IV will contain the analysis of the data gathered from this study.

CHAPTER IV

ANALYSIS OF THE DATA

The basic design of this study called for two major analyses: (1) to determine whether any significant relationship existed between teacher pretest scores on the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E and (2) to compare the post-test Minnesota Teacher Attitude Inventory scores of teachers in a control group with those assigned to an experimental group to determine the effects of a concentrated in-service education program to which the experimental group was exposed. This chapter presents the statistical analysis of the data in sequence according to the null hypotheses stated in Chapter III. In addition, the chapter includes a non-statistical analysis of data from an evaluative instrument used with teachers in the experimental group who participated in the in-service program.

Statistical Analysis of Data

Null Hypothesis 1: There is no significant relationship between teachers' scores on the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E.

To determine whether any significant relationships existed between teachers' scores on the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E, the scores of 180 teachers in Warren Woods Public School District were analyzed. Initially, 192 teachers answered the Minnesota Teacher Attitude Inventory. Subsequently, 180 of those teachers were matched with their scores on the Rokeach Dogmatism Scale - Form E. There was a loss of 12 scores due to personnel turnover and the inability of the writer to positively identify some subjects due to incomplete information on their responses to the personal data requested. Dogmatism scores for corresponding Minnesota Teacher Attitude Inventory scores of 22, 25, 25, 28, 29, 29, 31, 32, 32, 33, 54, and 70 were not matched and thus they were dropped from the study. Since the mean of the twelve tests dropped was 32.5 and the mean of the total population of 192 subjects was 33.4, their exclusion would not appear to bias the results of the study.

The BASTAT computer program, available through Michigan State University, was used to compute a simple correlation between teacher scores on the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E.

Table 3 shows the range of scores for both the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E. It also includes the mean and standard deviations for the two tests when administered to the subjects in this study.

TABLE 3.--Range, Mean, and Standard Deviations of Pretest Minnesota Teacher Attitude Inventory and Rokeach Dogmatism Scale - Form E for 180 Subjects

Test	Minimum Value	Maximum Value	Mean	Standard Deviation
Minnesota Teacher Attitude Inventory	-72	+101	33.37	30.79
Rokeach Dogmatism Scale - Form E	+52	+182	117.88	26.55

Computations yielded a correlation of -.60 between the scores on the two tests.

Discussion

The correlation of -.60 which was obtained in this analysis of 180 matched scores of subjects taking both the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E is considered a significant one. Therefore, the null hypothesis as stated was rejected and the alternative hypothesis was accepted which specifies that a significant relationship does exist between the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E. Since it is a negative correlation, it indicates that as test scores on the Minnesota Teacher Attitude Inventory increase, scores on the Rokeach Dogmatism Scale - Form E decrease. Another way of stating the relationship is that as scores on the Rokeach Dogmatism Scale - Form E increase, scores on the Minnesota Teacher

Attitude Inventory will decrease. The relationship is an inverse one. It should be noted, however, that a high score on the Minnesota Teacher Attitude Inventory purports to identify subjects with positive attitudes of students. Conversely, high scores on the Rokeach Dogmatism Scale - Form E indicate closed-minded individuals. Consequently, while the relationship is an inverse one, it does signify that persons with better attitudes toward children tend to be more open minded than those with poorer attitudes.

Remaining Null Hypotheses

The remaining null hypotheses investigated in this study were:

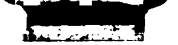
> Null Hypothesis 2: There will be no significant relationship between the pre and post-test scores on the Minnesota Teacher Attitude Inventory of the subjects in this study.
>
> Null Hypothesis 3: There will be no significant relationship between the scores of subjects on the Minnesota Teacher Attitude Inventory post test and their scores on the Rokeach Dogmatism Scale - Form E.
>
> Null Hypothesis 4: There will be no significant relationship between the post-test scores of subjects on the Minnesota Teacher Attitude Inventory and their number of years of teaching experience.
>
> Null Hypothesis 5: There will be no significant relationship between the post-test scores of subjects on the Minnesota Teacher Attitude Inventory and grade level taught.
>
> Null Hypothesis 6: There will be no significant differences in the post-test scores on the Minnesota Teacher Attitude Inventory between subjects in the experimental and control groups.

The FINN computer program was utilized to perform an analysis of covariance on the data gathered. Information on the 32 subjects of this study (16 in the experimental group and 16 in the control group) was put on computer cards for the statistical analysis.

Analysis of covariance was considered the most appropriate statistical technique to utilize in this study. Since a number of variables were under study, this approach was used because the covariance design increases the precision of an experiment and equates group means. The covariance technique eliminates the variability due to differences between groups on the various measures which are taken prior to an experiment, thus making a more precise test of the significance of the differences between the groups possible. A multiple regression analysis is used in the covariance technique.

Overall Regression Analysis

When all four covariates of (1) pretest, (2) dogmatism, (3) experience, and (4) grade taught were considered together, a relationship significant at the .01 level was found to exist between the combined covariates and the post-test scores of the experimental and control group subjects on the Minnesota Teacher Attitude Inventory. The following information relates the specific contribution of each of the independent variables in this study.



Null Hypothesis 2

Null Hypothesis 2: There will be no significant relationship between the pre and post-test scores on the Minnesota Teacher Attitude Inventory of the subjects in the experimental and control groups.

When the covariate "pretest" was added to the regression equation, a relationship greater than the .01 level was found to exist between the pre and post-test scores of subjects on the Minnesota Teacher Attitude Inventory.

Discussion

The relationship between the Minnesota Teacher Attitude Inventory pre and post-test scores was found to be significant at the .01 level. Therefore, the null hypothesis was rejected and the following alternative hypothesis was accepted:

> Knowledge of a subject's pretest score on the Minnesota Teacher Attitude Inventory will add significantly to the predictability of his post-test score.

Null Hypothesis 3

Null Hypothesis 3: There will be no significant relationship between the scores of subjects on the Minnesota Teacher Attitude Inventory post-test and their scores on the Rokeach Dogmatism Scale - Form E.

When the covariate "dogmatism" was considered in the regression equation, a relationship greater than the .05 level of significance was found to exist between the post-test scores on the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E.

Discussion

The relationship between the dogmatism score and post-test score of subjects in both groups was significant at the .05 level. Consequently, the null hypothesis was rejected and the following alternative accepted:

> Knowledge of a subject's dogmatism score will add significantly to the predictability of a subject's post-test score on the Minnesota Teacher Attitude Inventory.

Additional analysis of the dogmatism factor was undertaken. An examination of the sample correlation matrix within cell comparisons shows a correlation of -.35 for the factor of dogmatism and post-test scores. This suggests a tendency that the more closed minded the individual, the lower he will score on the Minnesota Teacher Attitude Inventory post-test. Conversely, the more open minded the subject, the higher his score on the Minnesota Teacher Attitude Inventory post-test will be.

To further explore this point, subjects in the experimental and control groups were classified according to their dogmatism score. The classification was arrived at in the following fashion: The range of dogmatism scores in the two groups was from 52 to 180. The distribution of scores was divided into three categories: (1) More Open subjects (defined as those with scores from 52 to 112); (2) Middle Range subjects (defined as those with scores from 114-146); and (3) More Closed subjects (defined as those with scores from 148 to 180).

The differences in pre and post-test scores of subjects in both the experimental and control groups on the Minnesota Teacher Attitude Inventory were then examined in relationship to the degree of dogmatism each held. Table 4 contains this information.

TABLE 4.--Dogmatism Scores and Corresponding Differences Between Pre and Post-test Minnesota Teacher Attitude Inventory Scores for Experimental and Control Subjects Grouped in Three Classifications

Experimental Group			Control Group		
More Open	Middle	More Closed	More Open	Middle	More Closed
52-118	120-146	148-180	52-118	120-146	148-180
52 +50	120 +72	148 + 5	12 - 9	126 -31	156 -11
100 +94	126 +27	150 +16	96 + 7	138 +22	168 +14
102 +43	128 +39	152 + 5	100 - 2	142 -21	180 -43
	128 +86	152 +19	100 +16	146 +13	
	146 -12	154 +48	104 -15		
	146 +61	156 +19	106 +19		
		158 +12	106 -20		
			110 - 6		
			112 - 3		
n = 3	n = 6	n = 7	n = 9	n = 4	n = 3
$\bar{x}$ = 62.3	$\bar{x}$ = 45.6	$\bar{x}$ = 17.7	$\bar{x}$ = -1.3	$\bar{x}$ = 4.2	$\bar{x}$ = -6.0

Examination of this data shows that the More Open experimental subjects showed the greatest mean score gains of all classifications. Middle Range experimental subjects scored the second highest gains, while the More Closed

experimental subjects scored the lowest of all the experimental classifications, yet higher than any of the control group classifications. In examining the means of the control classification, which all showed negative differences, the More Open control classification showed the least loss, while the More Closed control classification scored the greatest mean loss. It appears that the degree of dogmatism relates significantly to the post-test scores of subjects on the Minnesota Teacher Attitude Inventory whether they are members of the experimental or control group.

Null Hypothesis 4

Null Hypothesis 4: There will be no significant relationship between the post-test scores of subjects on the Minnesota Teacher Attitude Inventory and their number of years of teaching experience.

The average length of experience for teachers in the experimental group was 5.8 years, while control group subjects averaged 7.3 years.

When the covariate "experience" was submitted to the regression analysis, a relationship significant at the .77 level was found to exist between years of experience and post-test scores.

Discussion

The relationship between years of experience and post-test scores was not significant at the .05 level.

It is not possible to reject the null hypothesis. Consequently, it cannot be stated that knowledge of the years of teaching experience will add significantly to the predictability of post-test scores on the Minnesota Teacher Attitude Inventory.

Null Hypothesis 5

> Null Hypothesis 5: There will be no significant relationship between the post-test scores of subjects on the Minnesota Teacher Attitude Inventory and the grade level taught.

The subjects in the experimental group taught the following grades: grade one, 3; grade two, 2; grade three, 5; grade four, 3; grade five, 1; grade six, 2. Control group subjects taught the following grades: grade one, 2; grade two, 4; grade three, 3; grade four, 3; grade five, 2; grade six, 2.

When the covariate "grade level" was subjected to the regression equation, a relationship of .84 was found to exist between grade level and post-test scores on the Minnesota Teacher Attitude Inventory.

Discussion

The relationship found to exist between grade level taught and post-test score on the Minnesota Teacher Attitude Inventory was not significant at the .05 level. Consequently, the null hypothesis cannot be rejected in favor of its alternative. Therefore, it cannot be stated

that knowledge of the subject's grade level will add significantly to the predictability of the subject's post-test score on the Minnesota Teacher Attitude Inventory.

Null Hypothesis 6

> Null Hypothesis 6: There will be no significant differences in the post-test scores on the Minnesota Teacher Attitude Inventory between teachers in the experimental and control groups.

The FINN computer program used a univariate analysis of variance to determine whether any differences existed in post-test scores of subjects in the experimental and control groups. A significance at greater than the .01 level was found to exist between post-test scores of subjects in the two groups. This analysis took into account the effects of the four covarients and has statistically eliminated all differences due to the covariates.

Discussion

Since a significant difference at the .01 level of confidence was found to exist between the experimental and control groups, the null hypothesis was rejected and its alternative was accepted. Specifically,

> Experimental subjects will make significantly greater gains after exposure to an experimental treatment than will control group subjects who receive no treatment.

To investigate these findings further, a confidence interval was constructed to determine the effect that can be attributed to the experimental treatment. The least

square estimates adjusted for the covariates effect and the standard error of adjusted estimates were used in computing the confidence interval.

The result of the confidence interval is that the effect of the in-service training should produce an improved score of between 30.2 and 60 points for experimental subjects with 95 percent confidence.

It can be stated conclusively that in this study subjects with poor attitudes toward students realized statistically significant improvements in their attitudes toward students after being exposed to the experimental treatment.

Non-Statistical Analysis of the Evaluation Instrument

On the final meeting of each small group, experimental subjects were asked to fill out an evaluation instrument (Appendix G). Twenty-one questions calling for short essay responses were asked of each participant. They dealt with general and specific aspects of the in-service experience, ranging from the content of the seminars to ways of improving the format of the program. The responses of individuals to the evaluation are summarized in Appendix H. The responses to each question from subjects are listed in order of their gain between pre and post-test scores on the Minnesota Teacher Attitude Inventory.

The response from the teacher achieving the greatest gain is listed first, while the last response is that of the teacher with the least gain. It is therefore possible to track responses of individuals with varying degrees of gain for comparison purposes. This format is followed in all the questions except numbers 5 and 19, which are composite responses.

Analyzing Techniques and Materials

In an attempt to identify possible techniques or materials that may have accounted for gains made by experimental subjects, the experimental group was divided into two categories according to the differences between their pre and post-test scores on the Minnesota Teacher Attitude Inventory. Teachers gaining more than 22 points were assigned to a High Achiever group, since a positive difference of more than 22 points was greater than any gain made by subjects in the control group who had received no treatment. A total of 9 subjects were classified as High Achievers. The range in positive difference between their pre and post-test scores was from 27 to 94 points.

Subjects achieving a difference of 22 or less points were assigned to the Low Achievers group. Seven Subjects, whose differences in scores ranged from +19 to -12, were so assigned.

Table 5 shows the pre and post-test scores of both control group and experimental group subjects along with the differences between the scores.

TABLE 5.--Differences in Pre and Post-test Scores on Minnesota Teacher Attitude Inventory of Experimental and Control Subjects

Experimental Group				Control Group			
Subject	Pretest	Post-test	Difference	Subject	Pretest	Post-test	Difference
1	- 2	+37	+39	1	+11	+18	+ 7
2	+ 1	+87	+86	2	+ 5	+19	+14
3	-40	-21	+19	3	-16	+ 6	+22
4	+17	+36	+19	4	-22	- 6	+16
5	-30	-14	+16	5	+13	+32	+19
6	+ 3	+15	+12	6	+16	+29	+13
7	- 3	+24	+27	7	0	- 2	- 2
8	-30	+18	+48	8	-19	-39	-20
9	+10	+15	+ 5	9	+10	-21	-31
10	- 3	-15	-12	10	-28	-71	-43
11	+ 9	+70	+61	11	+15	+ 9	- 6
12	-20	+52	+72	12	-18	-27	- 9
13	-18	+25	+43	13	+17	- 4	-21
14	0	+50	+50	14	+ 6	+ 3	- 3
15	+ 7	+12	+ 5	15	+16	+ 1	-15
16	+10	+104	+94	16	0	-11	-11
	$\bar{X}$ = -5.56	$\bar{X}$ = 30.93	+584		$\bar{X}$ = .375	$\bar{X}$ = -4.0	-70

The evaluation instrument asked teachers to rate eight aspects of the in-service program as: (1) excellent; (2) good; (3) OK; or (4) poor. A comment section was also provided. Aspects rated were: (a) the Glasser tape; self esteem presentation and materials; (c) interaction analysis presentation and materials; (d) consultant help; (e) video training tapes of classroom meetings; (f) large group discussions; (g) small group discussions; and (h) an overall evaluation of the program. The intent of this rating schedule was to determine whether any aspects of the in-service experience were considered poor in quality. If so, it was important to identify those aspects, since it could have had great impact on the next stage of evaluation, namely, identifying those aspects of the in-service experience which had greatest value to each participant as teachers.

The responses to the rating of the eight aspects of the in-service experience are contained in Table 6. The number of responses to each rating for each aspect is summarized. A mean score for responses is also given.

An examination of this information reveals that only three responses in the entire evaluation were classified as poor by the participants. Each aspect of the program attained overall averages of from OK/good to good/excellent. This information suggests that participants judged the calibre of the materials, presentations, and help as being at least satisfactory.

TABLE 6.--Summary of Ratings and Averages for Eight Aspects of In-Service Experience According to High and Low Achiever Classification

	Glasser Tape				Self Esteem		
	High	Low	Total		High	Low	Total
Excellent	1	1	2	Excellent	4	2	6
Good	5	4	9	Good	5	4	9
OK	3	2	5	OK	0	0	0
Poor	0	0	0	Poor	0	1	1
Average	2.2	2.1	2.2	Average	1.6	2.0	1.7

	Interaction Analysis				Consultant Help		
	High	Low	Total		High	Low	Total
Excellent	1	2	3	Excellent	2	-	2
Good	3	2	5	Good	4	3	7
OK	4	2	6	OK	3	4	7
Poor	1	1	2	Poor	0	0	0
Average	2.5	2.3	2.4	Average	2.1	2.6	2.3

	Video Tapes				Small Group Discussion		
	High	Low	Total		High	Low	Total
Excellent	2	1	3	Excellent	4	0	4
Good	5	4	9	Good	4	5	9
OK	2	2	4	OK	1	2	3
Poor	0	0	0	Poor	0	0	0
Average	2.2	2.1	2.1	Average	1.7	2.3	1.9

	Large Group Discussion				Overall Evaluation		
	High	Low	Total		High	Low	Total
Excellent	0	0	2	Excellent	3	1	4
Good	4	5	9	Good	6	5	11
OK	5	0	5	OK	0	1	1
Poor	0	0	0	Poor	0	-	0
Average	2.6	1.7	2.2	Average	1.7	2.0	1.8

High Achievers rated the aspects in this order: (1) Self Esteem presentation and materials; (2) Overall Evaluation; (3) Small Group Discussion; (4) Consultant Help; (5) Video Tapes; (6) Glasser Tape; (7) Interaction Analysis; and (8) Large Group Discussion.

Low Achievers rated the aspects of the program in the following order: (1) Large Group Discussion; (2) Self Esteem presentation and materials; (3) Overall Evaluation; (4) Video Tapes; (5) Glasser Tape; (6) Interaction Analysis; (7) Small Group Discussion; and (8) Consultant Help.

Discussion.--It should be noted that the two areas rated lowest by the Low Achiever group were Small Group Discussion and Consultant Help, which involved small groups of no more than five people discussing topics and situations of one-to-one relationships in classroom visits or consultations. This is almost directly opposite the stance of High Achievers, who rated Small Group Discussion as third and Consultant Help as fourth. This appears to suggest that High Achievers saw greater value in small groups and one-to-one discussions than did their Low Achiever counterparts.

Both groups judged the Interaction Analysis at a low priority and that item received two of the three "Poor" evaluation responses. The total evaluation of that aspect was still between "OK" to "Good," however.

Aspects of Value to Teachers

Finally, experimental subjects were asked to rate eight aspects of the in-service experience in rank order in terms of the value that each aspect had to them as teachers. Subjects were instructed to rank in order of value the aspects of the program. The aspect of most value was to be ranked as "1" and the one of least value as "8." Those aspects included were the same as presented earlier, except that the "Overall Evaluation" was deleted and in its place the aspect of "Classroom Meetings" was substituted. Scores were determined by summing up responses of participants on each of the aspects rated. The results are contained in Table 7.

Discussion.--An examination of this information suggests that both High Achievers and Low Achievers agreed that the two most valuable aspects of the in-service experience to the participants as teachers were: (1) Classroom Meetings and (2) Self Esteem materials.

After that, little agreement is evident except that both groups rated the Glasser Tape, which was used to begin the experience, as a low value item (seventh). Once again, Low Achievers rated Consultants as least valuable to them and, similarly, saw less value in Small Group Discussion (sixth) than did their counterparts in the High Achiever group. High Achievers rated Small Groups third in value and Consultants sixth. This data suggests

TABLE 7.--Rank Order of Eight Aspects of the In-Service Experience by High Achiever Group, Low Achiever Group, and Total Group on the Basis of Value to Participants as Teachers

High Achievers		Low Achievers		Total Group	
Aspect	Points	Aspect	Points	Aspect	Points
1. Classroom Meetings	16	1. Classroom Meetings	8	1. Classroom Meetings	24
2. Self Esteem	25	2. Self Esteem	25	2. Self Esteem	50
3. Small Groups	34	3. Large Group	30	3. Small Groups	71
4. Video Tapes	40	4. Interaction Analysis	31	4. Video Tapes	76
5. Large Group	46	5. Video Tapes	36	5. Large Group	76
6. Consultant Help	48	6. Small Groups	37	6. Glasser Tape	90
7. Glasser Tape	53	7. Glasser Tape	37	7. Interaction Analysis	93
8. Interaction Analysis	62	8. Consultant Help	48	8. Consultant Help	96

that Low Achievers saw less value in small groups and one-to-one interaction than did High Achievers.

Dogmatism and Value of Materials

Subjects in the experimental group were also classified according to their dogmatism scores in an effort to examine any relationship between open and closed mindedness and the value of certain aspects of the in-service experience to the participants. Subjects were classified in the following manner. The range of scores of subjects in the experimental group was 52 to 158. Three classifications were established: (1) More Open, 52-118; (2) Middle Range, 120-146; and (3) More Closed, 148-180. Responses of teachers in the experimental group to the aspects of the in-service experience which they valued most as teachers were tabulated according to the three classifications of dogmatism. Those results are reported in Table 8.

Once again, Classroom Meetings headed the list of all groups as having the most value to participants as teachers. Self Esteem, while ranked second by More Open and Middle Range subjects, fell to third with More Closed subjects. Consultant Help was ranked least valuable by both Middle Range and More Closed subjects, while More Open participants ranked it fourth. The more open the subject the more valued was the consultant help. Small

TABLE 8.--Responses of Experimental Subjects Grouped by Classifications of Dogmatism, Relating the Value of In-Service Experiences

More Open 52-118		Middle Range 120-146		More Closed 148-180	
Aspect	Points	Aspect	Points	Aspect	Points
1. Classroom Meetings	4	1. Classroom Meetings	13	1. Classroom Meetings	7
2. Self Esteem	6	2. Self Esteem	14	2. Large Group	29
3. Video Tapes	12	3. Small Groups	20	3. Self Esteem	30
4. Consultant Help	13	4. Large Group	31	4. Video Tape	31
5. Small Groups	15	5. Glasser Tape	32	5. Interaction Analysis	35
6. Large Group	16	6. Video Tapes	33	6. Small Groups	36
7. Glasser Tape	18	7. Interaction Analysis	34	7. Glasser Tape	40
8. Interaction Analysis	24	8. Consultant Help	39	8. Consultant Help	44

Group Discussion likewise was rated lower by the More Closed subjects than by those in the other two classifications, thus reinforcing the tendency.

When the total group results are viewed, the following order of value to participants as stated earlier is found:

1.	Classroom Meetings	24 points
2.	Self Esteem Materials	50 points
3.	Small Group Discussion	71 points
4.	Video Tapes	76 points
5.	Large Group Discussion	76 points
6.	Glasser Tape	90 points
7.	Interaction Analysis	93 points
8.	Consultant Help	96 points

It becomes apparent that subjects in the experimental group found interaction analysis techniques and consultant help of least value to them. These results would tend to support the contention that teachers with poor attitudes are least receptive to techniques that force them to look at the patterns of their teaching styles. Yet, to a degree the self esteem tasks asked teachers to analyze children's behavior and to examine their treatment of those children. However, the child's behavior was stressed more than the teacher's. Perhaps the mechanics of the interaction analysis lessened teacher acceptance of the idea. A perusal of some of the responses of teachers to questions 14 through 17 of the In-Service Evaluation Instrument will shed some light on this aspect

of the program. Those responses seem to indicate that the technique would have value to student teachers or beginning teachers, yet few felt that they would use the techniques themselves.

This suggests an apparent reluctance on the part of the teachers involved to closely scrutinize or criticize their own behavior in the classroom.

Consultant help was rated valuable by the More Open subjects, yet on the overall evaluation it was rated least valuable. The design of the in-service experience may account for part of this low rating. In order to eliminate a possible bias in results which could be attributed to a specific consultant, these people were rotated among the subjects so they worked with each subject for approximately the same period of time. The description of this system was given in Chapter III. It is conceivable that due to the shifting of consultants, that positive, long-lasting relationships were not allowed to develop, and consequently the participants viewed the consultant help as less valuable to them. Since these subjects scored low on the Minnesota Teacher Attitude Inventory, which purports to measure a teacher's ability to establish interpersonal relationships with students, it could be suggested that they would also have difficulty establishing positive relationships with the consultants. Since they had a limited exposure to each consultant, perhaps no meaningful

relationships developed. However, an examination of questions 11 and 12 of the Evaluation Instrument suggests that they found consultants valuable and many teachers suggested that consultants be more available than the program provided.

Classroom Meetings and Self Esteem Materials

Since classroom meetings and self esteem materials appeared to be highly valued by participants, an examination of teacher responses to the questions in the Evaluation Instrument seemed warranted. (See questions 1 through 10, Appendix H.) The following statements appear to reflect the feelings in those responses, although they are not listed in any order of importance.

Classroom Meetings:

1. help teachers and students to get to know each other better.
2. involves children in problem solving situations.
3. provide a relaxed atmosphere for discussion.
4. are enjoyed by children.
5. provide a forum for student expression of ideas.
6. provided children of all academic levels an opportunity to contribute.
7. were beneficial to teachers
8. would be used by teachers next year.

Self Esteem Materials:

1. gave teachers insights into understanding children in the room.
2. pointed out discrepancies between children's and teacher's perception.
3. made teachers aware of children's feelings.
4. would be used by these teachers again.
5. could help teachers plan programs for children with poor self concepts.
6. can give teachers insights when discussing children with parents.
7. often reinforced a teacher's feelings about certain children.

Modifying the In-Service Program

In an effort to elicit ideas from participants on how to improve the program, question 19 of the Evaluation Instrument dealt with participants' suggestions for changing the format and content of the program. The only trend that could be seen in the responses dealing with the content of the program was that six participants indicated that less time should be spent on interaction analysis, and four subjects wanted the topic of contingency contracting added. Interaction analysis appeared to be poorly accepted by the group.

Regarding format, participants indicated three areas that should be changed. Thirteen subjects suggested that the sessions begin in the fall, while eight wanted more sessions to be held. Eleven participants felt that more teachers should be involved, with a maximum of 30 listed.

Fourteen of the sixteen participants responded in the affirmative to a question asking whether or not sessions should remain on a released time basis.

Discussion.--The following changes in the format and content of the in-service session seem warranted by the responses of the participants and by the observations of the writer:

1. Sessions should begin in the fall and continue regularly throughout the entire school year.

2. Seminar sessions and small work groups should be held on the same day, by perhaps extending the program to a full afternoon. This would ease the difficulties of freeing teachers for one-hour blocks which caused some administrative problems along with problems of continuity.

3. Less emphasis be placed on interaction analysis techniques unless sessions are extended over the year. If the program was for the full year, participants might be ready for exposure to interaction analysis near the end of the experience.

4. Consultants should be assigned to a group of teachers for the duration of the project, so a lasting, meaningful rapport could be developed.

Summary

This chapter has presented the statistical analysis of the data gathered as it relates to the six null hypotheses tested in this study. A discussion of the results of each hypothesis was also presented.

In addition, a non-statistical analysis of the in-service evaluative instrument was presented. It attempted

to identify the aspects of the program which had greatest value to the participants and which might be responsible for improvement in teacher attitude scores.

The fifth chapter will present the findings, conclusions, and recommendations of this study, based on the results of the information from this chapter.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study was conducted in an attempt to determine what effect a concentrated in-service program, geared to sensitizing elementary teachers of grades one through six to the needs of students, would have on those attitudes of the teachers which deal with pupil-teacher relationships as measured by the Minnesota Teacher Attitude Inventory.

In addition, the study attempted to determine whether any relationships existed between scores on the Rokeach Dogmatism Scale - Form E and the corresponding scores achieved by teachers on the Minnesota Teacher Attitude Inventory.

The study was prompted by the writer's interest in exploring materials and techniques which might be of benefit in bringing about a change in teachers' perceptions of, and relationships with, students.

The importance of the personal relationships developed in the classroom between teacher and pupil as pointed out by several writers cited in the review of literature supported the need for this study.

The subjects of the study were selected elementary teachers of grades one through six in a suburban Detroit school district.

In December, 1969, all elementary classroom teachers of grades one through six in the district were asked to complete an unidentified copy of the Minnesota Teacher Attitude Inventory. A short while later, the same teachers were asked to reply to an unidentified copy of the Rokeach Dogmatism Scale - Form E. Scores for both tests were identified for 180 subjects.

In addition, 51 subjects whose scores on the Minnesota Teacher Attitude Inventory fell more than one-half a standard deviation below the mean were classified as having poor attitudes toward children and were considered for placement in an experimental design.

A random table was entered to select 32 subjects for use in an experimental in-service program. Sixteen of the subjects were randomly assigned to the experimental group and sixteen were assigned to a control group.

Subjects who participated in the in-service project were never informed verbally or by implicit detail that the improvement of attitudes was the topic of concern.

The experimental group was exposed to a concentrated in-service program designed to actively involve teachers in tasks and experiences which would sensitize them to the needs of students.

Every effort was made to make the tasks non-threatening by asking participants to evaluate the techniques and ideas presented rather than criticizing their own practices. The project assumed that involvement was a requisite for behavior change and, consequently, teachers were asked to become actively involved in all phases of the project.

The objectives of the project were pursued through a combination of three types of experiences: (1) seminar sessions which were theoretical and emphasized research, literature, or positions relating to the needs of students, or approaches suggested for the classroom; (2) small work groups designed to stimulate and aid in the practical implementation of ideas presented in the seminar and to facilitate personal involvement in the materials; and (3) individual visitations and consultations held by consultants who functioned as supportive, positive resource people. Consultants all had previous training in group dynamics. They received specific briefing on the content of the seminars from the writer but were not informed that attitude change was the focus of the in-service experience.

Each in-service participant took part in seven two-hour seminars, seven one-hour small group sessions, and received ten individual visitations and consultations from the four consultants who were assigned to work with the participants on a rotating basis.

Each subject was involved in the experimental treatment for a minimum of 31 hours, covering a four-month span.

At the conclusion of the in-service experience in June of 1970, all elementary teachers of grades one through six were again administered the Minnesota Teacher Attitude Inventory.

The BASTAT computer program was used to determine the correlation between scores on the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E of the 180 teachers (Hypothesis 1).

An analysis of covariance was used to analyze the remaining five hypotheses. The FINN computer program analyzed the data from the 32 subjects in the experimental design. A four-way analysis of covariance was employed using the post-test score on the Minnesota Teacher Attitude Inventory as the dependent variable, while (1) pretest score on the Minnesota Teacher Attitude Inventory, (2) dogmatism score, (3) years of teaching experience, and (4) grade level taught were designated as covariates. The design had one factor, namely, the in-service training, with two levels--(1) experimental group and (2) control group.

In addition, each experimental subject completed an evaluative instrument which was analyzed in a non-statistical manner in an attempt to determine materials

and programs which may have contributed positively to teacher changes in attitudes.

Findings

The following null hypotheses were investigated. The corresponding findings are given.

> Null Hypothesis 1: There is no significant relationship between teachers' scores on the Rokeach Dogmatism Scale - Form E and the Minnesota Teacher Attitude Inventory.

Finding 1.--There is a significant relationship between teachers' scores on the Minnesota Teacher Attitude Inventory and the Rokeach Dogmatism Scale - Form E. A correlation of -.60 was found to exist. This correlation specifies that as teacher scores on the Minnesota Teacher Attitude Inventory get higher (more positive) their scores on the Rokeach Dogmatism Scale get lower (more open minded).

> Null Hypothesis 2: There will be no significant relationships between the pre and post-test scores on the Minnesota Teacher Attitude Inventory of subjects in the experimental and control groups.

Finding 2.--There is a significant relationship at the .01 level of confidence between teachers' pretest and post-test scores on the Minnesota Teacher Attitude Inventory.

> Null Hypothesis 3: There will be no significant relationship between the scores of subjects on the Minnesota Teacher Attitude Inventory post-test and their scores on the Rokeach Dogmatism Scale - Form E.

Finding 3.--There is a significant relationship at the .05 level of confidence between teachers' post-test

scores on the Minnesota Teacher Attitude Inventory and their scores on the Rokeach Dogmatism Scale - Form E.

> Null Hypothesis 4: There will be no significant relationship between the post-test scores of subjects on the Minnesota Teacher Attitude Inventory and their number of years of teaching experience.

Finding 4.--There is no significant relationship at the .05 level of confidence between teachers' post-test scores on the Minnesota Teacher Attitude Inventory and their years of teaching experience.

> Null Hypothesis 5: There will be no significant relationship between the post-test scores of subjects on the Minnesota Teacher Attitude Inventory and the grade level taught.

Finding 5.--There is no significant relationship at the .05 level of confidence between teachers' scores on the post-test of the Minnesota Teacher Attitude Inventory and the grade level they teach.

> Null Hypothesis 6: There will be no significant differences in the post-test scores on the Minnesota Teacher Attitude Inventory between subjects in the experimental and control groups.

Finding 6.--There was a significant difference between the post-test scores on the Minnesota Teacher Attitude Inventory of subjects in the experimental and control groups. The difference was significant at the .01 level of confidence.

Conclusions

The following conclusions were drawn from the findings of the study:

1. School administrators should continue their efforts to identify teachers with less than positive attitudes toward children and to plan meaningful programs to help improve those attitudes.

2. The concept of providing concentrated in-service programs, geared to sensitizing teachers to the needs of children, appears to be a fruitful approach to changing attitudes of teachers in a positive direction.

3. The factors of dogmatism and attitude as measured by the Rokeach Dogmatism Scale - Form E and the Minnesota Teacher Attitude Inventory appear to be significantly related.

4. The concept of dogmatism warrants more attention by personnel involved in training and hiring teachers, since it appears that the degree of dogmatism a person holds is an accurate indicator of possible attitude change.

5. Since this study suggests that grade level and length of teaching experience are not significantly related to changes in teacher attitudes, it seems to be in conflict with other studies found in the literature.

The following conclusions are based on the evaluation of the in-service program by participants.

6. In-service programs geared to changing teacher attitudes appear to have some chance of success if they provide positive experiences for participants. Programs that (1) are non-threatening, (2) provide the teacher with supportive personnel, (3) do not infringe on the teachers' free time, and (4) are centered on the needs of children seem to have merit.

7. The use of non-judgemental classroom meetings and an emphasis on self esteem appear to be successful approaches and techniques to which to expose teachers in an effort to sensitize them to the needs of children.

8. Teachers appeared to favor an in-service program which would span the entire school year.

9. Interaction analysis seems to have little value to teachers with poor attitudes toward children.

Recommendations

The following recommendations for additional research are based on the data and information gained by the investigator in the pursuit of the study:

1. The Rokeach Dogmatism Scale and the Minnesota Teacher Attitude Inventory should be tested on other samples of teachers to provide a basis for extending the inferences of this study to the general population of teachers.

2. Research designs should be used to study the effects on elementary pupils whose teachers hold different

belief systems and attitudes. These could include pupil self concept, convergent and divergent response, critical thinking, creativity, and achievement.

3. Experimental designs should be used to examine classroom practices of teachers who differ in attitudes to see whether actual practices are changed after similar in-service participation.

4. A follow-up study on the teachers in the experimental group should be conducted to assess whether the treatment had a persistent effect on the teacher attitudes.

5. A replication of the present study on a larger scale should be conducted to confirm or refute these findings.

6. Further studies isolating the various techniques used in the in-service program should be conducted to see whether the use of a particular technique or group of materials yields a greater gain in teacher attitude change than others.

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APPENDICES

APPENDIX A

EXPLANATORY LETTER TO TEACHERS REGARDING SURVEY QUESTIONNAIRE

MICHIGAN STATE UNIVERSITY

TO THE TEACHER:

We have been asked by Michigan State University to participate in a survey being conducted to ascertain what teachers believe about students.

We would appreciate your cooperation in completing the survey. Please be assured that every precaution has been taken to protect your anonymity. Please do not place your name on the forms.

A Personal Data form will also be distributed for completion. Again, please do not identify yourself. This data is needed in order to report the general findings of the study.

- -

This inventory consists of 150 statements designed to sample opinions about teacher-pupil relations. There is considerable disagreement as to what these relations should be: Therefore, there are no right or wrong answers. What is wanted is your individual feeling about the statements. Read each statement and decide how YOU feel about it. Then record your answer on the line next to the number.

If you strongly agree, mark a SA

If you agree, mark a A

If you are undecided or uncertain, mark a U

If you disagree, mark a D

If you strongly disagree, mark a SD

APPENDIX B

MINNESOTA TEACHER ATTITUDE INVENTORY

UNIDENTIFIED

SA—Strongly agree A—Agree	U—Undecided or uncertain	D—Disagree SD—Strongly disagree

1. Most children are obedient.
2. Pupils who "act smart" probably have too high an opinion of themselves.
3. Minor disciplinary situations should sometimes be turned into jokes.
4. Shyness is preferable to boldness.
5. Teaching never gets monotonous.
6. Most pupils don't appreciate what a teacher does for them.
7. If the teacher laughs with the pupils in amusing classroom situations, the class tends to get out of control.
8. A child's companionships can be too carefully supervised.
9. A child should be encouraged to keep his likes and dislikes to himself.
10. It sometimes does a child good to be criticized in the presence of other pupils.
11. Unquestioning obedience in a child is not desirable.
12. Pupils should be required to do more studying at home.
13. The first lesson a child needs to learn is to obey the teacher without hesitation.
14. Young people are difficult to understand these days.
15. There is too great an emphasis upon "keeping order" in the classroom.
16. A pupil's failure is seldom the fault of the teacher.
17. There are times when a teacher cannot be blamed for losing patience with a pupil.
18. A teacher should never discuss sex problems with the pupils.
19. Pupils have it too easy in the modern school.
20. A teacher should not be expected to burden himself with a pupil's problems.
21. Pupils expect too much help from the teacher in getting their lessons.
22. A teacher should not be expected to sacrifice an evening of recreation in order to visit a child's home.
23. Most pupils do not make an adequate effort to prepare their lessons.
24. Too many children nowadays are allowed to have their own way.
25. Children's wants are just as important as those of an adult.
26. The teacher is usually to blame when pupils fail to follow directions.
27. A child should be taught to obey an adult without question.
28. The boastful child is usually over-confident of his ability.
29. Children have a natural tendency to be unruly.
30. A teacher cannot place much faith in the statements of pupils.

GO ON TO THE NEXT PAGE

SA—Strongly agree
A—Agree

U—Undecided or uncertain

D—Disagree
SD—Strongly disagree

31. Some children ask too many questions.

32. A pupil should not be required to stand when reciting.

33. The teacher should not be expected to manage a child if the latter's parents are unable to do so.

34. A teacher should never acknowledge his ignorance of a topic in the presence of his pupils.

35. Discipline in the modern school is not as strict as it should be.

36. Most pupils lack productive imagination.

37. Standards of work should vary with the pupil.

38. The majority of children take their responsibilities seriously.

39. To maintain good discipline in the classroom a teacher needs to be "hard-boiled."

40. Success is more motivating than failure.

41. Imaginative tales demand the same punishment as lying.

42. Every pupil in the sixth grade should have sixth grade reading ability.

43. A good motivating device is the critical comparison of a pupil's work with that of other pupils.

44. It is better for a child to be bashful than to be "boy or girl crazy."

45. Course grades should never be lowered as punishment.

46. More "old-fashioned whippings" are needed today.

47. The child must learn that "teacher knows best."

48. Increased freedom in the classroom creates confusion.

49. A teacher should not be expected to be sympathetic toward truants.

50. Teachers should exercise more authority over their pupils than they do.

51. Discipline problems are the teacher's greatest worry.

52. The low achiever probably is not working hard enough and applying himself.

53. There is too much emphasis on grading.

54. Most children lack common courtesy toward adults.

55. Aggressive children are the greatest problems.

56. At times it is necessary that the whole class suffer when the teacher is unable to identify the culprit.

57. Many teachers are not severe enough in their dealings with pupils.

58. Children "should be seen and not heard."

59. A teacher should always have at least a few failures.

60. It is easier to correct discipline problems than it is to prevent them.

GO ON TO THE NEXT PAGE

SA—Strongly agree
A—Agree

U—Undecided
or uncertain

D—Disagree
SD—Strongly disagree

61. Children are usually too sociable in the classroom.

62. Most pupils are resourceful when left on their own.

63. Too much nonsense goes on in many classrooms these days.

64. The school is often to blame in cases of truancy.

65. Children are too carefree.

66. Pupils who fail to prepare their lessons daily should be kept after school to make this preparation.

67. Pupils who are foreigners usually make the teacher's task more unpleasant.

68. Most children would like to use good English.

69. Assigning additional school work is often an effective means of punishment.

70. Dishonesty as found in cheating is probably one of the most serious of moral offenses.

71. Children should be allowed more freedom in their execution of learning activities.

72. Pupils must learn to respect teachers if for no other reason than that they are teachers.

73. Children need not always understand the reasons for social conduct.

74. Pupils usually are not qualified to select their own topics for themes and reports.

75. No child should rebel against authority.

76. There is too much leniency today in the handling of children.

77. Difficult disciplinary problems are seldom the fault of the teacher.

78. The whims and impulsive desires of children are usually worthy of attention.

79. Children usually have a hard time following instructions.

80. Children nowadays are allowed too much freedom in school.

81. All children should start to read by the age of seven.

82. Universal promotion of pupils lowers achievement standards.

83. Children are unable to reason adequately.

84. A teacher should not tolerate use of slang expressions by his pupils.

85. The child who misbehaves should be made to feel guilty and ashamed of himself.

86. If a child wants to speak or to leave his seat during the class period, he should always get permission from the teacher.

87. Pupils should not respect teachers any more than any other adults.

88. Throwing of chalk and erasers should always demand severe punishment.

89. Teachers who are liked best probably have a better understanding of their pupils.

90. Most pupils try to make things easier for the teacher.

GO ON TO THE NEXT PAGE

SA—Strongly agree
A—Agree

U—Undecided
or uncertain

D—Disagree
SD—Strongly disagree

91. Most teachers do not give sufficient explanation in their teaching.

92. There are too many activities lacking in academic respectability that are being introduced into the curriculum of the modern school.

93. Children should be given more freedom in the classroom than they usually get.

94. Most pupils are unnecessarily thoughtless relative to the teacher's wishes.

95. Children should not expect talking privileges when adults wish to speak.

96. Pupils are usually slow to "catch on" to new material.

97. Teachers are responsible for knowing the home conditions of every one of their pupils.

98. Pupils can be very boring at times.

99. Children have no business asking questions about sex.

100. Children must be told exactly what to do and how to do it.

101. Most pupils are considerate of their teachers.

102. Whispering should not be tolerated.

103. Shy pupils especially should be required to stand when reciting.

104. Teachers should consider problems of conduct more seriously than they do.

105. A teacher should never leave the class to its own management.

106. A teacher should not be expected to do more work than he is paid for.

107. There is nothing that can be more irritating than some pupils.

108. "Lack of application" is probably one of the most frequent causes for failure.

109. Young people nowadays are too frivolous.

110. As a rule teachers are too lenient with their pupils.

111. Slow pupils certainly try one's patience.

112. Grading is of value because of the competition element.

113. Pupils like to annoy the teacher.

114. Children usually will not think for themselves.

115. Classroom rules and regulations must be considered inviolable.

116. Most pupils have too easy a time of it and do not learn to do real work.

117. Children are so likeable that their shortcomings can usually be overlooked.

118. A pupil found writing obscene notes should be severely punished.

119. A teacher seldom finds children really enjoyable.

120. There is usually one best way to do school work which all pupils should follow.

GO ON TO THE NEXT PAGE

SA—Strongly agree
A—Agree

U—Undecided or uncertain

D—Disagree
SD—Strongly disagree

121. It isn't practicable to base school work upon children's interests.

122. It is difficult to understand why some children want to come to school so early in the morning before opening time.

123. Children that cannot meet the school standards should be dropped.

124. Children are usually too inquisitive.

125. It is sometimes necessary to break promises made to children.

126. Children today are given too much freedom.

127. One should be able to get along with almost any child.

128. Children are not mature enough to make their own decisions.

129. A child who bites his nails needs to be shamed.

130. Children will think for themselves if permitted.

131. There is no excuse for the extreme sensitivity of some children.

132. Children just cannot be trusted.

133. Children should be given reasons for the restrictions placed upon them.

134. Most pupils are not interested in learning.

135. It is usually the uninteresting and difficult subjects that will do the pupil the most good.

136. A pupil should always be fully aware of what is expected of him.

137. There is too much intermingling of the sexes in extra-curricular activities.

138. The child who stutters should be given the opportunity to recite oftener.

139. The teacher should disregard the complaints of the child who constantly talks about imaginary illnesses.

140. Teachers probably over-emphasize the seriousness of such pupil behavior as the writing of obscene notes.

141. Teachers should not expect pupils to like them.

142. Children act more civilized than do many adults.

143. Aggressive children require the most attention.

144. Teachers can be in the wrong as well as pupils.

145. Young people today are just as good as those of the past generation.

146. Keeping discipline is not the problem that many teachers claim it to be.

147. A pupil has the right to disagree openly with his teachers.

148. Most pupil misbehavior is done to annoy the teacher.

149. One should not expect pupils to enjoy school.

150. In pupil appraisal effort should not be distinguished from scholarship.

APPENDIX C

TEACHER PERSONAL DATA FORM

PERSONAL DATA FORM

The data requested here is needed so the researchers can report their findings. Under no circumstances should you put your name on the form.

1) What grade do you teach?_____
(If a split, indicate 1 of the grades, Ex. 3-4 split, answer either 3 or 4.)

2) What is your age?_____

3) How many years of teaching experience do you have?_____
(Count this year as half (1/2).)

4) Male____ Female____

5) College from which undergraduate degree was granted.

U of M___	Western Michigan U.___	Eastern M.U.___
Wayne ___	Marygrove ___	Other ___
M.S.U.___	U. of Detroit ___	(do not specify)

Thank you,

APPENDIX D

REQUEST TO PARTICIPATE IN OPINION QUESTIONNAIRE

TO: Elementary Staff

FROM: Ron Marino

RE: Opinion Questionnaire

As many of you are aware, I am currently attempting to complete requirements for an advanced degree in elementary education.

Attached is a widely used questionnaire that I am asking you to complete in order that I can gather some of the necessary data for my study. Regular classroom teachers of grades 1-6 with at least 1 year of experience in numerous other schools are also being asked to participate.

Please complete this form and turn it into the office prior to your departure for vacation. (Do not use the envelope.) Please do not indicate your name. We do need the grade you teach and your total years of experience so that responses can be classified accordingly.

The whole questionnaire shouldn't take more than 15-20 minutes. Thanks for your help.

APPENDIX E

ROKEACH DOGMATISM SCALE

UNIDENTIFIED

TEACHER QUESTIONNAIRE

The following is a study of what the classroom teacher thinks and feels about a number of important social, educational, and personal questions. The best answer to each statement below is your personal opinion. Many different and opposing points of view should be apparent. You may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, many other people feel the same as you do. Some of the questions may appear ambiguous to you. We ask for your indulgence and cooperation. Please answer each one.

Mark each statement in the answer space provided according to how much you agree or disagree with it. Please mark every one.

Write +1, +2, +3, or -1, -2, -3 depending on how you feel in each case.

+1	I AGREE A LITTLE	-1	I DISAGREE A LITTLE
+2	I AGREE ON THE WHOLE	-2	I DISAGREE ON THE WHOLE
+3	I AGREE VERY MUCH	-3	I DISAGREE VERY MUCH

+1	I AGREE A LITTLE	-1	I DISAGREE A LITTLE
+2	I AGREE ON THE WHOLE	-2	I DISAGREE ON THE WHOLE
+3	I AGREE VERY MUCH	-3	I DISAGREE VERY MUCH

__1. The United States and Russia have just about nothing in common.

__2. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.

__3. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

__4. It is only natural that a person would have a much better acquaintance with ideas he believes in than with ideas he opposes.

__5. Man on his own is a helpless and miserable creature.

__6. Fundamentally, the world we live in is a pretty lonesome place.

__7. Most people just don't give a "damn" for others.

__8. I'd like it if I could find someone who would tell me how to solve my personal problems.

__9. It is only natural for a person to be rather fearful of the future.

_10. There is so much to be done and so little time to do it in.

_11. Once I get wound up in a heated discussion I just can't stop.

_12. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

_13. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

_14. It is better to be a dead hero than to be a live coward.

_15. While I don't like to admit this even to myself, my secret ambition is to become a great man like Einstein, or Beethoven, or Shakespeare.

_16. The main thing in life is for a person to want to do something important.

_17. If given the chance I would do something of great benefit to the world.

+1	I AGREE A LITTLE	-1	I DISAGREE A LITTLE
+2	I AGREE ON THE WHOLE	-2	I DISAGREE ON THE WHOLE
+3	I AGREE VERY MUCH	-3	I DISAGREE VERY MUCH

_18. In the history of mankind there have probably been just a handful of really great thinkers.

_19. There are a number of people I have come to hate because of the things they stand for.

_20. A man who does not believe in some great cause has not really lived.

_21. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.

_22. Of all the different philosophies which exist in this world there is probably only one which is correct.

_23. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" sort of person.

_24. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.

_25. When it comes to differences of opinion in religion we must be careful not to compromise with those who believe differently from the way we do.

_26. In times like these, a person must be pretty selfish if he considers primarily his own happiness.

_27. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.

_28. In times like these it is often necessary to be more on guard against ideas put out by people or groups in one's own camp than by those in the opposing camp.

_29. A group which tolerates too much differences of opinion among its own members cannot exist for long.

_30. There are two kinds of people in this world: those who are for the truth and those who are against the truth.

_31. My blood boils whenever a person stubbornly refuses to admit he's wrong.

_32. A person who thinks primarily of his own happiness is beneath contempt.

_33. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

_34. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.

+1	I AGREE A LITTLE	-1	I DISAGREE A LITTLE
+2	I AGREE ON THE WHOLE	-2	I DISAGREE ON THE WHOLE
+3	I AGREE VERY MUCH	-3	I DISAGREE VERY MUCH

_35. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

_36. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

_37. The present is all too often full of unhappiness. It is only the future that counts.

_38. If a man is to accomplish his mission in life it is sometimes necessary to gamble "all or nothing at all."

_39. Unfortunately, a good many people with whom I have discussed important social and moral problems don't really understand what's going on.

_40. Most people just don't know what's good for them.

Please Complete:

Grade taught_____

Years of teaching experience_____

Age: (Check one)

under 25____

over 25____

APPENDIX F

LETTER TO PARTICIPANTS FROM PROJECT DIRECTOR

WARREN WOODS PUBLIC SCHOOLS
Warren, Michigan

I want to thank you for your willingness to cooperate in the in-service program we are about to initiate. As your principal informed you, the object of the sessions will be to gather teacher opinion about various techniques to be used in the classroom that have been proposed by various educational experts.

The full scope of the sessions will be explained to you at the first meeting, which will be held this Wednesday from 12:45-2:45 p.m. in the Board Room at the Administrative Service Center.

Arrangements for substitutes have already been taken care of by my office, as they will be for all the sessions. As you know, we plan to conduct all in-service sessions on a released time basis.

Your major responsibility will be to use and react to the various materials and ideas presented in the sessions in an effort to help the district formulate decisions regarding the inclusions of these topics in its regular in-service activities.

I hope you will find the sessions of interest to you and we appreciate your willingness to participate.

See you Wednesday.

Sincerely,

Joseph M. Angileri

Joseph M. Angileri, Director
Special Education

JA:vp

APPENDIX G

EVALUATION QUESTIONNAIRE FOR THE IN-SERVICE EXPERIENCE

IN-SERVICE EVALUATION FORM

Name_____

1. Do you think all the district's elementary teachers should be exposed to classroom meetings and have the opportunity to conduct one. Why? Why not?

2. What specific things did you like about classroom meetings?

3. In general, how would you rate the effectiveness of the classroom meetings which you held?

4. How many classroom meetings did you have with your class? _____

5. List some of the topics of your classroom meeting.

6. Do you plan to incorporate classroom meetings in your teaching next year?

7. Would you favor all the district's elementary teachers being exposed to the use of the Self Esteem Inventory? Why? Why not?

8. What did you feel was the most significant thing you learned from using it?

9. Did you use any of the information gained through the Self Esteem Inventory in your discussion with parents during conferences? If yes, elaborate.

10. Would you ever use the inventory another year? When? Why?

11. In what ways have the various consultants helped you during the course of the In-Service project?

12. How could the consultants be better utilized?

13. What value do you see to be gained from the use of interaction analysis?

14. Did it make you look at your verbal techniques with children?

15. How could you utilize interaction analysis in your classroom?

16. Is this a topic that more teachers should be exposed to? Why? Why not?

17. Do you plan to use interaction analysis in your teaching next year?

18. Would you recommend a series of similar in-service sessions for various teachers next year? Elaborate.

19. If you could, how would you change the format or the content of these sessions? (Time of year, number of sessions, size of group, length of session, materials covered, consultants, etc.)

20. Would you recommend that the sessions continue on released time? If so, why?

21. Did the sessions cause you any inconveniences? If so, explain.

OVERALL RATINGS

(circle one)

Please make a judgement of the overall quality of the following aspects of the in-service program.

GLASSER TAPE	SELF ESTEEM MATERIALS	INTERACTION ANALYSIS MATERIALS
1. Excellent	1. Excellent	1. Excellent
2. Good	2. Good	2. Good
3. OK	3. OK	3. OK
4. Poor	4. Poor	4. Poor
COMMENTS:	COMMENTS:	COMMENTS:

CONSULTANT HELP	VIDEO TAPES ON CLASSROOM MEETINGS	LARGE GROUP DISCUSSIONS	SMALL GROUP DISCUSSIONS
1. Excellent	1. Excellent	1. Excellent	1. Excellent
2. Good	2. Good	2. Good	2. Good
3. OK	3. OK	3. OK	3. OK
4. Poor	4. Poor	4. Poor	4. Poor
COMMENTS:	COMMENTS:	COMMENTS:	COMMENTS:

TOTAL EVALUATION OF IN-SERVICE PROJECT

1. Excellent
2. Good
3. OK
4. Poor

COMMENTS:

Please place the following aspects of the In-Service program in the order of their greatest value to you as a classroom teacher. A (1) should indicate the aspect that you found most valuable to you as a teacher, while (8) would indicate that aspect of the in-service program which was of least value to you. Please include any comments you deem necessary.

____Glasser Tape	____Consultant Help
____Self-Esteem Material	____Discussion in large groups
____Interaction Analysis	____Small Group Discussion
____Classroom Meeting	____Video Tape on Classroom Meetings

APPENDIX H

RESPONSES OF EXPERIMENTAL SUBJECTS TO EVALUATION INSTRUMENT

IN-SERVICE EVALUATION INSTRUMENT

SUMMARY OF RESPONSES

1. Do you think all the district's elementary teachers should be exposed to classroom meetings and have the opportunity to conduct one? Why? Why not?

   1) Yes. Classroom meetings are a helpful aid to the teacher as well as the students in getting to know each other. They are also a good way to find out what subjects the children would like to spend time on.

   2) Yes. I think often times they provided additional insight into class personalities. The quiet children spoke more freely, a benefit to all children.

   3) Yes, (the word all is rather confining, though). I think it helps the children and teachers get to know each other better. It allows children to speak up that might not in the regular situation. They can help to straighten out problems that concern the children.

   4) Yes, to get to know the child better. Should start around the first of school year.

   5) Yes, many teachers in my building expressed interest in them. I think they are very beneficial to children and in the beginning of the year can help the teacher to more readily learn about the children in her class.

   6) Yes. I feel the classroom meeting is very beneficial--especially at the elementary level. It helps a great deal to establish rapport with the class. I explained it to one teacher in my building who used it and found it worthwhile also.

   7) Yes. I found it valuable--the children enjoyed them--they seemed relaxed and open during the discussions which I think was quite beneficial for them.

8) Yes. Because I honestly feel that this is the way for children to learn to solve many problems of life and to become more successful adults. The meetings should begin in Kindergarten and I'm sure that in three or four years that we teachers can see more children solving problems (and doing them successfully) with less interruptions in classroom time because of behavior or inattention because of problem worries.

9) Yes. The value of such meetings could be better determined if conducted on a larger scale with more teachers participating with the discussions of topics and ideas for guiding.

10) Yes. Because I feel all classes should have the "feeling" that a classroom meeting brings about in the room.

11) Yes. The kids really enjoyed them and many teachers in my building were interested in having them but didn't know how to go about them. When only certain classes have them, others feel left out in their room.

12) Yes. They are very good in finding out what is going on in the heads of the children.

13) Yes. To feel more free with children. To get to know their children better. To have a more relaxed classroom atmosphere.

14) Yes. Teachers should spend more time listening to the views of the students. They gave teachers and students more insight into each other.

15) Yes. The children in my classroom really look forward to having our classroom meetings. They even like to prepare songs or poems to begin the meeting.

16) Yes! They would prove beneficial insofar as <u>really</u> becoming acquainted with the child's thought process in that this technique allows a child true self expression.

2. What <u>specific</u> things did you like about classroom meetings?

1) The closeness of the group during the meetings. The meetings were a break in the regular schedule and they were fun because they were different. Many good ideas were brought up. Students who were low achievers were often more well read than I thought.

2) The honesty with which the children spoke and the interest they had in problem solving. I found you could actually learn from first graders.

3) Helped me to relate better to certain children. Allowed many children to express themselves freely. A classroom problem got solved.

4) The children feeling free to express their feeling to the teacher and one another.

5) They give children a chance to express themselves and can give them a sense that their ideas are worth saying to others.

6) The children opened up and said more than usual--especially the quieter children. Some of the poorer students (academically) astounded me and other students as to what marvelous ideas and comments they made. It established a definite rapport among my students and with me as far as planning things and discussing topics of importance to them.

7) I think the relaxed attitude of the children was a good point. After the initial meeting they realized they could verbalize freely and they did so.

8) Each child had his chance to express his feelings or thoughts (even though some were silly) on problems--learned to listen to others and learned that he could come up with solutions that others felt very good about and he in return found solutions that he had not thought of--my shiest one even came up with very good ideas.

9) Children could say what they wanted to. Children could express how they feel.

10) It gave the children an opportunity to express their feelings without repercussions from the teacher. It also helped to bring out and solve some of the problems.

11) I liked the chance to just talk with my class--not as a teacher, but more as a friend. My class was somewhat closer after a few meetings, and I liked the fact that they enjoyed them. It was the perfect chance to discuss things going on in class without having it regarded as discipline.

12) They gave the children a chance to express themselves freely. The children felt more relaxed about talking with me.

13) The children felt that I was more concerned about their feelings toward them.

14) Trying to include each child in the discussion; seeing how children feel about certain topics; interaction between students.

15) I like to give the children an opportunity to think for themselves. They enjoyed relating previous experiences to the topic.

16) The freedom of expression the child experiences. The informality of just chatting as people. The spontaneity of the children's interaction.

3. In general, how would you rate the effectiveness of the classroom meetings which you held?

1) The first few meetings went well. We had one in which everyone talked at once, so then we made rules to govern our meetings. The rest of the meetings again were very effective.

2) Very good.

3) I felt the meetings were quite effective over 3/4 of the time. The other meetings were good in exchanging ideas, but led to no general conclusions.

4) Satisfactory +.

5) It took a while to get the children used to the idea of meetings but, after they were, they helped many children realize that other people have ideas and feelings that they should remember when they do things.

6) Very effective and very enlightening, not only to students but myself also. This is an extremely effective "tool."

7) I think if we had used them all year they would have been very effective.

8) Good. But feel that they would have been excellent had I started them earlier in the year. Hope they will be next year.

9) About 50% were of value the others were just relating experiences. First graders need to be guided more in this activity to come to valuable solutions to a problem. The teacher must then be knowledgeable about the objectives of the meetings and able to ask leading but not value judging questions.

10) I would say more than half of them accomplished only a change from the regular routine at which time the students were allowed to act silly.

11) Very effective. Several of the children's ideas were tried. Some were good, others were discontinued, but things were learned from both.

12) I had a hard time keeping the children on one topic or leading them to a decision. Most of the children wanted to talk and got a chance to express themselves.

13) Excellent--the children enjoyed them and learned more about each other's feelings.

14) Very good.

15) Good. In order to have a good classroom meeting though, it is important to let the children know you are not trying to give them your ideas, but that you want them to give you their ideas.

16) Satisfactory! (Perhaps starting from the beginning of the year would have improved the overall effectiveness.

4. How many classroom meetings did you have with your class?

1)	22	9)	14
2)	18	10)	16
3)	12	11)	8
4)	16	12)	9
5)	16	13)	8
6)	7	14)	9
7)	8	15)	6
8)	21	16)	6

The range in number of class meetings held is from 6 to 22, with an average of 12.

5. List some of the topics of your classroom meeting.

National and World Concerns

War (2)
Space (2)
Astronauts and Coverage
Water Pollution (5)
Air Pollution (6)
Drugs (4)
Black Children

Personal Concerns

Self Improvement
Careers (3)
Dreams (4)
Things We Enjoy
Friends and Getting Along (7)
Girl-Boy Relationship (3)
Vacations (2)
Generation Gap (2)

School Concerns

Report Cards (3)
Parent Conferences (2)
Peer Relationships at School (4)
Homework (7)
Schools without Teachers (3)
Likes about School
Dislikes about School
Our School (4)
Evaluation of Class Project
Classroom Problems and Procedures (14)
Safety and Safety Rules (3)
Safety Patrol (2)
Individual Students (2)
Students Teaching Class
Substitute Teachers
Going to Another School
Field Trips

Miscellaneous Concerns

Sports (4)
Sport Personalities (3)
Being a Good Sport (3)

6. Do you plan to incorporate classroom meetings in your teaching next year?

1) I plan to continue with meetings next year. How many will depend upon the class itself.

2) Yes.

3) Yes. Starting right off in the fall.

4) Yes.

5) Yes.

6) Yes. This is very similar to the way I want to teach (Social Studies and Science especially).

7) Yes. I think if they are included at the outset of the year they will be more effective.

8) Definitely yes.

9) ---

10) Yes.

11) Yes.

12) Yes.

13) Absolutely.

14) Yes.

15) Yes.

16) Yes.

7. Would you favor all the districts teachers being exposed to the use of the Self Esteem Inventory? Why? Why not?

1) Yes. It is a good way to find out how the children think and what they feel about themselves.

2) Yes. Tremendous help in understanding children, even the ones you think you understand.

3) Yes. It certainly would help you in working with specific children.

4) Yes. But reworded for each grade level.

5) Yes. It is interesting information that lets you know what children think of themselves. It could help in teaching and disciplining individuals.

6) Yes. It is a good technique for elementary. I'm not sure it would be valid for above 6th grade--the students would be able to figure out the questions. It reinforces some of the ideas I had about various children's self image. It also helped me help them. And pointed out some areas where a child felt insecure allowing me to try to build up those areas. I do feel some children "bluffed" their way through the test and didn't really evaluate themselves. In those children I found they were deluding themselves.

7) Yes--at the beginning of the year I feel that a teacher could learn about the child through it. When we gave it this year I was surprised at the results. I thought I knew the children.

8) Yes, to help teachers better understand pupils at beginning of year.

9) Yes. Let teacher then decide if it would benefit herself or the class. In many cases the inventory would not be necessary but could be beneficial if a teacher feels a child thinks too much of himself or too little of himself.

10) Yes, but at the beginning of the year, then at the end to see if the teacher has had any effect on the student.

11) Yes, if given at the beginning of the year it would give an insight into behavior of individual students.

12) Yes, it should be used earlier in the year so the teacher can get to know her children better. An easier form is needed for early elementary.

13) Yes. At the beginning of the year to get to know the children better.

14) Yes. If it was completely revised.

15) Yes. Only if it were revised. It should gave three categories. Always, never and sometimes. I think you would get a better evaluation. There is a big difference between always and never.

16) Yes. To help them plan activities related to a child's interests and self concept.

8. What did you feel was the most significant thing you learned from using it?

1) My impressions of the children and their impressions of themselves are often different.

2) That I didn't know some of my students as well as I thought I did.

3) A child's outward appearances can be deceiving; one boy, who scored lowest, does not appear that way at all. Others scored as expected from observation.

4) What they really thought of themselves.

5) That my class as a whole has a much lower self esteem than I would have expected.

6) It enlightened me and made me more aware of some children's feelings.

7) Pretty well at that time.

8) Give at the beginning of the year please. I was surprised at some of the answers and feel that they weren't a true evaluation of some as some questions confused these students. I did find that I had agreement with most of them.

9) Good students do not always think well of themselves. Poor students do not always think poorly of themselves.

10) Nothing--I feel I already knew my students very well, except one who was a good student and should rate higher.

11) Students attitude toward family and parents was enlightening in several cases.

12) After working with the children all year, I could guess the outcome of it. It did help me be more positive about my own conclusions.

13) Who my intelligent but silent students were.

14) I didn't really learn anything from it except children wanted to make sure they answered the questions "correctly" not necessarily how they felt.

15) Almost all children think they are popular and doing at least average work in school. Almost all children want to run away from home at some time. They all think their parents don't understand them.

16) Being able to justify a child's actions in relation to how he truly perceives himself.

9. Did you use any of the information gained through the Self-Esteem Inventory in your discussion with parents during conferences? If yes, elaborate.

   1) No. I felt it was personal. If I told the parents that their child would like to run away from home, the child would often feel betrayed and not trust me.

   2) I only mentioned that we had taken the inventory, and what it basically was.

   3) Yes, one boy who does not relate well with peers. This information only reinforced what we already knew and spurred parents to get further help.

   4) No but will another year.

   5) No.

   6) Yes, but not directly quoting from the inventory. I discussed the child's poor self image, which the parents had noticed at home also. We discussed what we could do to improve her image. It helped.

   7) No.

   8) Yes, one child who felt unloved at home, parents and sisters too busy. I talked with the mother about relationship and tried to guide her in seeing how child felt--have noticed some improvement.

   9) Yes. Mentioned that child had low self concept (explanation of) how to help child.

   10) No.

   11) No.

   12) Yes. One child feels that no one likes him and I related this to his mother and also had a talk with the child about ways to make friends.

   13) No.

   14) No.

   15) No.

   16) No. (Would have liked to, though.)

10. Would you ever use the inventory another year? When? Why?

1) Yes. Although I've made a modified version that I would use. Some of the questions weren't clear to the children.

2) Yes. At the beginning and end of next year. However, I would do some re-wording.

3) Yes. I expect to administer it the first part of October. I will have had the chance to observe the children and then can use the information to begin some sort of program to help the low scoring children.

4) Yes, in October and again in May.

5) Yes, next year to help plan classroom meetings and to help individuals improve their self esteem.

6) Yes, next year at the beginning (Oct.) of the year and again in March to see if their self image had changed.

7) Yes, at the beginning of the year to learn about my students.

8) Yes, next (I hope) at beginning of year. I feel that perhaps I could get an insight into the pupil early that would help me understand and help child with needs.

9) No. Unless a child seemed to be having social (peer) or possible home problems. Could find where child fits himself into the social scheme and how to possibly help him. Not that beneficial at a total class.

10) Yes. Early in the year.

11) Yes. To help me know more about my class in general and individuals.

12) Yes. At the beginning of the year and end of the year. At the beginning to get to know them better and at the end to see how much progress they have made on their self image.

13) Yes. At the beginning and the end of the year to get to know the children better and to help those who have a low self concept of themselves.

14) Yes. I would either give it at the beginning to gain early insight into each child or to wait until I feel I know them. Then use it as a comparison.

15) Yes. At the beginning and at the end. It might be good way to evaluate the impression you have made on the children or how they have developed during the year.

16) Yes. At the beginning of the school year and the end.

11. In what ways have the various consultants helped you during the course of the In-Service Project?

1) Their discussions were helpful and the children enjoyed having visitors, especially the men.

2) One was helpful in helping me to understand how to begin a classroom meeting and how to help certain students.

3) Conducted classroom meeting, helped with techniques. Coding techniques and how they can be of value. Discussed individual children.

4) The first two helped me conduct a classroom meeting. Very helpful. The next offered his help with children.

5) Helped to explain interaction analysis and classroom meetings.

6) Their comments and opinions helped me to realize more and gain more from the techniques we tried.

7) By discussing the various aspects of the program.

8) Been most patient and understanding. Have helped in solving problems and very encouraging.

9) Guided questioning for classroom meeting (conducted meeting himself). Evaluation of a teacher-led meeting. Great help. Aided in suggestion of topics. Great help. Discussion of coding and type of teaching going on.

10) Conducted a meeting. I enjoyed watching students' reactions. Small group meeting on interaction--had good discussion.

11) Mostly by encouragement to try different methods and insight into what happened when I did. I knew that they were there.

12) They gave me a few ideas for topics for the classroom meetings. They were avialable when you needed them and I'm sure I could have made better use of them.

13) Given assistance and ideas for the classroom meetings.

14) To some extent. They helped to give a clearer picture of different things we have been doing.

15) One directed a classroom meeting. Others stopped in to see if I needed any help and gave me suggestions for working with children.

16) Private consultations, conducted classroom meeting!

12. How could the consultants be better utilized?

1) Their time was spread too thin. I could have used more help. In the time allotted they did a good job.

2) More frequent visitations if you desire.

3) More frequent visitations along with real help.

4) Seeing more of them.

5) I'm not sure, it would depend on how much a teacher wants assistance.

6) I feel too much was pressed upon them all at once. They couldn't devote time to the children they saw weekly and to our in-service project as well, especially when assigned to different buildings than they had been regularly scheduled.

7) I felt they did a good job considering all the other work they had.

8) Be available more frequently at beginning of year and later when crises arrives suddenly.

9) More observation and suggestions and various techniques to be implemented in the areas we worked.

10) More frequent visitation.

11) More time to talk to them.

12) They could conduct first classroom meeting so you could better see its purpose and the correct way of doing it.

13) Could conduct the first classroom meeting for us to watch. They could at the beginning of next year have meetings with teachers of all the schools to explain classroom meetings.

14) I really don't know.

15) Don't know.

16) More frequent visitations and help.

13. What value do you see to be gained from the use of interaction analysis?

1) I could be used with new teachers, student teachers and for observations. I don't see much value otherwise.

2) As one teacher mentioned you could see if you are teaching in patterns or "ruts."

3) Examining my personal techniques in the classroom, changing and improving them.

4) May be used by an administrator if used more than once. Could not get a true picture once a year.

5) Perhaps it would help teachers to better evaluate themselves.

6) It would be useful to a first year teacher, or a student teacher. As for myself, I evaluate myself and listen to my teaching during every lesson. I feel I know what kind of interaction I am getting from students.

7) I didn't feel I learned anything from this.

8) Can see how it would help teacher evaluate self--didn't feel successful with it this spring--hope to use next fall for better results.

9) Type of teaching going on in class: teacher or student oriented.

10) Helping new teachers. Student teachers. Seeing if you are in a rut.

11) Very little value to me personally, except to get me thinking about my teaching technique.

12) I was able to see the patterns of my teaching. It would be better used at the beginning of the year when things aren't so busy and the children are more cooperative.

13) To see what patterns you fall into.

14) If it was used as one of the teachers suggested over a period of time so you could see a pattern, maybe it would be of value, I don't think so, however.

15) It would show what your teaching pattern is. It would also show how the children react to your questions. Is there a lot of silence, confusion, praise, acceptance of their ideas.

16) A valuable observation technique for administrators. A tool in assisting a teacher to make value judgments pertaining to his/her teaching techniques and ability.

14. Did it make you look at your verbal techniques with children? How so?

1) Not really. I tape myself or a lesson once in a while and look at my verbal techniques that way.

2) Just looking and reading over the categories made me examine this more.

3) ---

4) Yes, made me more aware of how I was teaching.

5) Not really, perhaps I might talk less.

6) Not any more than usual. I listen to myself as it is and my verbal techniques.

7) No.

8) Definitely!

9) ---

10) Yes, I felt I wasn't giving enough verbal praise.

11) Yes. I would think about it from time to time as I discussed things with the class, but not a lot.

12) Yes. I need to praise them more verbally.

13) It made me think about what I was saying more. Was I lecturing too much, or not giving enough praise, etc.

14) I was too busy with the mechanical aspect of it all.

15) I taped a math lesson. I believe I should have lectured less and initiated more group participation.

16) Yes. Taping lessons, I examined how I truly conduct a class insofar as verbal comments made to the entire class and individual children.

15. How could you utilize interaction analysis in your classroom?

1) I thought about it. But because it is the end of the year I didn't have time to do much about it.

2) I wouldn't really care to, there are more interesting things to try.

3) To see if I am achieving my objectives.

4) ---

5) I'm not sure how you would use it in your classroom.

6) Strictly for evaluation of teaching techniques and evaluation of pupil response from a specific class for a specific lesson.

7) I don't think I would.

8) To evaluate myself--myself.

9) Type of teaching as opposed to objectives; how change to meet objectives.

10) If I had planned a certain lesson and I wanted to say for example a lot of student response and interaction I could tape the lesson and tell afterwards by listening to it.

11) Someone would have to come in and do it though.

12) At the beginning of the year to see where you need to improve your techniques with the class.

13) Use it at the beginning of the year to see whether you should be more direct or indirect in your teaching.

14) I don't really think you can use it effectively in your classroom.

15) I wouldn't.

16) Have co-workers code a lesson. Tape lessons--video tape also.

16. Is this a topic that more teachers should be exposed to? Why?

1) Yes. It is an interesting topic. Many teachers don't know how to analyze themselves and this technique would be helpful for them.

2) Yes. But not dwelled on as long as we did.

3) Yes. As a personal method of improving and changing your teaching.

4) ---

5) Possibly, but simply so that they would be aware, as professionals, of things that are happening in education.

6) Those who are having difficulty teaching a class, it would be beneficial to them for analyzing their teaching lessons.

7) I don't think so--it would depend on whether the teacher wanted to use it. It might be interesting for a beginning teacher.

8) Yes.

9) Yes.

10) ---

11) Yes. It might be of help to some--especially student teachers.

12) It is very confusing. I think the principal could and does do much the same thing when he observes you.

13) Not really, it is too difficult a task to learn to code and then be able to use it correctly without a lot of practice.

14) I don't think so.

15) I don't think teachers would be very interested in doing this. I believe it would be a valuable tool in evaluating student teachers.

16) Yes. To help them make a value judgement as to the techniques they use.

17. Do you plan to use interaction analysis in your teaching next year?

1) Maybe
2) No
3) Perhaps
4) No
5) No
6) Yes
7) No
8) Yes
9) No
10) No
11) Yes
12) No
13) No
14) No
15) No
16) Yes

18. Would you recommend a series of similar in-service sessions for various teachers next year? Elaborate.

1) Yes. They were very beneficial. They would be more beneficial if held in October instead of February.

2) Yes. They were personally enjoyable and informative and other teachers should have a chance to benefit from these.

3) Yes. But earlier in the year.

4) Yes.

5) Yes, especially classroom meetings. I feel that any teacher could benefit from some of these programs.

6) Yes, but start in October. It would be much more beneficial.

7) Yes. I found them informative and interesting. I think other teachers would feel the same. I especially liked being exposed to the classroom meetings.

8) Yes. I feel that they are most beneficial to me and would be to others. Eventually getting pupils who have learned to solve problems and showing a desire to be successful and will work at it.

9) Yes. Exposed to new techniques that might be implemented in all classrooms.

10) Yes, but why not once a month throughout the year.

11) Yes, they have been very beneficial to me this year, especially the classroom meetings.

12) Yes, could be held at each school possibly as teachers meetings. This way you wouldn't take away from children's classroom time.

13) Yes, could be held at separate schools as a teachers meeting and not taking classroom time away from the children.

14) Yes, it you started at the beginning of the year, somehow tied everything together and then had a follow-up--great.

15) Yes.

16) Yes. I personally found these enjoyable and informative. These sessions provided me with some new approaches which helped my effectiveness as a teacher. (P.S. enjoyed lunch.)

19. If you could, how would you change the format or the content of these sessions? (Time of year, number of sessions, size of group, length of session, materials covered, consultants, etc.)

Format Changes

13 teachers felt that the sessions should begin in the fall and continue through the year.

8 felt that more sessions should be held.

11 felt that more teachers should be involved. Maximum listed was 30.

5 felt that large group sessions should be longer (3 hours).

Content Changes

3 more video tapes
3 more speakers
6 less interaction analysis
4 add contingency contracting
2 let group decide topics
1 new teaching theories
1 how to help slow learner
1 give college credit
1 more teacher discussion
1 replace Glasser tape
1 change groups more often

20. Would you recommend that the sessions continue on released time? If so, why?

1) Yes, otherwise carry college credit.

2) Yes, it relates to the job.

3) Yes, other activities would conflict.

4) Yes, it relates to school.

5) Yes, teachers more willing to participate than after school.

6) Yes, it's about children.

7) Yes, it's more convenient.

8) Yes, don't feel rushed or pushed.

9) Yes, other classes and activities would interfere with after school meetings. Even though helpful people might be reluctant.

10) Yes, this involves our job.

11) Yes, it's part of teaching--learning new techniques.

12) No, the children didn't like me being away so much.

13) No, I didn't like being out of class so much.

14) Yes, it's more convenient. There wouldn't be any incentive to come otherwise.

15) Yes, teachers are tired at end of day.

16) Yes.

21. Did the sessions cause you any inconveniences? If so, explain.

1) No. We had some bad substiutues but we always get some bad apples.

2) No.

3) No.

4) No.

5) No.

6) No, except occasionally. I had a very unqualified substitute, who upset my children once.

7) No.

8) No.

9) ---

10) No.

11) No--on the contrary!

12) Yes, my children were getting very upset with my being gone so much. I realize there weren't that many afternoons taken, but my children didn't feel that way. They do not like having a sub.

13) A little--the children didn't like me leaving. It seemed to disturb them when I left each time. They would say, "Are you going again? Do you have to go?"

14) No.

15) No.

16) No.