INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.

2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.

3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.

4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.

5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

Xerox University Microfilms
300 North Zeeb Road
Ann Arbor, Michigan 48108
CLEVELAND, Bernard Fred, 1937-
MEASURING THE IMPACT OF GORDON'S TEACHER EFFECTIVENESS TRAINING ON TEACHERS' OF SOCIAL STUDIES.
The Ohio State University, Ph.D., 1973
Education, teacher training

University Microfilms, A XEROX Company, Ann Arbor, Michigan

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED.
MEASURING THE IMPACT OF GORDON'S TEACHER EFFECTIVENESS TRAINING ON TEACHERS' OF SOCIAL STUDIES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Bernard Fred Cleveland, B.S., M.S.

* * * * * *

The Ohio State University
1973

Reading Committee:

Dr. Robert E. Jewett
Dr. Paul R. Klohr
Dr. James K. Duncan

Approved by

[Signature]
Adviser
Faculty of Humanities Education
ACKNOWLEDGMENTS

I am indebted to many people for their assistance in helping me earn my doctoral degree.

Dr. Robert Jewett exhibited infinite patience, and his willingness to allow this writer the freedom to pursue his interests, will always be gratefully remembered.

Dr. Paul Klohr was a reservoir of humanism. He filled this writer's cup many times. His kindness, consideration, and willingness to listen helped to dispel much anxiety.

Dr. James K. Duncan played an instrumental role in developing the design for this study and in analyzing the results. He too, was extremely patient, gave freely of his time, and made many wise suggestions which bettered the study.

The eleven teachers and their students who worked with me were all cooperative and did whatever they could to assist the development of the study. Their efforts were most appreciated.

Madhukar Golhar, Ted Smith, and Sam Cassandra were very helpful in assisting with the computer programming for the study.
Libby Zwayer was an efficient, accurate, and kind typist and her work has done much to aid the appearance of this study.

The major expression of my gratitude must go, however, to my wife, Susan, and my children, Bret and Anne. My wife contributed moral support, understanding and encouragement. In addition, her monetary contribution kept the family free from need. My children contributed love and understanding at times when it was sorely needed. I will always be most appreciative of all of their efforts.
VITA

April 21, 1937 . . . . Born - Oneonta, New York

1958 . . . . . . . . B.S. in Elementary Education with Social Studies Specialization, State University, Oneonta, New York


1961 . . . . . . . . M.S. in Elementary Education with Social Studies Specialization, State University, Oneonta, New York

1961-1963 . . . . Graduate Work--Social Sciences, University of Northern Colorado, Greeley, Colorado

1963-1964 . . . . Assistant Professor of Education, Illinois State University, Normal, Illinois

1964-1971 . . . . Associate Professor of Social Studies, Marshall University, Huntington, West Virginia

1971-1973 . . . . Teaching Associate, Department of Humanities Education, The Ohio State University, Columbus, Ohio

PUBLICATIONS


FIELDS OF STUDY

Major Field: Social Studies Education

Studies in Social Studies Education. Professor Robert E. Jewett

Studies in Curriculum Theory. Professor Paul R. Klohr

Studies in American Social Thought and Reform. Professor Robert H. Bremner
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>VITA</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>viii</td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Problem</td>
<td></td>
</tr>
<tr>
<td>Questions</td>
<td></td>
</tr>
<tr>
<td>Procedures</td>
<td></td>
</tr>
<tr>
<td>Overview</td>
<td></td>
</tr>
<tr>
<td>II. REVIEW OF RELATED LITERATURE</td>
<td>8</td>
</tr>
<tr>
<td>The Schools and Dehumanization</td>
<td></td>
</tr>
<tr>
<td>The Student's Self-Concept and the Schools</td>
<td></td>
</tr>
<tr>
<td>The Humanistic Classroom</td>
<td></td>
</tr>
<tr>
<td>In-Service Education Studies</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td></td>
</tr>
<tr>
<td>III. TREATMENT</td>
<td>39</td>
</tr>
<tr>
<td>IV. RESULTS</td>
<td>104</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>Development of the Instruments</td>
<td></td>
</tr>
<tr>
<td>Descriptive Data on the Instruments</td>
<td></td>
</tr>
<tr>
<td>Application of the Instrument to the Question</td>
<td></td>
</tr>
<tr>
<td>Item Analysis Data</td>
<td></td>
</tr>
<tr>
<td>Results of the Statistical Data</td>
<td></td>
</tr>
<tr>
<td>Anecdotal Information</td>
<td></td>
</tr>
<tr>
<td>Procedures</td>
<td></td>
</tr>
<tr>
<td>Results of the Anecdotal Material</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td>vi</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Summary of Pre Test, Post Test and Post-Post Test Descriptive Statistical Data for Treatment and Control Groups</td>
<td>110</td>
</tr>
<tr>
<td>2.</td>
<td>Analysis of Variance of Repeated Measures</td>
<td>111</td>
</tr>
<tr>
<td>3.</td>
<td>Trend Analysis of Variance of Repeated Measures</td>
<td>111</td>
</tr>
<tr>
<td>4.</td>
<td>Tape Ratings for Treatment and Control Groups</td>
<td>115</td>
</tr>
<tr>
<td>5.</td>
<td>Impact of Training Program on Treatment Group</td>
<td>125</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

As a result of rapid technological changes within the framework of instructional methodologies, and because of innovations in educational philosophy, the role of the classroom teacher in his relationship with his students stands on the verge of radical change. These changes, in all probability, will cause the teacher to depart from the traditional authoritative role of information-giver to one that requires skills and functions for which most teachers have not received much training. Included in these functions would be the following:

1. Facilitating self-directed learning
2. Conducting productive student-centered classroom discussions
3. Serving as an educational consultant to students
4. Facilitating student problem-finding
5. Fostering a classroom climate of intellectual freedom and creativity.

---

1 Thomas Gordon, "A New Model for Humanizing Families and Schools," p. 5.
With this new role the teacher sheds the traditional role of disciplinarian, which involves the administration of reward and punishment in an effort to control student behavior, and concentrates on:

1. Fostering students' self-control and self-discipline to avoid both authoritarian or permissive approaches to discipline
2. Developing self-responsibility and independence in students
3. Fostering student participation in rule-setting
4. Resolving classroom conflicts through mutual problem-solving.  

A vital part of this new role would include new communication skills which would have a high probability of:

1. Enhancing students' self esteem
2. Reducing students' dependence
3. Helping students solve their own problems
4. Making students feel understood
5. Reducing the psychological distance between teacher and students
6. Reducing student hostility toward teachers
7. Influencing students to have consideration for the needs of teachers and other students
8. Producing a relationship of mutual respect between teacher and student. 

The effects of the ideas that are listed above would also have a high probability of making the schools less dehumanizing, the teachers and administrators more aware of the need for students to

---

2 Ibid.
3 Ibid.
develop positive self-concepts, and for school personnel to create humanistic classrooms.

**Problem**

Many educational critics contend (see Chapter II) that the humanization of education is the important issue affecting education. If one accepts this idea, then one of the groups of teachers who should be very sensitive and concerned with this issue and its ramifications is the group comprising the teachers' of social studies. The focus of this group's efforts center around the study of people. It is therefore essential that the social studies teacher should serve as a model capable of demonstrating a type of communication which will lead to the development of humanistic classrooms, where dehumanization of students does not exist, and where the development of the individual student's self-concept is of paramount importance.

The very real difficulty is how to bring about change in the teacher. How best can the attitudes and values of the social studies teacher change so that he can create a more humanistic classroom? One such method that educators utilize in promoting change is in-service education. This study measures some effects of one such in-service program, Gordon's Teacher Effectiveness Training.

The problem can be simply stated: Will an in-service program make a difference in the behavior of teachers? And
specifically, will Gordon's Teacher Effectiveness Training program encourage teachers' of social studies to become more sensitive in their outlook and to develop more humanistic classrooms?

Questions

The following questions need to be considered.

Will the treatment group, once it receives the Teacher Effectiveness Training:

1. Encourage students to participate in classroom rule-setting more so than the control group?

2. Encourage students to contribute to planning what and how the subject matter will be learned, more so than the control group?

3. Encourage student-centered classroom discussions more than the control group?

4. Allow students to have a percentage of their learning self-directed through projects of their own choosing, other individual work, or group work, more so than the control group?

5. Function more as educational consultants to students than the control group?

6. Be able to accept student expression of feeling and use active listening; be willing to allow and to encourage students to find and deal with their own problems; and to encourage the development of self-control more so than the control group?
7. Modify the classroom environment to prevent unacceptable behavior more so than the control group?

8. Be more willing to express its feelings in the form of an I-Message when someone or something is a problem to them, more so than the control group?

9. Be able to resolve classroom conflicts through mutual problem-solving more so than the control group?

10. Show more empathic understanding, level of regard, unconditionality of regard, and congruence more so than the control group?

11. Generally become more accepting of student behavior more so than the control group?

**Procedures**

As previously indicated, the impact of Gordon's Teacher Effectiveness Training on social studies teachers will be the focus of this study. A random selection of six teachers for the treatment group and six teachers for the control group will be taken from a list of social studies teachers comprising two suburban Columbus communities. The treatment group will be trained using the Teacher Effectiveness Training program. This investigator will select one class from each teacher and administer to each class three instruments calling for a multiple-choice type of response. These
instruments will be the Schuman Student-Centeredness Test, the Barrett-Lennard Relationship Inventory, and a modified form of the Science Activity Checklist. In addition this investigator will observe and audio-tape each class.

A pretest, posttest, post-posttest design will be utilized for this experiment. The experimental group will be instructed by this investigator in the Teacher Effectiveness Training Treatment.

The data analysis employed by this study shall consist of:

a. An item-analysis program to determine the pretest, post-test, and post-posttest mean scores of the two groups to determine if there will be a significant change in student attitudes toward their teachers as a result of the program, and if this is the case, the long-range impact of the Teacher Effectiveness Training program will be determined.

b. An analysis of variance on the gains to determine if there will be a significant difference between the groups as a result of the treatment.

If a difference among treatments exists at the .05 level or above, it shall be considered significant.

The audio tapes will be used to provide anecdotal information that may help to answer the questions.
Overview

This dissertation includes five chapters.

Chapter I. -- Introduction and general overview of the study including a problem statement, procedures, hypotheses, and definition of terms.

Chapter II. -- Review of related literature in four sections: (1) the schools and dehumanization; (2) the student's self-concept and the schools; (3) the humanistic classroom; and (4) in-service education studies.

Chapter III. -- A discussion of the Teacher Effectiveness Training program.

Chapter IV. -- Analysis of results in terms of the questions, and a description of the instruments used in the study.

Chapter V. -- Summary, including interpretations of results, general discussion of the study, and recommendations for further study.
CHAPTER II

REVIEW OF RELATED LITERATURE

Since professional literature is not organized in a way to reveal the direct relationships between "Teacher Effectiveness Training" treatment as defined in this study and other sub areas within the field, this investigator has created four categories to review significant related literature. These are: (1) the school and dehumanization, (2) the student's self-concept and the schools, (3) the humanistic classroom, and (4) in-service education studies.

The Schools and Dehumanization

Many of the recent critics of education have dealt with the question, "What are the schools really like?" (While this section does not attempt to review all of the literature associated with dehumanization and the schools, it does focus on some of the more current literature related to this study.) A discussion of the responses of various educational critics to that question, reveals something of the range of responses and makes clear their focus on the schools as "dehumanizing."
One of the most recent and respected critics of American education, Charles Silberman, has chastised American educators for being "mindless." He states, "At the heart of the problem . . . is the failure to think seriously about purpose or consequences--the failure of people at every level to ask why they are doing what they are doing or to inquire into the consequences."\(^1\) Quoting Erik Erikson who said, "The most deadly of all possible sins is the mutilation of the child's spirit," Silberman charges that schools are obsessed with "silence" and "lack of motion," with lesson plans and petty rules--all of which help to create an atmosphere of distrust. As a result, a crisis has developed in education, the essence of which is that, "Kids are turned off from learning; they see it as something distasteful, and fail to develop the capacity to direct their own learning--essential if they are to make a life in the twenty-first century."\(^2\) In addition, Silberman feels that children are not allowed an opportunity to develop self-discipline.\(^3\)


\(^{3}\)Ibid., p. 3.
Through its operation, the whole educational enterprise transmits a certain philosophy and certain values. Therefore, educators, says Silberman, must realize "that how teachers teach, and how they act, may be more important than what they teach." What he means is that values are shaped more by what we do than by what we say. Consequently, the child learns many values every day from the way the school is structured, how the teachers teach, how he is treated within the structure, what behavior is rewarded, what behavior is punished, etc., the so-called "hidden curriculum."

Estey observes,

In the school the child meets too frequently a massive dehumanizing education. He meets a new and even more demanding conformity and a further suppression of expression arising from his unique self. The teacher, perhaps more than the parent, knows what is 'best' for him. He has to be molded. He has to achieve. He has to give the 'right' answer or else--failure.

Ream continues in the same vein as Estey, when he declares that the student is forced to submit to authority. They have to follow directions, select the "right" answer, and follow teacher-made

\[4\]Ibid., p. 5.

\[5\]Ibid., p. 5.

schedules and deadlines. Furthermore, he concludes,

They learn to generate competition, aggression, and envy in their interpersonal relationships by being forced to work for grades and recognition. In short, they are punished for the crime of youth by being forced to exist with no control over their lives or their destinies.  

Foster and Dorough contend that, "in the schools, students are humiliated, degraded and told of their lack of worth." They also see the student living in an autocratic environment over which he has no control and which leads to a meaningless and irrelevant curriculum that is unable to meet the individual needs of the student. In addition, by placing emphasis upon achievement instead of fulfillment, these authors charge that teachers make "... students more domineering, more aggressive, and more cruel." They pose the question, "What kind of adults will these students become?"

Holt points out that,

For children, the central business in school is not learning, whatever this vague term means; it is getting these daily tasks done, or at least out of the way, with a minimum of effort and unpleasantness. Each task is an end in itself.


9Ibid., p. 102.

10Ibid., p. 102.
The children don't care how they dispose of it. If they can get it out of the way by doing it, they will do it; if experience has taught them that this does not work very well, they will turn to other means, illegitimate means, that wholly defeat whatever purpose the task-giver has in mind. ¹¹

Furthermore, he acknowledges,

To a very great degree, school is a place where children learn to be stupid. A dismal thought, but hard to escape. Infants are not stupid. Children of one, two or three throw the whole of themselves into everything they do. They embrace life and devour it; it is why they learn so fast, and are such good company. Listlessness, boredom, apathy--these all come later. Children come to school curious; within a few years most of that curiosity is dead, or at least silent. ¹²

Holt further laments that,

What is most striking and terrible about . . . school as we see it, and typical of most schools, even more than boredom and mindlessness, is the unrelenting and merciless attack it makes on the dignity and self-respect of the students. In countless ways they are taught to believe that they are worthless, that they have no rights and deserve none, that even to imagine that they might have some rights, some individuality, some dignity, is itself a kind of crime. ¹³

Allen insists that, "We fail to treat them students as human


¹²Ibid., p. 196.

beings who have awareness, dignity, will humor and love."\(^\text{14}\)

"Perhaps," he states, "the child's most crucial need is the need to be accepted for what he is rather than being molded into what the school thinks he should be."\(^\text{15}\)

To give some credence to these charges, a study conducted in a Washington, D.C., junior high school by Meltzer and Levy is cited. These researchers attempted to identify some of the causes of dissatisfaction with school and the various factors and/or characteristics of students, school and home which might lead to school dropout. The subjects of the study were 12 ninth-graders and six teachers. Although chosen by teachers, the students represented achievers, non-achievers, trouble-makers and conformists. The teachers participating in the study did not select or instruct the students. Both students and teachers were of mixed sex and were 75 percent Negro. Each group met for three one-hour sessions separately, then met together for one one-hour session. Included in the gathering of data were questionnaires, the notes and categorization of statements compiled by observers during group sessions, and diaries that each subject completed after each group session. From


\(^\text{15}\)Ibid., p. 71.
these data, statements were organized that were either critical or positive toward school, students and parents.  

Student criticism centered around the complaints that school was boring, that teachers didn't allow enough class participation and discussion, that teachers were unfair and unjust and that they used too much control over students, and that teachers showed favoritism among students. Particularly upsetting to the students was the feeling that teachers made "... the student feel small, childish, unimportant, and less than human." Students, then, seemed preoccupied with the problem of self-esteem. While the school inherited this problem, Meltzer and Levy state that the school can have a tempering effect on the problem or can, through the actions exhibited there, have the effect of increasing those feelings. The authors feel there is some evidence to support the attitudes of the students.

The teachers in the study felt that the curriculum for their inner-city children was irrelevant, that their training for inner-city children was inadequate, and that their ability to "manage" their

---


18 Ibid., pp. 15-16.
students and create a quiet environment where their students could learn was at best doubtful. The authors maintain that the teachers, lacking any support from the parents of their students, feel lost or stranded. Consequently, a self-fulfilling prophecy exists on the part of both teachers and students—the difficulties that the students face lead them to blame the teachers; their difficulty in learning and in their behavior in the classroom produces despair among the teachers; the teachers then resort to the techniques of discipline and control; the students are then convinced that their original feelings about the teachers are correct and they show more hostility toward the school; the teachers are then convinced that they are correct in their feelings about the students, and their need to resort to more stringent control, discipline, and punishment is reinforced.

Meltzer and Levy conclude that for the prophecy to be broken, a sense of community would have to prevail. Contacts between teachers and students will need to be more frequent, particularly outside the usual teacher-student pattern where the power and status relationships are less clear-cut.

---

19 Ibid., p. 17.
20 Ibid., p. 18.
21 Ibid., p. 19.
22 Ibid., pp. 19-20.
It would also be necessary for students to become participants in decision-making and in deciding what programs, rules and regulations would be utilized in their school.  

Commenting on the problems related to the achievement of students in the public schools, Doig notes that the student learns early that competition is considered by the teacher to be, if not the only motivation, at least the most important. He also learns, claims Doig, to suppress his feelings. As a result, a contract is developed, which if verbalized would read:

We, the undersigned students, in the interest of survival, agree to compete to such a degree as to fill the requirements set by the teacher, but not to the extent that we violate our pledge to be dishonest about our feelings, both with ourselves and with one another.  

Doig calls for a new contract that would create "a climate of openness and humanity," one that would stress values and skills over content. This new contract he sees as preparing

... tough, emotionally strong people... 'who' are required to share in setting learning goals for themselves and for the group. It will be a classroom in which students run the scary risk of growth through the honest evaluation of themselves and of one another and of the teacher... Perhaps most important of all, the new contract will be an open one, openly negotiated.

---

23Ibid., p. 20.
26Ibid., p. 30.
The classroom would then be construed not as a preparation for life, but instead as life itself, with all the accompanying risks and rewards.\textsuperscript{27}

\begin{center}
\textbf{The Student's Self-Concept and the Schools}
\end{center}

This section further clarifies the effects the school has upon the self-concepts of students.

Wagschal attacks the educational system for its systematic destruction of the students' self-confidence. He details the ways in which this is accomplished: the "System" determines the goals of the student, thereby implying that the student is incapable of selecting his own goals; the student is constantly reminded that he is ignorant, that he does not have either the ability or skills to find out what he wants or needs to know, and that he is incapable of evaluating himself. The tendency of parents and teacher to equate grades and personal worth often leads the non-achieving student to think that since he does not achieve, he is therefore "bad."\textsuperscript{28}

Wagschal continues,

We are, in short, a society overflowing with people who have very little self-confidence, and this is at least in large part due to our schools and our teachers. Needless to say, the lack of self-confidence in my generation can be traced to the same problem in the generation of my

\begin{flushright}
\textsuperscript{27}Ibid., p. 30.
\end{flushright}

\begin{flushright}
\end{flushright}
teachers, for the typical response of the unself-confident teacher has been to exert total power over his students, thereby ruining their self-images and continuing what might seem to be a never-ending cycle of self-contempt breeding more self-contempt.29

Several studies seem to support Wagschal's contentions. Roth sought to investigate the relationship between self-concept and reading improvement, or achievement, on a college level. Based on the propositions that there would be significant differences in the self-concepts of those who achieved, did not achieve, and who dropped out of the college reading improvement program, Roth's data supported his hypotheses.30 The study also demonstrated that in regard to changes in self-concept and grade-point average, "those who achieve as well as those who do not, do so as a result of the needs of their own self system."31

A study, made by Shaw, Edson, and Bell in 1960, had concluded "that bright, under-achieving male high school students had more negative self-concepts than students who were equally bright but achieving,"32 while among a similar population of

29Ibid., p. 172.


31Ibid., p. 281.

underachieving females, these females seemed to show ambivalence with respect to their self-concept. In a subsequent study Shaw and Alves sought to give more substantial verification to these findings.\(^{33}\)

To select their population, Shaw and Alves utilized high school subjects, in the eleventh and twelfth grades of a California high school, who had scored 110 or above on the California Test of Mental Maturity. The researchers classified a student as an "achiever" if his grade-point average in all his previous high school work was a "B" or above, and an "underachiever" if his grade-point average was "C+" or below. Some 129 students qualified for admittance in one of the two groups, and 78 were included in the final sample. Males composed one group and females the other. Certain instruments purporting to measure self-concept were administered to the students.\(^{34}\) The results of the findings verified the previous study; namely, that there seems to be "a direct association between negative self-attitudes and academic achievement, when ability levels are equal."\(^{35}\)

In a pilot study, Bruck and Bodwin sought to explore and determine the degree to which self-concept was "associated with the

\(^{33}\)Ibid.

\(^{34}\)Ibid., pp. 401-403.

\(^{35}\)Ibid., p. 403.
presence or absence of underachievement in students with normal or higher intelligence." Students who were referred to the Child Guidance Clinic in Flint, Michigan, were used as the subjects. Thirty were selected who had no learning difficulties, and thirty were selected representing underachievers. A scale purporting to measure self-concept was administered and the results indicated "a positive relationship between educational disability and immature self-concept."  

Fink, also tried to determine the relationship, if any, between an individual's self-concept and his academic underachievement. Subjects were matched according to I. Q. and to sex. Subsequently, 20 matched pairs of boys and 24 matched pairs of girls were selected for the study from a freshman class of a rural California high school. A series of items purporting to measure self-concept were administered to the subjects and three judges, two school psychologists and a clinical psychologist, using the psychological data alone, were asked to judge the adequacy of the self-concept of each student. The

---


37 Ibid., p. 182.
results of the study bore out the hypothesis for the boys, but was less positive for the girls. 38

The Humanistic Classroom

It is clear, from the previous studies, that what goes on in the classroom may be significant in helping a student improve his self-concept. A humanistic classroom could make a contribution to that end.

Bills states that:

Where children feel loved, wanted and cherished, they continue to respect themselves and at the same time develop similar regard for other people. Thus, from this point of view, it is important to ask, 'How do we help a child to maintain his own self-respect while he discovers the importance of other people?' The quality of the interaction between a child and other people is paramount. 39

Bills cites evidence to support his contentions that students who view their teacher as "empathetic and congruent" and with "unconditional positive regard," tend to have "more positive attitudes about themselves and other people than when they perceive their


teachers to hold fewer of these desirable characteristics. 40

Furthermore, he states that students often respond to each other as their teacher responds to them; that in student-centered classes, those who externalize their problems often make positive changes. 41

Bills concludes by stating that,

It is not necessary to teach children to develop respect for other people; respect appears to be a natural outcome of relationships in which children are loved and cherished. In relationships where children receive acceptance and are regarded as important people, they develop regard for other people--"love me to love thee." The most effective tool that parents and schools have for helping to develop regard for others is love. Schools have an additional advantage over parents, since they can provide greater reinforcement for a child's self-regard through the behavior of the child's peers. Children treat each other as they are treated. 42

Beatty makes a plea for teachers to be sensitive to their own feelings and emotions, and to encourage students to state their feelings and to explore any conflicts that they might feel. 43 "The key behavior," Beatty contends, "is listening and responding with understanding." 44

40Ibid., p. 84.

41Ibid., p. 85.

42Ibid., p. 85.


44Ibid., p. 92.
Children who experienced such a teacher would become more alive. They would maintain awareness of their feelings and emotions, and they would come to understand what they mean to themselves and to others. This would increase their self-understanding and ability to make choices beneficial to their own development. Some conflicts between personal worth and ability to cope might be resolved. Learning in such a classroom would lead to greater tolerance for frustration, for ambiguity, and for the differences among people.\(^45\)

Barth draws upon the experiences of the British Open Schools for some lessons about why the students of those schools enjoy their educational experiences. He contends that a child's enjoyment of school is:

1. . . . related to the number of significant options available to him each day.
2. . . . related to his having significant choice in determining the activity in which he will be engaged.
3. . . . related to his being able to pose his own problems and determine the means in which he will pursue them . . . with respect to the materials and activities available to him.
4. . . . related to the extent he is permitted to collaborate with his peers.
5. . . . related to the extent to which he is trusted by adults.
6. . . . likely to . . . the extent that it has a climate of consistent order.
7. . . . associated with the extent to which explicit and implicit comparison between his performance and the performance of other children are minimized.\(^46\)

\(^{45}\)Ibid., p. 92.

In a review of studies relating to the self and academic achievement, Purkey states that the evidence was conclusive that a teacher, through the use of positive educational experiences, could change a student's self-concept. He includes the following suggestions in his article:

- Utilize teaching procedures which provide each student with honest, success experiences.
- Demonstrate a continuing faith in each student's ability to achieve.
- Point out areas of accomplishment, rather than focusing on mistakes.
- Consult with the student, listen to him and support him in his attempts to express himself. 47

Schmuck states that "the relevance of positive classroom social climates for the optimal school adjustment of pupils is now taken for granted by most social psychologists of education." 48 The author points out, however, that few empirical dimensions have been delineated; thus the need for his study of certain aspects relating to classroom climates. (Also included in Schmuck's paper were some data on the characteristics of teachers with different classroom climates.) 49


49 Ibid.
From a group of 75 teachers near Ann Arbor, Michigan, Schmuck drew a subject pool of 727 pupils from 27 public school classrooms. Data was gathered from questionnaires and group interviews with pupils and interviews and questionnaires with the teachers.  

Schmuck notes the following:

... classroom peer groups with nearly an equal distribution of friendship and influence in contrast to those which were distinctly hierarchical had both more cohesiveness and more positive norms concerning the goals of the school. Although the teachers in these two types of classrooms were very similar, they did differ in very significant ways. The teachers with more positive social climates, in contrast to the others, emphasized and were more sophisticated about classroom mental health conditions. They also perceived more linkages between mental health and academic learning concepts than the other teachers. Teachers with more positive climates perceived their pupils' characteristics in a more differentiated manner and emphasized psychological attributes in contrast to physical characteristics more than the other teachers. Teachers with positive climates appeared to converse often with a wide variety of students and to reward individual students while punishing the whole class. In contrast, teachers with more negative climates conversed often with only a few students, seldom issued reward statements, and often punished individual students publicly.  

In another study, Scarr sought ways in which to foster a more humane classroom atmosphere. The major purpose of this study was

---

50Ibid.

51Ibid., p. 65.
to determine whether the authoritarian attitudes of education students could be changed from a greater to a lesser degree. Some 320 college students, selected from a junior course entitled "Human Development and Learning" were pretested before the course, then posttested after it had been given. The instruments consisted of a questionnaire and five attitude scales. The overall results of this study showed that a human development course required of education students has a large positive effect upon their attitudes, especially a reduction in authoritarianism.

The results of Emmerling's study, which attempted to explore selected personality traits of teachers as measured through their pupil perception, are also significant. He hypothesized that teachers who were:

... identified as being concerned with problems which are: (1) positive, (2) central, (3) self-related and (4) related to the future will be more effective in providing an instructional climate characterized by (1) freedom of communication, (2) empathic understanding, (3) positive regard, (4) unconditionality of regard, and (5) congruence (as perceived by their pupils) than will teachers identified


53 Ibid., p. 372.
being detrimental to the development of an individual's positive self-concept. They are vocal in their general conceptions of what such a school should be like.

Mallory and Heath voice their concern for going beyond the traditional academic offerings and attempting to integrate the knowledge and intellectual abilities of students with their emotional needs, their social ideas and their interpersonal skills. "To provide only traditional academic training for this generation," they charge, "is to risk estranging it even more from itself and souring it to the potential beauty of life as well as to the pressing needs of our society." 59

Innovation, they believe, often increases rather than decreases the alienation of students. 60 Calling for a reaffirmation of "our historical commitment to the goal of promoting maturity and educability . . . ," Mallory and Heath call for educators to assess their strategy in the light of the needs of our youth,

. . . to become more accepting of their own emotional needs, more open, trusting and skillful in their relations with others and more aware of how to develop mature values. Apathy, loneliness, and meaninglessness


59Ibid., pp. 40-41.

60Ibid., p. 42.
challenge us to develop an educational environment that helps each youth to develop more integratively and so more humanly. 61

Simon and Boyer contend that, "it is ever more surprising to find that how teachers say what they say appears to be a better predictor of a change in pupil behavior than anything else educational research has turned up to date." 62

Allen offers the insight that "a critical task of educational reform is to make it possible for teachers to be normal, emotional, responsive human beings." 63

Estey suggests that:

... a revamped teacher-parent education is required which must be based upon a faith in the self-realization capacity of children, and a deep awareness and respect for their uniquely paced growth and development process. 64

Coupled with the last three comments, Dinkmeyer and Driekurs believe that teachers lack the know-how to deal with

61 Ibid., pp. 44-45.


64 Estey, *op. cit.*, p. 21.
children in a democratic setting. Furthermore, they believe that if teachers are able to learn how to cope with students who are "socially and academically inadequate . . ." the teacher will be able to work more effectively with the "difficult" child. Thus, by changing himself, the teacher can change the classroom atmosphere and make learning more desirable and pleasurable, and in this way the teacher can help to promote change in the larger society.

In-Service Education Studies

Since this study falls within the framework of in-service education as it is commonly conceptualized, this investigator has selected some studies which approximate his efforts.

Asher has reviewed a number of in-service studies and makes the following generalizations:

1. . . . most studies of attitude change do not show long-term effects.
2. . . . there is not a simple one to one relationship between information, attitudes and overt behavior . . .

---

66Ibid., p. 5.
67Ibid., p. 124.
69Ibid.
3. A new practice is not apt to be adapted if the idea requires a great output of energy, new skills, a change in teacher values or new facilities. When the new practice has the following features, the probability of adoption is enhanced: consultant and peer help is available to develop the idea; it can be done a little at a time; there is a built-in evaluation to make progress visible; and the idea is student-oriented.  

4. Perhaps the primary criterion measure for the success of most in-service programs is teacher enthusiasm. If teachers respond to a program with warmth, excitement and praise, the offering is considered a success.  

Asher's generalizations can be compared with other studies to test their validity.

Rice, utilizing materials from the Anthropology Curriculum Project, tried to determine whether pupil achievement in anthropology was due to a trained teacher or to the function of the materials utilized by a teacher of anthropology. The design involved grades 1-5. Half of the teachers who volunteered received anthropological and methodological training in a special six-week institute. Pre-tests and post-tests were used as a means of measurement. The study revealed that special training in project materials did not enhance pupil performance.

---

70 Ibid., p. 29.

71 Ibid., p. 49.


73 Ibid., p. 11.
Hill sought:

... to investigate the effects on verbal teaching behavior of learning interaction analysis as an in-service activity and, second, to examine the effects of two variables, training time and mode of feedback, on change in verbal teaching behavior. 74

The results of his study showed that the verbal teaching behavior of his subjects did change, largely from using Flander's Interaction Analysis. The study also showed no relationship between training time and difference in change of verbal teaching behavior. In addition, the study revealed that there was no relationship between change in verbal teaching behavior and the method of feedback that was used. 75

Butts and Rauss attempted to determine what type of teacher is most likely to perceive and practice a curriculum innovation effectively. A program developed for a new science curriculum, "Science--A Process Approach," was administered to nineteen elementary teachers, whose experience and previous preparation varied. 76 Information from the pre- and post-test scores suggested


75Ibid., pp. 100-118.

76David Butts and Chester Rauss, A Study In Teacher Change, (Science Education Center, Texas University, Austin, 1967), pp. 5-6.
that the longer a teacher has taught, the more open he is to new and different approaches to teaching, and consequently the more valuable in-service programs are. The data also showed that the more competent the teacher was in the subject matter area, the more positive was the change in the teacher's attitude toward and practice of the new curriculum.77

Wood sought to determine if an in-service program would bring about changes in teacher attitudes and in the classroom verbal interaction between teacher and student. A secondary purpose was to determine if the amount and direction of such change could be measured. The in-service program was eight weeks in length, and consisted of 20 teachers. The teachers developed and utilized an interaction analysis instrument in experimental and control classroom situations. Teachers also responded to attitude inventories. Wood concluded that an in-service program in teacher-student verbal interaction that was designed to change the attitude of teachers, as measured by attitude inventories, was unsuccessful.78

77Ibid., pp. 16-17.

Stanley sought:

... to determine the relative attitudinal change of participants following a planned inservice education experience and to relate these changes to the participant's scores on scales measuring critical thinking, openness to change, originality and ideational fluency and the factors of formal education, teaching experiences and sex. 79

Stanley staffed an experimental school with 30 teachers who had volunteered for that project. 80 The in-service program was nine months in duration and the evidence from the data led to the major conclusions that a significant positive attitude change occurred, and that women in the study changed even more significantly than did the men. 81

Tuchman, McCall and Hyman conducted a study whose purpose was:

... to determine if teachers whose self-perception of teaching behavior differed from their behavior, as recorded by an observer, would change their perception, behavior, or both as the result of feedback. 82


80 Ibid., pp. 128-129.

81 Ibid., pp. 133-134.

Utilizing Flander's Interaction Analysis, the authors worked with 24 high school teachers, who volunteered to participate in the study. The conclusions indicated that:

... the behavior and self-perception of experienced in-service teachers can be changed by invoking a discrepancy between a teacher's observed behavior and his own self-perception of his behavior, and then making him aware of this discrepancy via verbal feedback.

The study also indicated that the greater the discrepancy, the more the teacher tried to reduce the discrepancy, regardless of the form of feedback used.

Stone, studying ways to promote inductive teaching and creative problem solving through in-service training, used 124 teachers as a treatment group and 36 teachers as a control group. He was able to show, through observers using Flander's Interaction Analysis, that in the three dimensions that were analyzed -- teacher talk, indirect teacher talk, and content -- experimental teachers

83 Ibid.
84 Ibid., p. 616.
85 Ibid., p. 616.
showed significantly greater change toward inductive teaching styles than did control teachers. 86

Khanna held an in-service program, stressing a humanistic approach, that included a two-week summer lab and 14 Saturday meetings for 150 participants. A second part included a three-week program involving 71 teachers who, three weeks after the program concluded, were interviewed and gave their subjective reactions concerning the programs. 87 Subsequent interviews were held with 19 participants in the treatment and 18 in the control group, six months after the conclusion of the program. Internal and external criteria and matched control groups were used in the evaluation process. 88 Six different types of measurement instruments were utilized. 89 The conclusion of the study showed that the teachers taking part in the program became less authoritarian, more self-actualized, and

---


88 Ibid., pp. 10-11.

89 Ibid., p. 107.
developed greater self-insight and leadership skills. They were also perceived in a more positive vein by their supervisors and students. \textsuperscript{90}

\textbf{Summary}

A review of the related literature indicates that there has been considerable criticism of the public schools for the dehumanizing aspects of their environment. While most of this evidence has come through observation, an empirical study by Meltzer and Levy tends to confirm this criticism.

Those who have been concerned with the school impact on the student self-concept have also voiced their disapproval of the treatment of students by the schools' staff. Various studies reviewed in this chapter have indicated that there is a significant relationship between self-concept and achievement.

In addition, those calling for a humanistic school have had their positions reinforced by studies that show that classroom climate has a tremendous effect on the amount of learning that occurs, and whether student behavior and attitudes change for the better.

Although Asher reported that in-service education does little to change the attitudes and practices of teachers, other studies

\textsuperscript{90}Ibid., pp. 92-96.
were cited which indicated that in-service work could be effective in
promoting change.

In Chapter III, a treatment program is described which trains
the teacher in a new model for human relationships. This model is
designed to teach educators skills which will make schools institutions
that are humanistic in their approach, and which seek to meet the
ideals enunciated by many educational critics.
CHAPTER III

TREATMENT

Dr. Thomas Gordon's "Teacher Effectiveness Training" is a 30-hour treatment (the treatment variable is also an educational program) consisting of six modules, designed to help teachers achieve the educational goals stated in Chapter I. Its principal focus is on skill training practice and coaching. The program is concerned with a person's behavior in the "here and now."

To supplement the program, the participants were provided with a workbook entitled "Teacher Effectiveness Training" (composed of at-home-activities, diagnostic activities and selected readings) and a copy of Gordon's book Parent Effectiveness Training. They were strongly encouraged to read the chapter and do the exercises which paralleled the classroom work.

What follows is a brief summary of the program, including the modules and their activities. Following this information is a more

---

1 This chapter is based on, and all citations are from, the Instructor Outline, provided by Effectiveness Training Associates. (See bibliographic reference.) All direct quotations and diagrams that are duplicated from the Outline will be followed by a page number.
detailed description of the modules and activities. In sessions one through three, Modules A and B are taught; in sessions four and five, Modules C and D are covered; in sessions six through eight, Module E is taught, and in sessions nine and ten, Module F, and the course summary are explained.

MODULE A:

"Acceptance or Unacceptance: The Key To Your Response To Another's Behavior"

Contents

1. Classifying behavior into two categories: acceptable or unacceptable.

   a. Realizing no one can be one hundred percent accepting of another's behavior.

   b. Categorization of the behaviors depends on the other, the self, and the environment.

   c. Individuals are inconsistent in their feelings from day to day.

   d. Understanding why individuals have favorites.

2. Matching of different feelings with behaviors depending on whether the behavior is acceptable or unacceptable.

   a. Skills to help modify unacceptable behavior.

Activities

1. Class lists the behaviors of a particular student which are acceptable to them and those behaviors that are unacceptable to them.

2. Instructor lectures, draws diagrams and lays the groundwork for the module.

3. Question-answer session follows the lecture.
MODULE B:

"How To Be An Effective Helping Agent For Others (When They Own The Problem?)"

Contents

1. Helpful ways to respond to a student (or class) when he (or they) own a problem.
   a. The Roadblocks to Communication and their effects.
   b. Additional and more helpful ways of responding to another's problem: silence, non-committal acknowledgment, door-openers, and feedback.

2. Practice in utilizing feedback or "active listening."

3. Instructional tapes demonstrating the use of active listening.

4. More practice in active listening.

5. Indications of situations where active listening can be utilized by the teacher.

6. Effects and benefits of active listening.

7. Additional practice in active listening.

8. Conditions necessary for active listening to be successful.

Activities

1. Instructor plays the role of several persons, one at a time, and has class respond, in writing, as they would express themselves verbally if such a situation arose.

2. Instructor presents "Roadblocks to Communication," and gives examples.

3. Class analyzes its messages and classifies them according to the Roadblocks.

4. Class discusses effects of Roadblocks on the student owning the problem.

5. Instructor presents key points concerning feedback and other ways of responding to problems.

6. Feedback or active listening communication diagram is drawn and key points are explained by the instructor.

7. Techniques used in the instructional tapes are discussed.

8. "Man In Sea 12A," an around the room exercise in active listening is role-played.
9. Instructor suggests opportunities where active listening can be utilized by teachers: when a student has difficulty learning; in content-centered class discussion; and in student-centered discussions. Discussion follows.

10. Discussion of the effects and benefits of active listening is initiated.

11. Role-playing episode is enacted where a classroom participant active listens to the instructor.

12. Class divides into pairs and each participant shares a real problem, while the other participant active listens. Roles are reversed after about 15 minutes. Evaluation of each participant's active listening is then given by the other participant.

13. Additional practice in active listening in around-the-room problem of the instructor.

14. Discussion of appropriate conditions that are necessary for active listening to be successful.

15. Instructor presentation of common and other errors in using active listening.

16. Active listening to various non-verbal messages is practiced.

17. Participants form pairs or "dyads" and take turns discussing a problem. Each take turns engaging for two minutes, in parroting, paraphrasing, and active listening. Discussion follows.
MODULE C:

"How to Modify Behavior of Others That Is Unacceptable To You (When You Own The Problem)"

Contents

1. Identifying problems in the "I own" area.
   a. The difference in attitude and posture that occurs when the "other" owns the problem and when "I own" the problem.
   b. The criteria for evaluating methods of influencing another's behavior.

2. The relationship between the Roadblocks and changing unacceptable behavior.
   a. The "you-message" concept.

3. The role of sending "I-Messages" in changing unacceptable behavior.
   a. The interrelation between I-messages and active listening.
   b. The limitations of I-messages.
   c. The construction of I-messages.
   d. The problem of "anger" and I-messages.
   e. I-message errors and benefits.

Activities

1. Instructor asks the class to recall behaviors they listed as unacceptable in initial acceptable/unacceptable exercise.

2. Instructor gives examples of behavior which might fall into "I own" category and indicates the attitude and posture that one should have when "the other" owns the problem and when "I own" the problem.

3. Three criteria for evaluating the methods of influencing another to modify his behavior is put forth by the instructor.

4. Instructor initiates a role-playing exercise where-in messages illustrating the Roadblocks are sent in an effort to get class members to change their behavior.
   a. Messages are then evaluated on how participants felt on: willingness to change behavior; self-esteem; regard for the sender.
   b. Discussion of the type of messages inherent in the Roadblocks occurs.

5. Idea of using pronoun "I" as the basis of an "I-message," stating how the individual feels about the unacceptable behavior is introduced.
4. The difference in feeling between an "I-message" and a "You-message."

a. Practice I-messages regarding the role-playing incident are sent and evaluated.

b. Subsequent situations are given by the instructor, which are "I own" situations and the participants are asked to respond with I-messages.

c. Instructor adds the idea of active listening after the I-message to help the person handle the feelings the I-message precipitated.

d. Instructor presents reasons why I-messages work and under what conditions.

e. Classroom exercise is initiated where class members have an opportunity to get in the habit of thinking how to formulate I-messages, by filling out three columns on their paper: "non-blameful description of his behaviors;" "Tangible Effects On Me Now Or In The Future;" "My Feelings Or Emotions."

f. Examples of I-messages concerning situations from their own lives are drawn from the class members.

g. Problem of "anger" and its relationship to I-messages is discussed.

h. I-message errors and benefits are discussed.

i. Difference between I-messages and You-message use is illustrated through culminating exercise. Discussion follows.
MODULE D:
 "Modifying The Environment"

Contents Activities
1. Ways to modify the environment by: 1. Instructor presents examples of each way to modify the environment and then divides class into four equal groups.
   a. enriching or impoverishing
   b. restricting or enlarging
   c. rearranging and simplifying
   d. systematizing or planning ahead for.
   a. Each group is assigned one area and generates as many ideas for modifying the environment in that area as possible.
   b. Ideas are recorded and later shared with the rest of the groups.
   c. General discussion is then held to clarify any questions that the participants have about the module.

MODULE E:
 "How To Resolve Conflicts-Of-Needs"

Contents Activities
1. Resolving situations where the 1. Instructor lays groundwork for "other" has a need to continue his resolving conflict-of-needs situation through diagrams and presentation of why some behavior will remain unchanged as a result of any tangible or concrete way. I-messages.
   a. Identifying conflicts in one's relationship with another.

2. Typical ways of resolving problems through the use of Method I (authoritarianism) and Method II (permissiveness) and their effects.

   a. The teacher's limitations in utilizing Method III.
   b. The "Rule-Setting Class Meeting" and "The Conflict-Resolution Class Meeting."
   c. Ways to deal with administrative decisions that are "not acceptable; and ways to help students who have unresolved conflicts with another teacher.

2. Class members proceed to identify conflicts in their relationship with another by listing specific behaviors of a student who, through his behavior, is causing a conflict-of-needs situation. Class members are asked to identify behaviors that "tangibly and concretely" effect them.

3. Instructor diagrams and presents Method I and Method II and discusses the effects of these methods, the problems inherent in using them, and the effects of the methods.

4. Instructor diagrams and presents rationale for Method III.
   a. Instructor tape is played to illustrate an actual Method III situation. Discussion follows.
   b. Effects and benefits of Method III are discussed.
   c. Problems in implementing Method III are discussed.
   d. Role-playing situations giving the class opportunities to practice Method III are initiated.
   e. The limitations of the teacher using Method III within the framework of the school are pointed out by the instructor, as well as ways to enforce rules and restrictions outside the teacher's area of freedom.

5. Discussion of the "Rule-Setting Class Meeting," and "The Conflict-Resolution Class Meeting."
6. Instructor also presents material dealing with using the course skills with administrators, and with a student who has an unresolved conflict with another teacher.

MODULE F:

"How To Deal With Value Collisions"

<table>
<thead>
<tr>
<th>Contents</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Value conflicts in human relationships and ways in which the teacher can deal with them.</td>
<td>1. Instructor presents the concept of value collisions and the fact that the other person must be convinced that his behavior concretely affects the individual sending the message.</td>
</tr>
<tr>
<td>2. Course summary.</td>
<td>2. Class generates behaviors that fall into this category, and the instructor suggests ways in which the class can deal with such behaviors: by modeling the desired behavior; by being an effective consultant; by modifying the self; by praying (a special prayer).</td>
</tr>
</tbody>
</table>

3. The instructor initiates a discussion concerning the ambiguity of values collision skills.

4. The instructor summarizes the program and entertains questions.

**Narrative Account of Treatment**

Module's A and B were covered in the first three sessions.

Before the first program session began, the necessary paper work for Gordon's Effectiveness Training Associates was completed. The basic ground rules were mutually decided. Each person then introduced himself to the other participants.
In initiating Module A, "Acceptance or Unacceptance: The Key to Your Response to Another's Behavior," the participants took a sheet of paper, drew a line across the middle of it, and then selected a particular student with whom they had a relationship. They then described on the top half of the paper, at least five specific behaviors that the person in question executed that were acceptable to the participant. They then listed five unacceptable behaviors on the bottom half of the paper.

After the exercise was completed, some participants volunteered to read some behaviors above the line and some below the line. Some discussion ensued in an effort to clarify questions that arose about the difference between a personality trait and an individual's actual behavior. The point was then made that behavior falls into two categories--it is either acceptable or unacceptable. The papers were then collected so that they could be utilized in another session.

The instructor then indicated that he would deal for several sessions with the behaviors falling in the area of acceptance. The following diagram was drawn on the blackboard:

```
AREA OF ACCEPTANCE

AREA OF NON-ACCEPTANCE
```
"No one can be totally or unconditionally accepting of another person" (A-3). The same individual may be more accepting than another, as the following diagrams illustrate:

The dividing line does not remain stationary, but fluctuates due to three factors—the other person, one's self, and the environment in which one finds himself. Examples were given to illustrate those factors.

Consequently, it is impossible for anyone to be consistent in his feelings from day to day. Teachers may find certain of their students' behaviors more acceptable than others, and for that reason they cannot help having favorites.

The instructor then explained how each area in the rectangle requires different feelings.
While behaviors that the participants listed in the upper area of the rectangle generally communicate positive feelings, a person exhibits other feelings when he decides he has a problem or some sort of difficulty. Participants were asked the question, "What are the things people say and do that suggest that they have a problem?" (A-7). A discussion followed.

These behaviors, it was explained, should be placed within another area of the rectangle.

This area could then be called "Other Owns the Problem."

The lower third of the diagram could be called "I Own the Problem." since it reflects behaviors that cause the individual a problem. Since the middle area represents no behaviors that caused the individual any problems, it may be called the "No Problem" area. The skills dealing with these areas are entirely different.
Thus, the first third of the course deals only with skills applicable to the upper part of the rectangle, and that the rectangle shows two things:

a) the behaviors of the other person

b) when the behaviors are placed above or below the line of the individual's attitude toward them is shown.

In initiating Module B, "How to be an Effective Helping Agent for Other (When They Own the Problem)," the instructor played the role of several persons, one at a time, and had the participants spontaneously respond in writing to his messages. One such example was the following:

(16 year old boy) I'm getting to hate school. It's a bore. When I get through with high school, I'm going to quit. I'm not interested in college cause it won't get you anywhere. Schools' don't help you along in the world, they just teach you a lot of theory and unimportant facts--just junk. (B-2)

After the participants gave several messages for each example, the instructor presented what is known in the program as
the "12 Roadblocks to Communication":

1. ORDERING, DIRECTING, COMMANDING

(Telling the other to do something, giving him an order or a command.)

2. WARNING, THREATENING, PROMISING

(Telling the other what consequences will occur if he does something, or carrying out of the consequences--either rewarding or punishing.)

3. MORALIZING, PREACHING, SHOULD AND OUGHTS

(Invoking vague outside authority as accepted truth.)

4. TEACHING, LECTURING, GIVING LOGICAL ARGUMENTS

(Trying to influence the other with facts, counterarguments, logic, information, or your own opinions.)

5. ADVISING, GIVING SOLUTIONS OR SUGGESTIONS

(Telling the other how to solve a problem, giving him advice or suggestions, providing answers or solutions for him.)

6. JUDGING, CRITICIZING, DISAGREEING, BLAMING, NAME-CALLING

(Making a negative judgment or evaluation of the other.)

7. PRAISING, AGREEING

(Offering a positive evaluation or judgment, agreeing.)

8. REASSURING, SYMPATHIZING, CONSOLING, SUPPORTING

(Trying to make the other feel better, talking him out of his feelings, trying to make his feelings go away, denying the strength of his feelings.)
9. INTERPRETING, ANALYZING, DIAGNOSING

(Telling the other what his motives are or analyzing why he is doing or saying something; communicating that you have him figured out or have him diagnosed.)

10. PROBING, QUESTIONING, INTERROGATING

(Trying to find reasons, motives, causes; searching for more information to help you solve the problem.)

11. DIVERTING, AVOIDING, BY-PASSING, DIGRESSING, SHIFTING

(Trying to get the other away from the problem.)

12. KIDDING, TEASING, JOKING, USING SARCASM

(Distracting the other, kidding him out of it, pushing the problem aside.) (B-4-6)

The class then put the number of the appropriate roadblock next to each of their responses. Examples of the roadblock were given as the messages were re-read.

Added to the list of Roadblocks, but in actuality separate from them, were listed additional categories. These included:

13. SILENCE (PASSIVE LISTENING)

14. NON-COMMITTAL ACKNOWLEDGMENT

("Oh," "I see," etc.)

15. DOOR-OPENERS

(Invitations to say more.)

16. FEEDBACK, REFLECTING, MIRRORING

(Receiver re-states or mirrors back sender's message--no more, no less--giving no inputs of his own.) (B-6-7)
Some key points were then made about the Roadblocks:

1. They all have the effect of interfering with communication or damaging a relationship.

2. Professional counselors are trained to avoid them.

3. Most of the categories imply non-acceptance of the individual. (1, 2, 3, 5, 6)

4. Some categories imply that the person establishing the Roadblock believes that the other person is unable to assume the responsibility for his problems and is unable to solve them; therefore the person who does not have the problem can best solve it. (1, 2, 3, 4, 5, 9, 11)

5. Some categories place people on the defensive and make them resentful. (1, 2, 3, 4, 6, 8, 9, 10, 11)

6. All categories carry "hidden messages" indicating lack of trust, lack of judgment, etc.

7. Some Roadblocks may stop the individual from talking. (1, 2, 3, 4, 5, 7, 9, 10, 12)

The class was asked to study as an assignment, Appendix 5 in the textbook. Any questions or disagreements the class had would be dealt with after that appendix was read.

Some key points concerning feedback and other effective ways of responding to people's problems were presented. These points incorporated the following:

1. Silence and non-committal acknowledgment can often-times be utilized to encourage the other person to say more.

2. The use of door-openers are especially effective at the beginning of a conversation, as they indicate to the person that he has the initiative to start a conversation.
3. There are, however, serious limitations in categories 13, 14, and 15, as:

a) there is no interaction--the sender is left alone;
b) the sender does not know if his message is understood;
c) the sender is not aware if his message is being accepted, or if he is being accepted as an individual;
d) they lack the ability to "facilitate, catalyze, or promote additional communication." (B-8)

4. Feedback carries the least risk and is the most facilitative of the categories 13 through 16.

5. To understand Feedback, one must understand what goes on in the communication process.

Using a blackboard, the following communication diagram was drawn.

![Diagram]

The circle represents the inside of the sender. There is some kind of disequilibrium--a need, feeling, etc., within the sender. He seeks to achieve equilibrium; his feeling is seen as an internal event.
To represent his inner state, the sender selects and transmits a code.

The receiver must use a decoding process to understand the internal feelings of the sender. The decoding is considered to be accurate if the receiver understands.

The receiver knows that he has correctly decoded the message because he uses feedback to determine the accuracy of his decoding.
The instructor then returned to the situations used in the classroom demonstration and again sent the messages. The participants then, one at a time, "active listened" to each message. The instructor coached and occasionally corrected the individual, illustrating the ideas that:

1. Active listening should stress the feelings rather than the code itself.
2. Active listening is not the same as sending one's own message.
3. There can be numerous feedbacks, all essentially correct.
4. The feedback should be in the words of the receiver.

Two instructional tapes were then played to demonstrate a counseling expert utilizing feedback. The participants were asked to:

1. Focus their attention on the method rather than the content.
2. Be particularly aware whenever the client shows any movement.
3. Be observant and notice that the sender usually validates the accuracy of the feedback with statements like, "Right," "Yeah," etc. Should the feedback not be accurate, the sender will send a modified code.

4. Note the difference between active listening and the 12 Roadblocks.

A discussion followed the playing of the tapes. A classroom exercise was then held to give the class further training in active listening. This exercise is called "The Man in Seat 12A." In this exercise the instructor plays the role of a troubled airplane passenger and the participants take turns active listening his comments. A discussion followed this exercise. The class was asked what they had experienced, and questions clarifying the skill were answered.

Opportunities were suggested as to when the classroom teacher could most profitably use active listening:

1. As the basic instrument in instructing and training.

2. As the central tool in conducting student-centered classes.

3. As the major technique in leading individual counseling conferences with a student, parent, another teacher, or other school employees.

4. As an additional skill in such conferences and meetings as the rule-setting class meetings, the conflict-resolution conferences, and the content-centered class discussions.
The participants were then presented with some additional information under each area. Under the instructing and training section, these key points were made:

1. Probably the most well-understood idea of instruction involves the teacher playing the role of "sender." This technique of lecturing, demonstrating, etc. takes place outside the learner.

2. A less well-understood perception of instruction is the idea of the "receiver." With this attitude, the facilitation of learning occurs within the learner.

3. The receiving attitude is best accomplished by active listening, and can be used effectively under two conditions:
   a) when the student is having difficulty learning
   b) when the teacher wishes to actively involve the learner in the learning process

4. Students exhibit verbal and non-verbal cues and clues when they are having difficulty. These would include:
   a) "I don't understand that."
   b) "Please go slower."
   c) Lack of attention.
   d) Puzzled looks.

A rectangle was then drawn and the class determined where the cues and clues would fit in.
The implications, drawn by the instructor, included the following:

1. Since the cues and clues are no longer in the "no problem" area, any further teaching will be futile, as they will result in Roadblocks being established.

2. The teacher does not own the problem when the learner is having difficulty—it is important that the teacher plug in the cues in the "he owns problem" area, otherwise he will continue to be a sender and the learner will become increasingly frustrated.

3. Consequently, the appropriate skill to utilize is active listening when the learner has difficulty.

The learner can be involved in the learning process with active listening, because it increases the learner's attention, and because the learner talks, he becomes involved. One suggested method was active listening to the student's messages. Door openers could be used to accomplish this action, or the teacher could ask the student to feedback what he heard the teacher say.

Benefits accruing from the use of active listening allow the learner to relate ideas to his own life and thus bring about relevance; they
allow him to explore a subject at a deeper and more insightful level. In addition, the teacher can more easily understand any difficulty encountered by the learner; and the classroom is enlivened by a change of pace.

Regarding the use of active listening in content-centered class discussions, the participants were asked to read activity 13 in their workbook. Some of the main ideas that are involved in this concept are included in the following:

1. Active listening can help to motivate students to discuss subject matter, concepts and ideas, and is probably the best technique to facilitate student learning.

2. The content-centered classroom discussions can be set up at any time and active listening, if used extensively for classroom discussions, allows the teacher to transmit acceptance of student responses, and in addition, the teacher models active listening to establish the classroom climate.

3. The teacher will then be able to insert his own data, opinions, etc., as the discussion progresses. He must still avoid use of the Roadblocks.

Some do's and don'ts that the instructor suggested using were:

a. Don't call on students
b. Don't feel compelled to 'correct' misinformation
c. Don't praise particular student's contributions
d. Do allow students to differ with others
e. Do let strong feelings get out
f. Don't try to summarize or 'wrap up'
g. Do let the discussion end in ambiguity or irresolution.

(T.E.T. Supplement, B-4)
Participants were then asked to turn to the fourteenth activity in their workbook and read about "Student-Centered Discussions." They were then asked for their reaction, and a discussion ensued to clarify the ideas.

This was followed by some suggestions about how to use active listening in the individual counseling conference. These suggestions included:

1. That teachers will automatically pick up cues and clues from those who own problems.

2. Whether the teacher chooses to respond to those clues will depend on "Do I feel like being a helping agent? Do I have the time? Am I feeling accepting? Is this the appropriate setting? Can I keep my own needs out of it? Or, if the time or place are the only problems, can we make an appointment later or go somewhere else?" (T.E.T. Supplement, B-5)

3. That if the teacher feels accepting, has the time, etc., then the teacher must determine whether he is accepted by the other as the helping agent. The teacher determines this by seeing whether messages come in response to active listening, or if a positive response is forthcoming through the use of a "door-opener."

4. It is essential to choose a place that insures a maximum amount of privacy; the sender may need to be assured about the confidentiality of the conversation; large blocks of time may not be necessary for a conference; the amount of available time the teacher has should be told to the sender; should the sender need more time than is available, then the teacher should schedule another conference.

5. In the event that there are limited conference facilities, the teacher could use a corner of the classroom, a bench in the school yard, a counselor's office, the auditorium, etc.
"What are the effects and benefits of active listening?" was then asked. Brought out in the discussion were these ideas:

1. The sender realizes that the listener sees him as a person.
2. The sender knows that the listener understands him.
3. The listener can check on the accuracy of his decoding.
4. The sender has an opportunity to have a catharsis and vent his feelings; these feelings then lose their grip on the sender.
5. Acceptance of the sender is communicated.
6. While the listener is involved in the problem-solving, the sender retains the responsibility for defending and solving his problem.
7. It enables the sender to move from a superficial problem to a more deep-seated problem.
8. It enables the sender to deal with feelings rather than facts.
9. New insights—attitudes, behaviors, understandings, etc. are oftentimes fostered.
10. The sender is able to be more open and honest with the listener and is more able to use him as a helping agent.
11. The focus of the sender is often shifted from "external-to-self" to "self."
12. A warm and intimate relationship is promoted between the sender and the listener.
13. The sender is encouraged to be more self-responsible, more self-directing, and more the master of his own destiny.
14. The listener sometimes hears new data.
Another classroom demonstration was then held. A volunteer from the class portrayed the role of a teacher while the instructor played the role of a fifth grade student who had a problem. The example was geared to show that active listening helped the child move from a superficial to a more deep-seated problem, from outside the child's self to his inner self, and it demonstrated that dealing with the superficial problem might well tend to reinforce the basic problem of the child.

Another classroom exercise was held in which the class broke into pairs, or "dyads," and found a quiet corner of the room in which each person in the dyad shared, for approximately fifteen minutes, a real problem with the other person. The listener used active listening. At the end of the thirty minute period, an evaluation period of five to ten minutes occurred where each person evaluated the active listening of the other. During this exercise, the instructor observed each group and coached where necessary.

The instructor then presented a problem of his, and went around the room randomly selecting the participants to listen actively to his problem.

He then delineated the appropriate conditions necessary for active listening to be successful. Insofar as the sender is concerned, he must be experiencing feelings or experiencing problems and the listener must be sensitive to his cues and clues. One must be
careful not to use active listening if feelings are not present in the
listener, as the sender may perceive active listening as a "maddening word game." (B-26) The possible exception to this would be a situation when the listener was unsure that he had understood an informational input and he was using active listening to clarify or verify his understanding.

Insofar as the listener is concerned, he must feel accepting and really want to help. He must have and want to take enough time and trust that the sender can handle his own problem. In addition he must feel reasonably separate from the sender's problem.

Should the above conditions not be present in the listener, his active listening will reflect the lack of them by throwing in Roadblocks within the active listening, demonstrating non-verbal cues of acceptance or lack of interest, or not perceiving the underlying feelings in the sender's message.

Common errors in active listening were also identified and discussed. These included:

1. Overshooting - one exaggerates the feeling
2. Undershooting - the feeling is minimized
3. Adding - the listener adds his own insight
4. Omitting - ignoring material that the listener does not want to hear
5. Lagging - dropping behind the pace of the sender
6. Rushing - anticipating the message of the sender

7. Parroting - the code is responded to rather than the actual message

8. Analyzing - going beyond the scope of the message and adding an interpretation as to why the sender feels as he does

In addition to the "common errors," other errors occur, such as:

1. Using active listening when the other person's behavior is a problem to you.

2. Using active listening when you have a behavioral or attitudinal objective for the other person.

3. Using active listening when individual needs specific help or information which you possess and he does not.

4. Using active listening without matching non-verbal empathy, such as tone of voice, facial expression, etc.

5. Focusing active listening on the object of the sender's concern instead of on the sender.

6. Starting each feedback with same phrase.

7. Using active listening as a shield when the sender is angry at the listener.

8. Using feedback to "draw out" sender, instead of giving him the opportunity to listen if he so desires.

9. Using active listening to acquire information and then moving in with certain of the Roadblocks.

Following this presentation, another exercise was initiated---how one responds to non-verbal messages. After giving examples of how people communicate non-verbally, the instructor role-played
certain situations, such as "after teacher gave a lecture and asked the class to discuss ideas, nobody said a word." Class members active listened these episodes in an effort to decode the non-verbal communication.

The concluding exercise in this module dealt with clarifying the difference between active listening and parroting or paraphrasing. Once again the participants paired off and determined which was to speak first and which was to speak last. Each person selected a real problem in his own life or a controversial subject. In the first phase of this exercise, each person was asked to parrot what the other was saying for two minutes (the instructor kept time). After each person had an opportunity to accomplish the first phase, the group reconvened and shared its feelings about the individual experience. For the second phase of the exercise the participants each paraphrased the other for two minutes. Again the group reconvened and the feelings concerning the experience were shared.

In the third phase of the exercise, each person to active listened to the other individual in his dyad. Three minutes were allowed for this session, and three minutes were allowed for the people in the dyad to share their feelings about the exercise. The group then reconvened and shared its experiences with each other.

In sessions four and five, Modules C and D were covered. To begin Module C, "How to Modify Behavior of Others That Is
Unacceptable to You (When You Own the Problem)," the class was asked to recall behaviors that they listed as unacceptable in the initial acceptable/unacceptable exercise. The instructor stated that he would now begin to deal with those unacceptable behaviors.

The following rectangle was drawn, and it was pointed out that the active listening raised the line and consequently enlarged the no problem area. The area below the no problem line was referred to as the "I Own" area, because the problem is caused by another's behavior. This behavior is somehow interfering with my needs and I feel unaccepting of such behavior. This module deals with means to push the bottom line down.

Various examples of behavior were given which might fall into the "I own" category and then the attitude and posture of this situation was contrasted with the situation that occurs when the other owns the problem.
When Other Owns the Problem | When I Own the Problem
---|---
(Here, ) | (But here, )
I'm a listener | I'm a sender
I'm a counselor | I'm an influencer
I want to help the other | I want to help myself
I'm a sounding board | I want to sound off
I facilitate other finding his own solution | I need a solution myself
I can accept the other's solution | I must be satisfied with the solution
I don't need to be satisfied | I'm primarily interested in my needs
I'm primarily interested in the other's needs | I'm more agressive (C-2-3)
I'm more passive | 

The class was reminded that the three factors controlling the line--Self, Environment, and Other can be utilized to lower the line and make the other's behavior more acceptable. However, in this module modifying the behavior of others is the paramount objective.

"Three Criteria for Evaluating Methods of Influencing Another to Modify his Behavior" were suggested:

a) It must be effective at producing helpful change.

b) It must have low risk of lowering other's self-esteem.

c) It must have low risk of hurting the relationship. (C-3)

The instructor then illustrated how the Roadblocks are the usual means used to modify the environment and that they are part of a type of behavioral modification. For example, the behavioral objective for the other person is communicated by Roadblock #1, "Order." Roadblock #2, "Threats or Promising," is used to predict and/or carry out the rewards or punishments needed for reinforce-

ment or extinguishment. The rest of the Roadblocks offer various
forms for communicating behavioral objectives or applying psychological rewards or punishments.

A classroom exercise was then initiated in which the instructor told the group to imagine themselves to be his guests who have just sat down on his new white couch and put their feet upon it. The behavior was below the instructor's line and he sent them some Roadblocks to try to get them to modify their behavior. The class responded to the instructor's messages by reporting how the message made them feel on three accounts:

1. Willingness (or lack of it) to change behavior
2. Self-esteem
3. Regard for sender (impact on relationship). (C-3)

Messages are constructed so that there is one for each Roadblock. It was evident to the participants that their students would experience the same feelings that they did if the Roadblocks were used to modify their behavior in school situations.

The Roadblocks contain these hidden messages:

1. #1-5, (solution messages) - the hidden message is: "You're too dumb to figure out how to help me." (C-4)

2. #6-11, (put-down messages) - the hidden message is: "There is something wrong with you (you're bad or inconsiderate) to have caused me a problem." (C-5)

3. #12, (indirect messages) - the hidden message is: "If I confront you directly, you might not like me." (C-5)
The Roadblocks are seen as being ineffective for several reasons. Insofar as solution messages are concerned, they cause resistance and prevent the other from initiating behavior out of respect for the person whose needs are being thwarted. "Put-down" messages peck away at the other's self-esteem, cause resistance or arguments, cause him to be embarrassed, and blame him for having needs of his own. Indirect messages leave the impression that the other person may not understand, and point out that the sender is not open and direct, but crafty and indirect.

The Roadblocks are "You Messages"--"You get your feet off...", etc. If the opposite pronoun were used--"I"--one could develop an "I-Message." Such a message would describe the sender and might produce less defensiveness on the part of the receiver; it could show the effects of the other's behavior on the sender, and it could help the sender face the feelings about the effects of the behavior on himself instead of focusing such feelings toward the receiver.

The class then was asked to think about how the feet on the couch would affect them and how they would feel about those effects. They were asked to put their feelings in the form of an I-message. The class was asked to evaluate each I-message in light of the following three criteria:
a) Willingness to help you out
b) Their self-esteem
c) Their feelings toward you. (C-6)

The point was emphasized that leaving out solutions permits the other person to choose the best solution for himself. The class was then asked for several ways in which they could help the sender with his problem. A variety of responses indicated many solutions to that problem.

The next exercise gave the class some preliminary experience sending I-messages. The participants were asked to respond with I-messages to situations the instructor presented. An example of such a situation was the following:

You are a first-year teacher. The principal drops in for an evaluation observation, and your class inexplicably starts acting up--restless, moving about, talking, smart-aleck remarks, little attention paid to the lesson. After staying for 30 minutes and taking copious notes, the principal has just left. (C-7)

After the class has given a few responses to the examples, the instructor countered with a defensive remark, and he then coached the participants to active listen the defensive remark. The instructor showed the class that by active listening to the defensive remark, the sender is able to stay within his role and to respond realistically to the messages of the receiver. Once this part of the exercise had been completed, the rationale of active listening after sending I-messages was discussed.
While the sender is still unaccepting of the original behavior, the defensive message is an indication that the receiver also owns the problem.

To get the individual to help him the sender must help the receiver adjust to the new feeling.

The concept of "normal emotional temperature" was then introduced.

It is impossible for the receiver to respond positively when his emotional temperature has risen. It therefore follows that the I-message should be followed by active-listening. This will enable the message to work more successfully.
The reasons why I-messages work and under what conditions were presented. I-messages show the receiver how his behavior affects the sender and allows the receiver to modify his behavior.

I-messages reveal the sender as an authentic or congruent person. By having the inside match the outside of the sender, the possibility of mobilizing positive feelings in the other tends to be considerably higher. Also, it is more difficult to argue with an I-message and there is less possibility of resistance.

"I-Messages always produce helpful behavior change in others except under three clearly predictable and manageable conditions":

(C-9)

1. When a weak or poorly constructed I-message is sent.

2. When the receiver has too strong a need to continue his unacceptable behavior to be able to change (this would then be dealt with through the problem-solving technique).

3. When the receiver doesn't feel that his behavior affects the sender in any concrete or tangible way (this might indicate a Collision of Values existed and would call for skills to be described later). Some examples were then given of the above situations.

I-messages work because they represent clear communication. If, for example, one is standing in a crowded elevator and someone is standing on his foot, he may say "Ouch!". This would be an I-message and would look like this diagram.
In contrast, a "You-Message" would be diagrammed as follows:

A classroom exercise was then initiated for developing I-messages. Each class member took a piece of paper, turned it sideways, and drew two vertical lines to form three wide columns, and headed them as follows:

Non-Blameful Tangible Effects on My Feelings or
Description of His Behavior Me Now Or in Future Emotions (C-11)

An example was given such as: "I have just parked my car across your driveway and have dashed into the house. You need to go to work, keep an appointment, etc., and can't get out of the driveway because my car is blocking it. This is unacceptable behavior to you and you decide to confront me with an I-message."

The class then filled in all three columns to suit the example. Once this had been completed, volunteers read what they had in
column one. The same occurred for columns two and three. Class
discussion centered around the appropriateness of entries and such
issues as lack of blame in the first column, showing the necessity
in column two for the behavior to affect the sender, and lastly, in
column three, the appropriateness and congruence of feelings.

Volunteers were then asked to send several I-messages. The
same steps were repeated using new and unacceptable behaviors
drawn from the class. In addition, participants were asked to fill
in the three columns at home with the below-the-line behavior of a
household member.

The special problem of "anger" was raised. Anger is often
ineffective in an I-message because:

1. It is not congruent, as the real feelings such as fear, etc.
   have been bypassed.

2. Anger is basically a you-message and tends to blame or
   punish.

3. People are aware that it is used to blame or punish others.

4. It is often ignored by people.

5. The sender focuses on the receiver's failure to carry out
   the sender's solution, whereas the sender overlooks his
   own needs and feelings connected with it. This is of
   course part of our cultural pattern.

6. Anger is often an act to enable people to reach an
   objective.
Some I-message errors and I-message benefits were then discussed. The common errors in using I-messages include:

1. A disguised you-message (the use of 'feel' instead of using 'think'; for example, "I 'feel' you are being obnoxious.")

2. Undershooting—-not sending feelings full-strength.

3. Retaining a desire to teach, punish or get revenge, instead of being content to get one's needs met.

4. Being incongruent--not finding what the real feelings are and settling instead for plausible ones.

5. Forgetting to active listen to the other's response.

6. Using I-messages over and over on predictably repeating behaviors.

The benefits of using I-messages include:

1. Modeling honesty and openness (others will find it safe and desirable to be honest and open with the sender).

2. The responsibility for behavior is left with the other person--his ability to react in a responsible manner is not taken away from him.

3. The sender gets his needs met, the receiver's self-esteem stays high and the relationship continues to grow warmer and closer.

4. The receiver learns the effects of his behavior on others (he can initiate behavior out of the respect for others and can thus learn to become more considerate of the needs of others).

5. The sender is helpful by being able to vent his strong feelings and this prevents him from lapsing into angry, evaluative you-messages.

6. The sender is able to get into closer proximity with his own needs and feelings and is able to deal more effectively with himself.
The culminating exercise in this module dealt with experiencing the difference between I-messages and you-messages. The class once again paired off. They determined who would be the sender first, "A," and the receiver, "B." Each participant mentally recalled a recent, actual example of a behavior of a student, faculty member, or principal, that was below his acceptance line. When the participant was the sender he used this unacceptable behavior as the subject of his message.

"A" then told "B" who "B" was supposed to be and briefly explained the situation to him. "B" then was to possess no skills and attempted to role-play the situation as he believed the subject would. For three minutes, "A" used Roadblocks on "B" to try to get "B" to change his behavior. "B" responded spontaneously. Time was called after three to five minutes and the "A's" then composed a good I-message and started over again sending a good I-message and active listening to "B's" response. "B" responded as he would if he were the subject again without any skills. After three to five minutes this part of the exercise was terminated. Then, the roles were reversed and the same steps were completed.

A group discussion was held on the basis of how it felt to experience one or more of the four roles (you-message sender, I-message sender, you-message receiver, and I-message receiver).
Any technical points or other problems were then clarified for the group. This exercise and the discussion completed the third module.

In initiating Module D, "Modifying the Environment," the rectangle was diagrammed reiterating the idea that confrontation with I-messages enlarges the no problem area.

"Modifying the Environment" was announced as for lowering the line even further.

Some examples of illustrating this technique were given, one being that if students borrow your books and fail to return them, the development of a sign-out system will probably deal more effectively with the problem in the long run. Modification of the environment can be utilized in either of two situations:

1. When the other is already behaving in a way that is unacceptable and you want to change the behavior.
2. When you predict that the other may in the future behave in an unacceptable way and you want to prevent that behavior occurring. (D-2)
A schema for thinking about ways of modifying the environ-
ment was then offered. This included:

1. Enriching or impoverishing
2. Restricting or enlarging
3. Rearranging and simplifying
4. Systematizing or planning ahead for a future

Examples were given of each of the preceding suggestions:

1. Enriching—having plenty of materials available to
   hold the student’s interest and to keep him occupied;
   Impoverishing—not passing out materials until they
   are needed;
2. Restricting—designating a special area for working
   on projects;
   Enlarging—having students take a field trip;
3. Rearranging—placing seats in a circle;
   Simplifying—having materials within easy access for
   the student;
4. Systematizing—allowing students to do some of the
   clerical chores, like collecting papers;
   Planning ahead—informing students ahead of time
   that special situations will occur (visitors, field
   trips, etc.). (D-3)

A classroom exercise was then begun to generate ideas for
modifying the environment. The class was divided into four equal
groups. The groups were then to generate as many ideas as possi-
ble for modifying the environment of the student. Group 1 had the
task of generating ideas for modifying the environment by enriching
or impoverishing, Group 2 by restricting or enlarging, Group 3 by
rearranging and simplifying, Group 4 by systematizing and planning
ahead. Each group was to select a recorder then to write down
every idea that was generated by his group, so that he could report
them to the total group. The two-fold purpose of the exercise was to help the participants think creatively about the possible ways the environment can be modified, and to provide each participant with a list that he can utilize for his own classroom situation.

A time span of 20-25 minutes was allowed for this exercise. At the end of this time the group was reconvened and each recorder reported his list to the class, reading slowly enough so that, if participants desired, they could take notes for their own use.

A general discussion was then held and any questions about modifying the environment were answered. This completed the fourth module.

Module E bears the title "How To Resolve Conflicts-Of-Needs." Since this aspect of the instruction is considered to be the most difficult skill to learn, the instructor asked the class to read Chapters 10-13 in the text. Three sessions (six, seven, and eight) are used to teach this module.

The rectangle was again brought up-to-date, showing the effects of each category--active listening, modifying the self, modifying environment, and modifying the other (I-messages).
These four basic techniques enlarge the no problem area.

Active listening, despite its ability to help, does not totally resolve all the problems of the other. Inevitably, some remain unresolved. Also, the techniques of modifying self, environment and the other will not help the teacher to get rid of all behaviors that are unacceptable to him—some remain unchanged. The reasons for such behavior remaining unchanged are two-fold:

1. The other has too strong a need to continue his unacceptable-to-me behavior, resulting in a conflict of needs; or
2. The other doesn't buy that his behavior affects me in any tangible or concrete way, resulting in a collision of values. (E-2)

Consequently, at the bottom of the rectangle there will be both "Conflicts-of-Needs Situations," and "Collisions of Values." One way to think of the idea of conflict-of-needs (value collisions are dealt with in the next module) is to view it as "The Relationship Owns The Problem."

A classroom exercise designed to identify conflicts in one's relationship with another was then inaugurated. Each participant was asked to take a sheet of paper on which he was to list specific
behaviors of a student who is still causing a conflict-of-needs situation in his relationship with that student. It was suggested that each class member ask himself these questions:

1. What specific behaviors (things he does or says) continue to be unacceptable to me?

2. What does he do or say that causes conflicts or might cause a conflict in the future? (E-3)

Some examples were given: a student disrupting a class because of loud talking; a fellow teacher who uses the room and leaves it in a mess; a parent who consistently telephones about her child.

The participants were then asked to read their listed behaviors and then go through the list and check for those behaviors that the student "would easily understand and accept as behaviors that tangibly and concretely affect you or interfere with you or interfere with meeting your needs" (E-3).

Volunteers were then asked to read items they checked. The class was asked to save its papers for a later session, and that only the items that were marked would now be dealt with.

The instructor then presented a talk about the methods that are typically used to try to resolve conflicts. Two diagrams were drawn on the board and the two methods were labeled "Win-Lose" methods.
In Method I, if the other doesn't immediately accept the solution, the resort is to power and the use of Roadblocks. In Method II, if the solution is not immediately accepted, then crying, blaming or other Roadblocks occur.

Conflicts were then furnished from the class and they were asked to resolve the conflicts using first Method I, then Method II. The direction of resentment flow in each diagram was then illustrated.
Both Method I and Method II involve a power orientation. The question was asked, "What is power?" (E-5), and after this was answered and discussed, the function of rewards and punishments was diagrammed and explained.

1. I must possess something the other needs strongly (Rewards) and/or something that might hurt him (Punishers).
2. He must be dependent upon me for satisfying his needs.
3. He must be afraid of me for what I might do to hurt or deprive him.
4. Summary: For me to have power over another, he must be dependent on me and/or afraid of me. (E-6)

The question was then posed to the class: "Do you want your students to be dependent and afraid?" (E-6)

The class members were then asked to recall their relationships in the past in which an individual had the power to reward or punish them. They were then asked to try to recall specific instances where these individuals used their power over the participants to change their behavior or to get them to accept their solutions. The class was asked:

How did you feel?
What did you do?
How did you respond?
What were the effects on you?
What methods did you learn to cope with their use of power? (E-6)

As these feelings or behavior or coping mechanisms were expressed, they were written on the board. The following represent examples of the above:

1. resistance, defiance, rebellion, negativism
2. resentment, anger, hostility
3. aggression, retaliation, striking back
4. lying, hiding feelings
5. blaming others, tattling, cheating
6. dominating, bossing, bullying
7. needing to win, hating to lose
8. forming alliances, organizing against teachers
9. submission, obedience, compliance
10. apple polishing, courting favor
11. conformity, lack of creativity, fear of trying something new, requiring prior assurance of success
12. withdrawing, escaping, fantasizing, regression. (E-6)

In sum, "To fight, flight, or submit, that is the question." (E-7)

Additional points were also stated. One identified the danger of running out of power when Method I is used. For example, as students get older, teachers have little power over them, as this diagram suggests.

Teachers cannot, for example, use physical punishment in most schools; while students can be expelled from class, many do not feel this is very punishing; when they reach the age limit, students can quit school.

Second, the use of rewards and punishments requires expertise or it can backfire on the person with the power. For example, too severe punishment may cause the individual to quit; people learn to produce only for rewards; inconsistency in the distribution of rewards and punishments may lead to or contribute to neuroses. The third point was that rewards must be carefully selected so that they have value to the other person. A fourth point
is that rewards and punishments lack effectiveness for complex behaviors such as making a child be cooperative, have good study habits, be considerate, have initiative and be honest. Finally, the use of reward or punishments involves the person using the value judgment for the other person as to what his behavior should or should not be. One could ask himself these questions: "Do I have the right?", "Do I have the wisdom to decide?", "What if I am wrong?", "Do I know best?" (E-8).

The class was then asked what the effects of using Method II would be. They stated that the person who has been subjected to Method II will feel resentment and hostility toward the other since his needs were not met. The type of students that Method II develops, they pointed out, can be described in several ways. Probably the student would tend to be more creative; he would tend to be more selfish, inconsiderate, unmanageable, and uncooperative; he would probably feel more unloved as he might rightfully have the feeling that the teacher really didn't care; such students would have difficulty with their peers when they tried to get their way with the; the experience which emphasize a cooperative and collaborative attitude and which are essential for a democratic society would be lacking; students from homes where Method II was employed would probably have difficulty in school, where Method I is the norm; students under a Method II teacher would find their class to be chaotic and undisciplined.
The "Method III or the No-Lose Method of Conflict Resolution" was presented. The diagrams for Methods I and II were redrawn, and then the following diagram for Method III was drawn. The instructor explained that this method is a "No-Lose" method in contrast to the other methods which are "Win-Lose."

![Diagram](image)

"Together we search for a solution that is acceptable to both -- a solution that meets my needs and meets other's needs."

A conflict-of-needs situation that had already been described was selected and resolved using Method III. In using Method III it was emphasized that there is no use of power on either side, because the solution will be acceptable to both. There is also no feeling of resentment, because no one feels that he has lost.

An instructor-tape was then played to illustrate the use of I-messages, active listening, and Method III to resolve an actual conflict-of-needs situation. A discussion followed the tape. Pertinent points, if not brought out in the discussion, were emphasized by the instructor.
Following this exercise, ideas concerning the effects and benefits of Method III were presented. It was asserted that: there is no resentment flow, either upward or downward; because the person participated in making the solution, there is a higher motivation for him to carry out the decision; because two people are involved in the solution, there is a possibility of a very creative solution emerging from the problem-solving; there is no need to sell the solution to an individual as one has to do in either Method I or Method II; since no power is necessary, one would not have to be concerned about the effects of power; warm friendly and loving feelings are generated by Method III in contrast to Methods I and II; and using Method III can teach the other person that you care about him, you care about yourself, that it is possible to have a relationship in which people can collaborate and negotiate; and that conflicts are inevitable and their resolution can bring people more closely together.

A class discussion was triggered by the following questions:

1. Why do parents, teachers, leaders so frequently use Method I or II instead of Method III?

2. What kind of society would one have if Method III were used in homes, in schools, in organizations?

3. Can you relate Methods I, II and III to wars between nations? (E-13)
After the discussion, some problems in implementing Method III were discussed. Among the key points were:

1. The communication involved in Method III is in reality I-messages and active listening.

2. The conflict must be redefined in terms of competing needs rather than competing solutions.

3. Method III is really more than a compromise because the solutions can be quite creative, while compromise is a mutual agreement to give up half of each competing solution rather than a creative new way to meet all of the basic needs.

Any other issues the class raised concerning Method III were then discussed.

An exercise was then held which involved role-playing each of the six steps of Method III. The instructor played the role of the student; the class, the role of the teacher. The class counted off by fives and were given these instructions:

The task of the individual playing #1, will be to set the stage for a Method III conflict-resolution session with me. This will require you, (1) to find a time suitable to the student, (2) to make sure he understands the idea of Method III, (3) to make sure he is willing to enter into Method III, (4) to convince him he is not going to lose.
The task of the individual playing #2 will be to carry out Step I in the Problem-Solving process. Turn to that activity (#14) in your notebooks and read Step I carefully, now.

The task of the individual playing #3 will be to carry out Step II of the Problem-Solving process. Turn to that activity (#14) in your workbook and read Step II carefully, now.

The task of the individual playing #4 will be to carry out Steps III and IV of the Problem-Solving process. Turn to that activity (#14) in your workbook and read Steps III and IV carefully, now.

The task of the individual playing #5 will be to carry out Steps V and VI in the Problem-Solving process. Read those sections carefully in activity(#14), now.

After allowing the participants enough time to read the material, the l's were asked to come to the front of the class. At that time, the description of the teacher from an episode called "The Handicapped Exam-Taker" was read to the whole class. The situation is described as follows:

Teacher role

You are a Social Science teacher, who has always relied on objective exams, because you feel they are much fairer and give a better picture of your students' performance. You have given the same objective final exam for four years--thus you have collected some very extensive norms on this test, making it even more valuable to you.

John, one of your best students, judging from his performance in class discussions has asked you for a conference. It is around the middle of the semester. This student is really quite brilliant and creative, but sometimes he is short on facts and figures when he discusses in class. (E-20)
As previously indicated, the instructor played the role of the student, which was described in this manner:

You are John, a student in junior high school. You are now in the middle of the quarter, and you decide you must have a conference with your Social Science teacher.

You really love the course and you have done a lot of outside reading and have participated actively in the class discussions. However, you know that this teacher's final exams are always objective tests. This scares you, because for some reason you always do poorly on such tests. You do well on essay tests, and you write excellent term papers or themes. You know that if your grade is based primarily on how you do on the final, you will surely get a C or a D, even though you feel you should get an A based on what you have learned from discussion and from your reading.

You cannot afford a C or D in this class because it will bring down your average below what is required for you to make the honor role, for each achievement, your parents always give you $50.

You want to convince the teacher to excuse you from the final and either design an essay exam for you or let you do a comprehensive term paper. (This role was not read to the class.) (E-20)

When it seemed appropriate, the participant playing #1 was stopped, and the instructor coached him in the areas in which he felt the participant needed help. Each individual then had this opportunity to role-play, and then to be critiqued. This was then followed by a general class discussion.

The concluding exercise in this module provided additional
skill practice in Method III. The class was divided into two groups, one labeled "1," the other "2." The "1's" were taken out of the room and told about their role. The "2's" were then told about their role. (A description of the situation and role follows.) Each of the "1's" was then asked to pair up with one of the "2's." Each pair was then to try to resolve its conflict using Method III. A time limit of 25-30 minutes was set by the instructor. After the time period was up, the class was reassembled and the class responded about its "gut" feelings, then about the conflict-resolution process. Any question about the conflict-resolution process was answered. (The role-playing situation follows.)

The Eager-Beaver Problem

Teacher's Role

You can choose to be a teacher of any grade between 6th and 12th.

You have a student who participates frequently and strongly in all classroom discussions. This prevents others from participating. He (or she) is very bright and very eager to show off his knowledge, which usually is much greater and more accurate than anyone else's in the class. He (or she) sometimes puts down less knowledgeable students, making them feel embarrassed and inadequate.

You have made attempts at trying to reduce the youngster's participation through I-messages but you have seen no change in his behavior.

You decide to try to use Method III with the youngster, after school, with just the two of you in the room.
Your needs:

1. You feel strongly that others should have the chance to participate.
2. The quality of your class discussions is markedly reduced because so few students contribute—you fear their learning is severely affected.
3. You don't want to squelch the eager-beaver's creativity and motivation. (E-24)

Student's Role

You are a student who loves learning—you read a lot, learn things quickly and easily.

You have a need to prove to other students how bright and knowledgeable you are.

You get impatient with other students who do not learn as quickly as you or who have far less knowledge.

You have set a goal for yourself of getting straight A's in school. So far, you have been able to do this.

You wish school could give you more opportunity for independent study and individualized learning. You feel bored with most of the class discussions, because other student's contributions are weak and not based on proper information. (E-24-25)

A few minutes were spent discussing the fact that the teacher's freedom to utilize Method III is limited by federal and state laws, education codes, school board policies, building rules, etc.

Also discussed were some ways to enforce restriction and rules outside the teacher's area of freedom. To deal with this aspect of behavior, the teachers were encouraged to mentally review the rectangle to see where the student's behavior could be inserted.
It was recommended to the teacher that if the rule-breaking behavior is below their line, they should determine if the student knows of the rule and of its consequences. If he does not, then he should be informed. If he should know the rule, but asks to be free of it, the teacher should inform him that he does not have the prerogative to free him from the rule. Should the student know the rule and break it, the instructor recommended that the teacher send a clear I-message and active listen. Should the behavior still not change, the teacher should move into Method III. If the Method III solution does not produce a solution acceptable to the teacher, he was advised to: tell him what the consequence will be next time; administer the consequences this time; and if the teacher desires, he can attempt to get the rule changed.

The instructor also reiterated that the function of the course was to enlarge the no problem area within the rectangle. By enlarging this area the teacher has provided for more "teachable time" or a "teachable situation."

Time was also spent on discussing "The Rule-Setting Class Meeting," and "The Conflict-Resolution Class Meeting," after the class read those sections of their workbooks dealing with those topics.

Additional comments were made regarding the use of active listening and I-messages with supervisors or administrators. It was suggested that the teacher be honest with his feelings with the
supervisor and administrator. It was also pointed out that principals could benefit from some active-listening of their problems.

Some suggestions were made for going over the administrator's head, when one is not satisfied with a decision. A conference should be asked for; an I-message should be sent; if it fails a stronger I-message should be sent; should it fail, the administrator should be asked to accompany the teacher to a meeting with his supervisor; should he not go, then the teacher should attend the meeting alone and tell the administrator's supervisor what steps the teacher has taken to try to resolve his situation.

In dealing with a student who has an unresolved conflict with another teacher, it was suggested that the teacher: active listen thoroughly to him; ask him if he has tried to resolve the conflict directly with the teacher; ask him if he would be willing to confront the teacher with an I-message; if he would be willing to do so, then coach him on how to best send it; if he has already tried to work it out with his teacher, ask him if it would be acceptable to him to call in the teacher to try Method III problem-solving between he and the teacher; should he be frightened of this, the teacher should active listen his fears to try to help him deal with them; and if he still refuses, the teacher should tell him it is impossible for him to solve the problem in the other teacher's absence.
The subject of the sixth module, "How to Deal With Value Collisions," and the material for session nine was initiated by the instructor asking the class to refer to the sheets on which they had listed specific behaviors of the other person that still remained unacceptable to them. They were asked to read only the unasterisked behaviors on their list. From these examples, the trainer developed the concept of "value collisions"—behavior which the other person does not readily accept as tangibly and concretely affecting another individual. Since I-message includes as one of its components, "tangible effects on me," the other person will not be motivated to change his behavior if the behavior does not tangibly affect him. People strongly defend their beliefs, thoughts, style of dress, or style of life, and strongly adhere to their values. We have civil rights or freedoms that are guaranteed to adults in our society.

The instructor then picked out a teacher with long hair and sent him some strong messages: "I'm disturbed by your long hair; I just can't stand your long hair. I would feel a lot better if you would have it cut." The participant was asked what he felt, and the class responded to this. The class was asked why the individual was not motivated to change. The participant was asked how he would feel toward the instructor if he were antagonized about this thing every day.
The end result of the discussion was that the other person must be convinced that his behavior tangibly affects the individual sending the messages. (Several examples were given to illustrate the point.)

A rectangle was drawn and the situation was reviewed:

What remains is the area of value collisions. The class generated behaviors of their students that did not tangibly or concretely affect them. To help the class, the following characteristics were named:

1. I feel unaccepting of the behavior. It is below my line.
2. The other probably will not buy that the behavior tangibly affects me.
3. In my opinion, he has a problem. I think the behavior is bad for him in some way.
4. But the behavior won't fit up in 'he owns' area of rectangle because:
   a. I don't feel accepting and more importantly,
   b. He doesn't believe he has a problem. (F-4)

The class then named as many of these behaviors as it could and these were listed on the blackboard. After the listing had been completed, several questions were raised:
1. What would happen to the number of conflicts in your classroom, if none of these behaviors were permitted to become hairy issues or angry battles?
2. Why do we hassle our students so much?
3. Why do we deny youth their civil rights? (F-4)

After this discussion, the instructor demonstrated what can be done with the behavior of the other person that an individual cannot accept, but yet does not tangibly or congruently effect the individual. The first suggestion was to model the desired behavior. Numerous ideas were combined with this suggestion to enable the participants to see what a powerful force modeling can be.

Another method suggested was to be an effective consultant. A consultant is a potential change-agent, who usually is hired to promote change; he is seen as an individual who has wisdom, experience, know-how, desirable values and beliefs. To be an effective consultant a person must:

1. Be armed with facts and figures and have well thought-out ideas.
2. Leave the responsibility for change with the client.
3. Attempt to influence the client one time, and no more.

A hypothetical consultant-client relationship was then role-played before the class. The instructor played the part of the consultant, and a volunteer played the role of the client. The consultant proceeded to hassle the client with Roadblocks about why his ideas were not being accepted by the client.
The parallel was made that many teachers lose their consultant status because they: nag, repeat, induce guilt, evaluate, judge and blame, feel as if they are failures if their values are not accepted, feel hurt or rejected if their values are not accepted.

The third method an individual may use in dealing with the unacceptable behavior that does not tangibly or concretely affect him is to modify the self. This can be accomplished by:

1. Opening oneself to consider the logic or wisdom of another's values.

2. Being aware that there are many different values operating in the world.

3. Try on for size the other's values.

4. Asking oneself if someone must be like himself in order for the individual to like him.

5. Asking oneself if getting one's needs met and developing a feeling of self-worth comes from one's own productive efforts or does one depend on how his students turn out (or how people will evaluate them or evaluate himself?).

6. An introduction and consideration of the "Maslow Hierarchy," as a way of getting one's own needs met. (The hierarchy begins with satisfying one's "physical comfort" and moves through such stages as "safety and security," "social" (caring and interacting), "achievement and accomplishment" and culminates in the idea of "self-actualization"—the free and complete use of one's self-potential. A discussion was then initiated concerning the implications of this view of man in relation to the class participants becoming more self-actualized and becoming more accepting of others.)

7. Re-examining a certain value and giving up the value, if that makes sense, and thus avoid value-collisions.
8. Being aware of recent findings that there is a close relationship between the acceptance of self and the acceptance of others.

9. Becoming more familiar with the world of the student so that greater acceptance can be achieved.

10. Asking oneself--"Is it my right and duty to mold my students?"

11. Asking oneself--"Do I own my students?"

The fourth method suggested was "praying"; not just any prayer, but one in particular:

God grant me the Serenity to accept things I cannot change,
Courage to change things I can
And wisdom to know the difference. (F-10)

A final classroom exercise in this module was held to help the class cope with the ambiguity of values collision skills. Certain key points were made and then the class was asked to react to these ideas. These points included:

1. Acknowledging that the values area is ambiguous when contrasted in high degree to the predictability of I-message and Method III.

2. Acknowledging that while power is available in the values area, the use of it may damage or end the relationship, and if the relationship is damaged then all other areas of the rectangle will suffer. In addition, the more power one uses over another, the less influence he has over the other.

3. Calling attention to the role played by the instructor—he has no power over the class participants, but hopes to have great influence.
In the final session, a summary of the course contents was given and final questions and comments were entertained.

Also held during the last session, although not a part of the treatment, were interviews with each of the participants.

Chapter IV surveys the results of the study. Included within this chapter are sections dealing with the development of the instruments, descriptive data on the instruments, application of the instrument to the question, item analysis data, results of the statistical data, anecdotal information, procedures, results of the anecdotal material, and a summary of the chapter.
CHAPTER IV

RESULTS

Introduction

This chapter discusses: (1) the development of the instruments used in this study; (2) the descriptive data on each individual instrument; (3) application of the instrument to the questions; (4) item analysis data; (5) the results of the statistical data; (6) anecdotal information; (7) the procedures involved in collecting the anecdotal material; (8) the findings of the anecdotal material; and (9) the summary and interpretation of the data.

Development of the Instruments

No instrumentation exists which was specifically developed to measure the impact of the Teacher Effectiveness Training Program. The literature was examined in an effort to select instruments that would most closely measure the questions in this study. These specific tests included the Schuman Student-Centeredness Scale, the Barrett-Lennard Relationship Inventory, and the Science Activity
Check List: Student Perception. These three tests were then combined into one instrument (see Appendix A).

**Descriptive Data on the Instruments**

The Schuman Student-Centeredness Scale (Appendix A) is an instrument purporting to measure the degree of student-centeredness within a particular classroom. Consisting of 18 items, and rated on a scale of one to five, this instrument depends for its ratings upon pupil perceptions of the teacher. The scoring range of this instrument is from 18 to 54, the lower score being regarded as an indication that the teacher is perceived as being more student-centered.

The reliability of the Schuman Student-Centeredness Scale was estimated by members of the staff of the University of Chicago.\(^1\) Landsman demonstrated that a corrected reliability coefficient of .93 was obtained for the scale with an N of 60.\(^2\)

The Science Activity Check List: Student Perception (Appendix A) purports to determine the nature of the activities which secondary school science teachers use. As the title indicates, the instrument depends upon student perception for its validity. The validity for the

---


2. Ibid.
instrument was estimated by a panel of judges who were science educators. An item-analysis program involving a test-retest procedure was utilized to estimate reliability. The Kuder-Richardson-20 estimate was .770, while the K-R-21 estimate was .731.

Fourteen items, answered with a T for true and F for false, were selected from the Check List. Minor changes were made in the statements when the need was apparent (e.g., the word "science" was replaced by the words "social studies").

The Relationship Inventory (Appendix A) purports to measure a person's ability to demonstrate to another person his capacity for (1) level of regard, (2) empathic understanding, (3) unconditionality of regard, (4) congruence, and (5) willingness to be known. (The last factor was eliminated by Barrett-Lennard because it correlated closely with the congruence factor and was therefore not pertinent.) The items included in this form of the Inventory were modified for high school use by Robert E. Bills and Barrett-Lennard. The Inventory consists of items that allow a response on a six point continuum from a strong agreement (+3) to a strong disagreement (-3). Each of the four sections


includes eighteen items. In an effort to obtain a maximum independence of answers, each measure of a variable occurs on every fourth item. Content validation was carried out through the use of the ratings of five judges and through the use of an item analysis. (For detailed procedures consult Barrett-Lennard.)

The split-half reliability coefficients of the Relationship Inventory are reported using client-therapist relationship data. The corrected Spearman-Brown rho's were: (1) level of regard .93, (2) unconditionality .78, (3) empathic understanding .83, and (4) congruence .89.

Application of the Instrument to the Questions

The following questions were listed in Chapter I. Will the treatment group, once it receives the Teacher Effectiveness Training:

1. Encourage students to participate in classroom rule-setting more so than the control group?

2. Encourage students to contribute to planning what and how the subject matter will be learned, more so than the control group?


3. Encourage student-centered classroom discussions more than the control group?

4. Allow students to have a percentage of their learning self-directed through projects of their own choosing, other individual work, or group work, more so than the control group?

5. Function more as educational consultants to students than teachers in the control group?

6. Be able to accept student expression of feeling and use active listening; be willing to allow and to encourage students to find and deal with their own problems; and to encourage the development of self-control more so than the control group?

7. Modify the classroom environment to prevent unacceptable behavior more so than the control group?

8. Be more willing to express its feelings in the form of an I-message when someone or something is a problem to them, more so than the control group?

9. Be able to resolve classroom conflicts through mutual problem-solving more so than the control group?

10. Show more empathic understanding, level of regard, unconditionality of regard and congruence more so than the control group?

11. Generally become more accepting of student behavior more so than the control group?
Of those questions, only numbers three, four, five, six, eight, and ten can be purportedly measured with the three instruments.

**Item Analysis Data**

An item analyzing program provided by the Center for Testing and Evaluation at The Ohio State University, provided statistics for the pre test, post test, and post-post test results for the treatment and control groups. That information, which was later used as a basis for the analysis of results, is found in Table 1.

Item analysis test score distribution information was also obtained for each instructor. (See Appendix B.) In addition, subtest score distribution information was secured for each teacher. (See Appendix C.)

**Results of the Statistical Data**

A two-way analysis of variance was computed for both repeated measures and for a trend analysis of repeated measures. (Tables 2 and 3.)

The repeated measures F score at the .05 level is significant at 3.884, an F-ratio of 1.4335 is not significant.

Thus the trend analysis at the 0.5 level is also not significant. Further analysis was suggestive but did not solve the problem. (See Appendices B and C.)
### Table 1

**Summary of Pre Test, Post Test and Post-Post Test Descriptive Statistical Data for Treatment and Control Groups**

<table>
<thead>
<tr>
<th></th>
<th>Treatment Group</th>
<th></th>
<th>Control Group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Post-Post</td>
<td>Pre</td>
</tr>
<tr>
<td>Number of Students</td>
<td>104</td>
<td>123</td>
<td>116</td>
<td>151</td>
</tr>
<tr>
<td>Mean</td>
<td>65.39</td>
<td>62.45</td>
<td>60.52</td>
<td>60.34</td>
</tr>
<tr>
<td>Median</td>
<td>66</td>
<td>62</td>
<td>60</td>
<td>61</td>
</tr>
<tr>
<td>S. D.</td>
<td>12.35</td>
<td>15.15</td>
<td>16.33</td>
<td>15.79</td>
</tr>
<tr>
<td>Range</td>
<td>56</td>
<td>66</td>
<td>80</td>
<td>88</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.20</td>
<td>-0.30</td>
<td>-0.15</td>
<td>-0.35</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.64</td>
<td>-0.50</td>
<td>-0.37</td>
<td>0.07</td>
</tr>
<tr>
<td>Reliability Estimate</td>
<td>K-R20=0.867</td>
<td>K-R20=0.910</td>
<td>K-R20=0.920</td>
<td>K-R21=0.849</td>
</tr>
<tr>
<td>Mean Item Difference</td>
<td>.371</td>
<td>.400</td>
<td>.418</td>
<td>.420</td>
</tr>
<tr>
<td>Mean Item Difficulty</td>
<td>.293</td>
<td>.352</td>
<td>.389</td>
<td>.363</td>
</tr>
</tbody>
</table>
TABLE 2

ANALYSIS OF VARIANCE OF REPEATED MEASURES

<table>
<thead>
<tr>
<th>Effect of Group</th>
<th>Degrees of Freedom</th>
<th>Sums of Squares</th>
<th>Mean Squares</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>236</td>
<td>399.3782</td>
<td>399.3782</td>
<td>1.4335</td>
</tr>
</tbody>
</table>

TABLE 3

TREND ANALYSIS OF VARIANCE OF REPEATED MEASURES

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean of Squares</th>
<th>F-ratio</th>
<th>P less than</th>
</tr>
</thead>
<tbody>
<tr>
<td>22007.762</td>
<td>238</td>
<td>92.470</td>
<td>1.508</td>
<td></td>
</tr>
<tr>
<td>139.402</td>
<td>1</td>
<td>139.402</td>
<td>0.221</td>
<td></td>
</tr>
</tbody>
</table>

As has already been indicated in an earlier section of this chapter, the instruments seem to be reliable. In this situation, however, it would appear they are invalid. While student perceptions are an ultimate criterion to use in research studies, the researcher may find that as a result of using this criterion many more situational and personal variables may have entered onto the scene and destroyed the validity of his instruments. Apparently this is what has happened with the statistical data. The test means of the scores suggest this and the decreasing test means of both teachers "A" and "K", representing the treatment and control groups respectively, in addition to the
analysis of variance, strongly suggest that the instruments are measuring other factors than the treatment. The data derived from the instruments is therefore inconclusive.

**Anecdotal Information**

Did the training program have an effect on the treatment group? In addition to the statistical data, anecdotal material, consisting of audio-taped classroom observations of both the treatment and control groups, and audio-taped interviews of the treatment group, was collected and assessed. General information regarding the school, as well as biographical information concerning the teacher was collected. Personal observations and perceptions concerning the teachers in the treatment group were also recorded.

**Procedures**

There were three taped observations of each teacher. These observations corresponded with the administration of the instruments on a pre, post, and post-post basis. Observations one and three consisted of observing the normal classroom lesson. Observation two (post) was handled in this fashion. Two articles concerning poverty⁷ were given to the teachers in each group with the instructions that they teach a lesson centered around one or both of these articles

⁷See Appendix D for a reproduction of these articles.
in any way that they so desired. Thus, the second observation
provided a common situation through the use of the same articles and
the same directions.

A rating scale comprising two types of measurement—use of
the program skills, and the degree that classes were student centered—
was constructed and the audio tapes were rated accordingly. (This
was easily accomplished because evidence of the use of specific skills
was being sought.) The rating scale follows.

1 - Use of skills non-existent.
2 - Minor use of skills.
3 - Some use of skills.
4 - Moderate use of skills.
5 - Heavy use of skills.
A - Teacher centered class.
B - Mostly teacher centered class.
C - Somewhat student centered class.
D - Predominately student centered class.
E - Totally student centered class.

A random sample of five tapes was selected from those already
recorded to check on the accuracy of the rating. Since the ratings
remained the same as the first time, this would indicate that the
ratings were consistent.
The treatment group interviews were conducted during the last class session. Each participant was interviewed separately with no possibility of the others overhearing him. A good rapport had been established between the instructor and the participants during the period of the training program. The development of the rapport was apparent as the participants felt free to express both positive and negative comments during the course of the interview.

The general information was obtained through observation and by talking to the teachers in the study. The biographical information was collected by having teachers fill out a brief questionnaire. (See Appendix E.) Perceptions regarding the treatment group were dutifully remembered and recorded.

Results of the Anecdotal Material

Tape ratings

The results of the ratings for the teachers are as follows. 8

The ratings indicate that teachers "B" and "D" seemed to have the least difficulty of all the teachers in the treatment group in putting the skills into practice. By the same token the ratings would indicate that teachers "A", "C", and "D" all experienced greater difficulty in applying the skills to their individual classrooms.

8See Appendix F for a more detailed description of the observations and ratings.
**TABLE 4**

**TAPE RATINGS FOR TREATMENT AND CONTROL GROUPS**

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1, A</td>
<td>3, C</td>
<td>3, C</td>
</tr>
<tr>
<td>B</td>
<td>1, E</td>
<td>5, E</td>
<td>3, C</td>
</tr>
<tr>
<td>C</td>
<td>1, A</td>
<td>1, A</td>
<td>2, A</td>
</tr>
<tr>
<td>D</td>
<td>1, B</td>
<td>5, D</td>
<td>4, C</td>
</tr>
<tr>
<td>E</td>
<td>2, B</td>
<td>Da</td>
<td>Da</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control Group</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>2, A</td>
<td>2, B</td>
<td>2, A</td>
</tr>
<tr>
<td>G</td>
<td>1, A</td>
<td>1, B</td>
<td>1, C</td>
</tr>
<tr>
<td>H</td>
<td>1, A</td>
<td>1, B</td>
<td>1, B</td>
</tr>
<tr>
<td>I</td>
<td>1, B</td>
<td>1, C</td>
<td>1, C</td>
</tr>
<tr>
<td>J</td>
<td>1, A</td>
<td>2, D</td>
<td>1, B</td>
</tr>
<tr>
<td>K</td>
<td>1, B</td>
<td>1, B</td>
<td>1, A</td>
</tr>
</tbody>
</table>

*a These two classes were predominately student-centered classes. There was little opportunity to rate the teacher's program skills.

**Interviews**

The interview with teacher "A" indicated that he felt frustrated about the program. He thought it would work best in an idealized situation--a class composed of a smaller number of students which he felt was not the case in his teaching situation. He indicated that he could see better possibilities in a one-on-one situation for the use of the course skills. Teacher "A" stated that he had seen his use of the skills, in some instances, make positive changes. To him, the most difficult skill to use was the Method III skill (problem solving). Some
early efforts in this vein, he stated, ended in failure for him and this shook his confidence in the course. He also indicated that the course skills made him more sensitive to his classes and that he was able to learn the names of his students faster than he had in previous years. He claimed his awareness of the class situation was better, and that he made a greater effort and was more successful in explaining his content material to his students. Teacher "A" also felt that the training would have been more effective had the training been given prior to the beginning of school, because he felt it was difficult to change his conception of his role during the course of the year.

Teacher "A" seemed to feel that he was more able to allow self-directed learning on the part of the students than he had in the past. He now saw his role as more of an educational consultant than previously. He also allowed more freedom in his seating arrangements and indicated he was more willing to talk with students and elicit their responses than he had in the past.

Teacher "B" indicated that the program was "fantastic." She felt that she had made gains in modifying herself—that her area of acceptance had grown larger. She noticed that while I-messages were the most difficult for her to deliver, they had much more impact on the behavior of her students than did any messages that could be construed as threatening. Teacher "B" felt that she was much more open to pupil centered planning than she had previously been; she endeavored
to initiate self-directed learning, and she now conceived of her role as more of an educational consultant than she had previously. She felt that she was now more able to allow and accept student expression of feeling, that she was more able to modify the environment to avoid discipline problems than she once had, and that although she had not utilized Method III with the whole class, she had attempted to use it, with some success, on an individual basis.

Teacher "C" felt that the class had been "personally very beneficial. . . ." and that his approach to teaching and dealing with discipline problems had been widened. He felt that the program was "worth taking. . . ." and that it was practical. He expressed some difficulty in concentrating on the course skills, saying that it "depends on my mood. . . ." He indicated, "I haven't used it as much as maybe I should, but I've tried it on a one to one basis and it's helped one hundred percent."

Teacher "C" felt that the program had affected his behavior by making him more conscious of what he was doing. As he stated, "I'll think about it first, then do it." He also felt that the program enabled him to have more patience and more understanding, and that it made him more aware of how other teachers disciplined their students. Teacher "C" indicated that he was very selective in the students that he asked for contribution to classroom planning, that he had encouraged student centered discussions several times, that he
was more able to accept student expression of feelings, that he had made some minor efforts to modify the environment to prevent unacceptable behavior, and that he had attempted using Method III on an individual basis.

Teacher 'D' stated that he enjoyed the course and looked forward to each class meeting. He felt that, as a result of the program, he was able to increase student participation in his classroom planning, and that he felt more free to become experimental in his teaching. Unlike the other teachers, teacher 'D' felt that Method III was the easiest skill to utilize and that he had used Method III to facilitate teacher-student rule setting. The most pronounced change that he noticed after the course, was that his students were more open and able to better express their feelings.

Teacher 'E' stated that, 'The program opened up whole new areas of thought in terms of relations between students and teachers that I had never thought about before--namely the departure from the authoritarian approach to teaching to one in which students are given more opportunity to determine classroom policies, and to mutually talk about problems.' He continued, 'I'm not saying that I have inaugurated all of these things, but I see the potential and the possibility of doing it.' Teacher 'E' felt the course was 'very worthwhile' and thought that it would ease many tensions between students and teachers. He felt that the program had allowed him to be more
relaxed with his students and that he had become a more accepting person. As he stated, "I liked kids, but in the past, I liked them quiet." Teacher "E" felt that his students were more open and were more willing to disagree with him concerning historical interpretations. He felt that he was gradually developing more student-centered classes, that he was allowing more self-directed study efforts, and that his role was now more one of an educational consultant.

Teacher "E" still expressed a lack of confidence about his ability to effectively use all of the course skills, but he convincingly indicated that he intended to reread the material and more fully master it so that he could continue to apply the program skills.

**Researcher perceptions**

This writer would agree with Teacher "A's" assessment of his feelings about the program. It seemed that he did indeed have difficulty seeing where he could effectively utilize the program skills. His relations with at least one class were very strained. This became apparent the third time the questionnaire was administered to the class. Sensing hostility to the teacher, this writer had time following the administration of the instruments, to actively listen to the feelings of the class. Their criticism centered around their treatment under teacher "A"--that he made jokes at their expense and when they reciprocated they were asked to leave the class; that he pried into
their personal affairs, and that the only time they had a change of pace in the classroom procedures was when this writer appeared to observe a class.

Teacher "B" seemed to have little difficulty accepting the philosophy and in implementing the program skills. Despite a difficult school situation she was able to effectively use the skills. This writer felt that she would become even more adept with the skills as she continued to use them.

Teacher "C" had many personal problems which surfaced in some form in practically every training session. This felt that this continual preoccupation with his problems prevented him from internalizing the philosophy and skills and in seeing where in the classroom the skills could be used. He did not portray a warm and accepting feeling in his classroom. Teacher "C" also indicated that he was thinking seriously of inaugurating a professional golfing career if that could prove feasible. This might indicate that he did not view teaching as a viable life-long career for himself.

Teacher "D" seemed to be an accepting person who was able to integrate the philosophy and to use the skills effectively in his classrooms. One could see that his relationships with his students were warm and sincere. Like teacher "B", teacher "D" should become most proficient through the use of the skills.
Teacher "E" worked hard at attempting to internalize the philosophy and to utilize the skills. He remarked early in the course that peer pressure would make it difficult for him to feel free to use the program skills. Later, in the program he felt that the peer pressure would be there only if he actively began to try to convince other teachers of the worth of the program. Teacher "E", in this writer's estimation, will continue to master the skills and to seek ways of using them in his classroom.

**Schools**

A total of five middle and/or junior high schools, and three high schools were utilized as research bases in the study. The treatment group sampling was drawn from two middle and/or junior high schools, and two high schools, while the control group sampling was drawn from four middle and/or junior high schools and one high school.

All schools would be considered to be located in a suburban setting. Insofar as the treatment group sampling of schools was concerned, high school "A" is located in a prestigious suburb of Columbus. Most of its graduates go to college.

High school "B" is located in a small community south of Columbus. The students are drawn from a less affluent environment
than in school "A." Fewer of these students would go to college, more would be job-oriented.

Of the middle and/or junior high schools, school "C" is drawn from the affluent suburb, while school "D" is within the same district as is high school "B." The population of school "D" is drawn from the lower middle class or upper lower class. That particular school abounds with discipline problems. Conversations with teachers in the treatment group and with other teachers in the lunchroom, indicated that, in their perception, the principal functions ineffectively in his role—that he fails to provide adequate leadership. Of all the schools that this researcher worked in, this would have to be classified as the most difficult. (For example, a few male students refused to take the questionnaire when it was administered for the second and third times.) A general air of hostility and uncooperativeness seemed to permeate the school.

The population of three of the four middle and/or junior high schools that were part of the control group sample seemed to be composed of middle class children. The fourth school was the same as school "D." The single high school contained in this sample was located in the same district as high school "B." Its' students were also drawn from the middle class.
Teacher biographical information

Of those teachers comprising the treatment group, the mean age was 32.4 years, the mean number of years of education was 4.6 years, and the mean number of years of experience was 18 years. The median age was 30 years, the median number of years of education was five years, and the median number of years of experience was seven years.

The mean age for teachers in the control group was 30 years, the mean years of education was 4.2 years, and the mean number of years of teaching experience was 5.7 years. The median age was 28 years, the median number of years of education was four years, and the median number of years of experience was four years.

Summary

As has already been indicated, the three instruments used to measure change in the treatment group, although reliable, do not appear to be valid. Kerlinger, in commenting on the problems involved in field studies, seems to support this contention with this statement, "The investigator in a field study . . . is always faced with the

---

9See Appendix E for more detailed biographical information.

10One teacher withdrew from the treatment group after the second meeting. He had not attended any sessions, and it was too late to replace him. Consequently the size of the treatment group was reduced by one teacher.
unpleasant possibility that his independent variables are contaminated by uncontrolled environmental variables. The anecdotal information provides insight the instruments do not. This data seems to indicate that the Teacher Effectiveness Training program had a varying impact upon the five members of the treatment group. The following information, which is based on the interviews or observations, indicates in which areas (as delineated by the questions) the training program affected the treatment group. (Table 5)

All participants indicated, or showed through examples, that they had become more accepting of their students' over-all behavior. Four out of the five participants thought the program to be valuable and worthwhile. (These feelings would have to be tempered as a result of the feelings, attitudes, and classroom behavior of teachers "A" and "C."

Chapter V contains a summary of the study, conclusions reached as a result of the study, a discussion of the results of the study, and recommendations for further study.

---

<table>
<thead>
<tr>
<th>Question</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (classroom rule-setting)</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>somewhat</td>
<td></td>
</tr>
<tr>
<td>2. (pupil-planning)</td>
<td>yes</td>
<td>somewhat</td>
<td>yes</td>
<td>somewhat</td>
<td></td>
</tr>
<tr>
<td>3. (student-centered discussion)</td>
<td>yes</td>
<td>yes</td>
<td></td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>4. (self-directed learning)</td>
<td>yes</td>
<td>yes</td>
<td></td>
<td>yes</td>
<td>somewhat</td>
</tr>
<tr>
<td>5. (functioning as educational consultant)</td>
<td>yes</td>
<td>yes</td>
<td>somewhat</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>6. (use of active listening)</td>
<td>somewhat</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>7. (modifying classroom environment)</td>
<td>yes</td>
<td>yes</td>
<td></td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8. (using I-messages)</td>
<td>yes</td>
<td></td>
<td></td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>9. (use of Method III)</td>
<td></td>
<td>individual basis</td>
<td>individual basis</td>
<td>individual basis</td>
<td>individual basis</td>
</tr>
<tr>
<td>10. (showing categories, as delineated by Barrett-Lennard)</td>
<td>yes</td>
<td></td>
<td></td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>11. (acceptance of student behavior)</td>
<td>possibly</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

125
CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

This final chapter: (1) summarizes the study, (2) presents and discusses the conclusions reached as a result of the study, and (3) presents recommendations for further study.

Summary

The major thrust of this study was to measure the impact of Gordon's Teacher Effectiveness Training on teachers of social studies. The problem was stated: Will an in-service program make a difference in the behavior of teachers? And specifically, will Gordon's Teacher Effectiveness Training program encourage teachers of social studies to become more sensitive in their outlook and to develop more humanistic classrooms?

The following questions were considered. Will the treatment group, once it receives the Teacher Effectiveness Training:

1. Encourage students to participate in classroom rule-setting more so than the control group?
2. Encourage students to contribute to planning what and how the subject matter will be learned, more so than the control group?

3. Encourage student-centered classroom discussions more than the control group?

4. Allow students to have a percentage of their learning self-directed through projects of their own choosing, other individual work, or group work, more so than the control group?

5. Function more as educational consultants to students than the control group?

6. Be able to accept student expression of feeling and use active listening; be willing to allow and to encourage students to find and deal with their own problems; and to encourage the development of self-control more so than the control group?

7. Modify the classroom environment to prevent unacceptable behavior more so than the control group?

8. Be more willing to express its feelings in the form of an I-Message when someone or something is a problem to them, more so than the control group?

9. Be able to resolve classroom conflicts through mutual problem-solving more so than the control group?

10. Show more empathic understanding, level of regard, unconditionality of regard, and congruence more so than the control group?
11. Generally become more accepting of student behavior more so than the control group?

The literature was reviewed, and certain articles and books were selected from four areas: (1) the schools and dehumanization, (2) the student's self-concept, (3) the humanistic classroom, and (4) in-service education studies. This material helped to provide documentation about the dehumanization faced by students, the effect of that dehumanization upon the self-concept of students, how classrooms can be further humanized, and lastly information about the effectiveness of in-service education studies.

Six teachers, comprising the treatment group, and six teachers comprising the control group, were randomly selected from two suburban school systems. (One member of the treatment group subsequently withdrew from the program before it started, consequently the treatment group was composed of five teachers.) One class per teacher was selected, and utilizing a pre, post, and post-post test design, an instrument was administered to the students. Three tests, the Schuman Student-Centeredness Scale, A Modified Science Activity Check List, and the Barrett-Lennard Relationship Inventory, comprised the instrument. In addition, anecdotal information in the nature of: (1) audio-taped observations for each class, (2) taped interviews with the treatment group, (3) biographical information on each teacher, and (4) researcher observation and perceptions, was
collected. Both the statistical data and the anecdotal information were assessed in an attempt to measure the impact of the program.

Conclusions

A reliable test was developed which attempted to assess the impact the program had on certain of the questions. These included the questions dealing with: student-centered discussion (#3); self-directed learning (#4); functioning as an educational consultant (#5); use of active listening (#6); using I-Messages (#8); and showing categories, as delineated by Barrett-Leonnard (#10). The statistical data indicated that the tests, while probably reliable, were invalid. This may well have been the result of confounding variables. As previously indicated in Chapter IV, Kerlinger supported this contention by stating that field study results are often "contaminated" by uncontrolled variables. Consequently, no direct significant difference between the treatment and control groups was discernable through the statistical data.

The anecdotal material, consisting of audio-taped classroom observations of both the treatment and the control groups, audio-taped interviews of the treatment group, as well as teacher biographical information, information regarding the school and personal observation and perceptions, indicated that changes occurred for three out of the five teachers in the treatment group in every area as
delineated by the questions. This was particularly apparent in question four (self-directed learning), question five (functioning as an educational consultant), question six (using active listening), question nine (using Method III), and question eleven (accepting student behavior).

**Discussion**

Four out of five teachers in the treatment group spoke well of the training program. Three of these four teachers made real efforts to acquire proficiency in the use of program skills and to internalize the philosophy. Of these three teachers, teachers "B" and "D" had the most success in achieving this goal. They were able to accept the philosophy and to structure lessons so that the skills could be put to use. Teacher "E" had more of a struggle with the idea of changing his philosophy and in implementing the skills because of his long career (32 years) in education, during which time he used mainly traditional methods of teaching.

Teacher "C," despite evaluating the course highly, seemed to be unable to implement either the skills or philosophy except on an individual basis. Teacher "A" showed that he could utilize the active listening skill, but did not seem to feel comfortable in using, or to see the need for, the skills or program philosophy in his classroom.
Consequently, although four out of the five teachers spoke highly of the training program, and its impact was noticeable, its effects could well have been diminished by confounding variables. Among these variables could be the institutional press of the school. With its "hidden curriculum," the school may well have affected the students' perception, so that changes that occurred in their teacher's behavior were not readily perceived.

A class variable could have been operating, with students in the more affluent suburbs reacting to the program and in particular to the post or second observation dealing with poverty, in a different way than did the students in the less affluent school district. In addition to a class variable operating, two age variables could have been operating. One age variable could have been the age of the teachers. The data, previously stated in Chapter IV, indicated that the median age of the treatment group was 30 years. The specific ages were, in order from teacher "A" to "E," 30, 22, 23, 31, and 56 years. This age variable could have meant that students in their relationship with their teachers could have been affected by their teacher's age. (They may have related in a particular way to a teacher simply because he was older or younger.) The other age variable that could have affected the study was the age level of the students taking the test. The previous data indicated that within the treatment group, the sample contained data from three junior high school classes and two high school classes.
The treatment impact could have been affected by the age and/or maturity level, and the grade level of the respondents.

The number of years of teaching experience, the type of teaching experience, and the grade level of previous teaching experience, in addition to the type of training received by the teachers themselves, could have played an important role in the acceptance of the philosophy and the ability to use skills. Also the general background that produced the teacher has undoubtedly left its impact, and this could possibly have affected the program's effects. The fact that only one of the teachers in the treatment group was a female also must be considered. From the evidence already cited concerning teacher "C," it is evident that severe personal problems can affect the clout of the program. A question must be raised as to whether social studies teachers can most easily be trained in the program or whether other types of teachers would more easily be trained.

The teachers did not pay any course fees. Perhaps having to pay for the course, or receiving compensation for taking the course could have a more dramatic effect on its outcomes. Similarly, teachers who had a strong motivation to take the treatment, as a result of hearing about the program or one of its sister programs (such as Parent Effectiveness Training) would probably be a more effective practitioner of the skills. This idea magnified in the form of a school staff requesting the training, or of a school administrator providing
his staff an opportunity to be trained in the program, would provide additional incentive to become proficient in the use of the skills.

Since most teachers seem to be textbook oriented, a text written for the course could provide reinforcement benefits.

Therefore, while it appears that some changes have occurred in teacher behavior as a result of the training program, the evidence could be more authoritative in that regard.

**Recommendations**

A welcome aid in studying this training program would be the development of an instrument specifically designed to measure the program effects. Such an instrument used in conjunction with a pilot study would determine the validity of the instrument and could thus enable a more precise and meaningful study to be conducted.

Attempts at equalizing the personalistic and situational variables present in this type of field study, should be made. One method of achieving this would be to train a social studies department, or indeed a whole school in the training program and then to use another department or school as a control group. (If the teachers of a whole school, or system were trained, it would be particularly important for the administrators to be trained in Gordon's Leader Effectiveness Training. In this way the administration could model the skills and set an example for the teachers.) The training
program would then possibly have more of an impact in that situation than it did in this study.

This program is important enough so that it should be a vital part of every teacher's general methods training! A pre-service program could be initiated either in addition to the other existing education courses, or in place of one or more such courses. Probably the logical time to offer the training would be just prior to the student teaching experience. In addition, in-service opportunities should be provided so that teachers already in the field would have an opportunity to avail themselves of the training.

It should be pointed out that this program can be integrated into or used in addition with other teaching strategies. The program probably best lends itself to an open classroom situation, although its relationship to subject matter would lend itself to strategies which combine the cognitive and the affective domains. By dealing with the underlying feelings of students, a teacher has a much greater opportunity to change attitudes and values, than he has by working strictly with facts.

Large school systems could cut down on the cost of the program by having interested faculty members receive the necessary training to become qualified instructors. This would leave only a portion of the fee to be paid to the Effectiveness Training Associates and would have an added advantage of having on the staff one or more teachers
who could act as on-the-job consultants and provide assistance to others less skilled in the approach.

The major impact of the Teacher Effectiveness Training program can be obtained when a total school system is trained in and committed to the implementation of its philosophy and skills.
APPENDIX A

Instruments and Answer Sheet
STUDENT OPINION SURVEY

Directions: Please answer all questions on the answer sheet.

The Schuman Student-Centeredness Scale

Part I: Write the number most clearly expressing your impression of this class for each question.

1. Ideas and suggestions that are later acted on arise:
   1. Almost wholly from the students.
   2. Largely from the students.
   3. Partly from the students and partly from the teacher.
   4. Largely from the teacher.
   5. Almost wholly from the teacher.

2. Classroom procedure is determined:
   1. Chiefly by the teacher.
   2. Mostly by the teacher, a little by the students.
   3. Partly by the teacher, partly by the students.
   4. A little by teacher, mostly by the students.
   5. Chiefly by the students.

3. The students are ________ free to criticize statements by the teacher.
   1. Almost always.
   2. Often
   3. Occasionally
   4. Seldom
   5. Almost never

4. The teacher gives his ideas:
   1. Practically never.
   2. Only at the request of the student.
   3. Only after the students have expressed their ideas.
   4. Right along with the students.
   5. Before the students express their ideas.
5. The teacher directs the student's work:

1. Never
2. Only after the student requests direction.
3. When he senses that the student needs it.
4. After the student has tried for himself but before the student requests direction.
5. Before the student has a chance to try for himself.

6. The amount of work the students do seems to be a function of:

1. Chiefly what the teacher wishes.
2. Most what the teacher wishes and a little of what the student wishes.
3. Partly what the teacher wishes and partly what the students wish.
4. A little what the teacher wishes and mostly what the students wish.
5. Chiefly what the students wish.

7. The teacher evaluates the students' comments in class (such as good-bad, right-wrong, smart-dumb):

1. Practically never
2. Seldom
3. Occasionally
4. Often
5. Almost always

8. The classroom procedure is:

1. Chiefly lecture.
2. Mostly lecture and a little discussion.
3. Some lecture and some discussion.
4. A little lecture and mostly discussion.
5. Chiefly discussion.

9. There is restriction placed on intercommunication of students with each other, even though they be in different parts of the room:

1. Practically no
2. Little
3. Some
4. Much
5. Very much
10. Students are _____ given the opportunity to express their ideas.

1. Practically never
2. Seldom
3. Occasionally
4. Very often
5. Almost always

11. The use and disposition of the equipment and materials is determined:

1. Chiefly by the students.
2. Mostly by the students and a little by the teacher.
3. Partly by the students and partly by the teacher.
4. A little by the students and mostly by the teacher.
5. Chiefly by the teacher.

12. The teacher _____ requires that the students confine themselves to the subject matter in class.

1. Practically always
2. Usually
3. Sometimes
4. Very seldom
5. Practically never

13. The topics to be considered in class are determined:

1. Chiefly by the teacher.
2. Mostly by the teacher and a little by the students.
3. Partly by the teacher and partly by the students.
4. A little by the teacher and mostly by the students.
5. Chiefly by the students.

14. The activities and work of the student tend _____ to reflect his particular interests.

1. Hardly at all
2. A little
3. Somewhat
4. A lot
5. Chiefly
15. The teacher seems _____ willing to let the student arrive at his own conclusions even if the conclusions are quite different from the views held by the teacher.

1. Unwilling
2. Not very
3. Somewhat
4. Quite a bit
5. Completely

16. The teacher brings _____ pressure to bear on pupils to speed their learning process.

1. Tremendous
2. Considerable
3. Some
4. Little
5. Practically no

17. Class or group goals are:

1. Chiefly determined by the teacher.
2. Mostly determined by the teacher and a little by the student.
3. Determined partly by the teacher, partly by the student.
4. Determined a little by the teacher and mostly by the student.
5. Chiefly determined by the student.

18. The teacher tries:

1. Chiefly to impart his ideas to the student.
2. Mostly to impart his ideas and a little to understand the students' ideas.
3. Partly to impart his ideas and partly to understand the students' ideas.
4. A little to impart his ideas and mostly to understand the students' ideas.
5. Chiefly to understand the students' ideas.

---

Modified Science Activity Checklist: Student Perception

Part II: Answer the following questions by answering either "T" for true, or "F" for false.

19. My job is to copy down and memorize what the teacher tells us.
20. We students are frequently allowed time in class to talk among ourselves about ideas in social studies.

21. Over 25% of our class time is spent in answering orally or in writing answers to questions that are in the textbook or in study guides.

22. If I don't agree with what my teacher says, he wants me to say so.

23. Most of the questions that we ask in class are to clear up what the teacher or text has told us.

24. A majority of our class time is spent listening to our teacher tell us about social studies.

25. My teacher doesn't bother to admit his mistakes.

26. If there is a disagreement among students during a discussion, the teacher usually tells who is right.

27. My teacher often repeats almost exactly what the textbook says.

28. Our teacher tries to show us how to ask ourselves questions about statements in the text.

29. We are sometimes asked to design our own independent study or project and to seek answers to a question that puzzles us.

30. Our teacher wants us to ask him if we are getting correct results in our work.

31. The teacher answers most of our questions about our classroom work by asking us questions.

32. We spend less than one-fourth of our time in social studies classes doing work that we have ourselves initiated.

The Relationship Inventory

Part III: Below are listed some ways that a person may feel or behave toward another person.

Please consider each statement carefully with reference to your present relationship with your social studies teacher.
Mark each statement, on your answer sheet, according to how strongly you feel that it is true, or not true, in this relationship. Please mark every one. Write in plus (+) or minus (-) marks to stand for the following answers:

+++ Yes, I strongly feel that it is true.  -  No, I feel that it is probably more untrue than true.
+  Yes, I feel it is true.  --  No, I feel it is not true.
+  Yes, I feel that is probably true, or more true than untrue.  ---  No, I strongly feel that it is not true.

33. He respects me.

34. He tries to understand exactly how I see things.

35. He is interested in me only when I am talking about certain things.

36. He tells me things that he does not mean.

37. He disapproves of me.

38. He understands my words but does not know how I feel.

39. Sometimes he is more friendly toward me than he is at other times.

40. What he says to me is never different from what he thinks or feels.

41. He is curious about what makes me act like I do, but not really interested in me as a person.

42. He is interested in knowing how things seem to me.

43. His feeling toward me is not due to the way that I am reacting to him.

44. He is upset whenever I talk about or ask about certain things.

45. He likes to see me.

46. He nearly always knows exactly what I mean.

47. He likes me when I feel certain ways about myself but when I feel other ways he does not like me.
48. He has feelings about me that he doesn't say anything about and these make it harder for us to get along.

49. He hardly notices me.

50. At times he thinks that I feel more strongly or more concerned about something than I do.

51. He always seems to feel the same way toward me.

52. He behaves just the way that he really is when I'm around.

53. He appreciates me.

54. Sometimes he thinks that I feel a certain way, because that's the way he feels.

55. He likes me in some ways and dislikes me in others.

56. At times I think he is not aware of the way he feels about me.

57. He is friendly and warm towards me.

58. He understands me.

59. If I am annoyed with him he becomes annoyed with me.

60. He pretends that he likes me or understands me more than he really does.

61. He cares about me.

62. The way he feels about some of the things I say, or do, keeps him from really understanding me.

63. Whether I am expressing "good" or "bad" feelings seems to make no difference to the way he feels toward me.

64. He does not avoid anything that he thinks or feels about me.

65. He feels that I am dull and uninteresting.

66. He ignores some of my feelings.
Sometimes he is warm and friendly toward me, at other times cold or disapproving.

I feel that I can trust him to be honest with me.

He is interested in me.

He appreciates how my experiences feel to me.

Depending on the way he feels, he sometimes responds to me with quite a lot more warmth and interest than he does at other times.

He is at ease in our relationship.

He just "puts up" with me.

He tells me what my actions and feelings mean.

His liking or disliking of me is not affected by anything that I tell him about myself.

He is acting a part with me.

He does not really care what becomes of me.

He does not realize how strongly I feel about some of the things we discuss.

His general feeling toward me varies a lot.

Sometimes I feel that what he says to me is quite different from the way he feels underneath.

I feel that he really thinks I am worthwhile.

He responds to me mechanically.

Whether I like or dislike myself makes no difference to the way he feels about me.

I don't think that he is being honest with himself about the way he feels toward me.

He dislikes me.
86. He looks at the things I do from his own point of view.

87. Sometimes he seems to like me and at other times he doesn't seem to care.

88. I feel that he is being genuine with me.

89. He is impatient with me.

90. He generally sees how I am feeling.

91. He likes me better when I behave in some ways than he does when I behave in other ways.

92. Sometimes I can see that he is not comfortable with me, but we go on paying no attention to it.

93. He feels a deep liking for me.

94. He understands completely what I say to him.

95. Whether I feel fine or feel awful makes no difference to how he feels about me.

96. He does not try to mislead me about his own thoughts or feelings.

97. He thinks I'm disagreeable.

98. He can be fully aware of the feelings that hurt me most without being upset himself.

99. I can be very critical of him or I can like him without it changing his feeling toward me.

100. What he says gives a false impression of his total reaction to me.

101. At times he feels contempt for me.

102. Even when I can't say quite what I mean, he still understands me.

103. I think that my feeling toward him helps to cause him to feel the way he does toward me.

104. He tries to avoid telling me anything that might upset me.
APPENDIX B

Test Score Distribution--Summary Statistics
for Each Teacher
## Treatment Group--Teacher A

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Number of Students</td>
<td>30</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>Mean</td>
<td>62.33</td>
<td>52.86</td>
<td>46.00</td>
</tr>
<tr>
<td>S.D.</td>
<td>13.21</td>
<td>13.50</td>
<td>17.20</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>63</td>
<td>53</td>
<td>42</td>
</tr>
<tr>
<td>Mode</td>
<td>51</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.11</td>
<td>0.12</td>
<td>0.31</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.81</td>
<td>-0.63</td>
<td>-0.89</td>
</tr>
<tr>
<td>Maximum</td>
<td>90</td>
<td>80</td>
<td>81</td>
</tr>
<tr>
<td>Minimum</td>
<td>39</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>51</td>
<td>53</td>
<td>61</td>
</tr>
</tbody>
</table>

## Treatment Group--Teacher B

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Number of Students</td>
<td>29</td>
<td>29</td>
<td>22</td>
</tr>
<tr>
<td>Mean</td>
<td>65.55</td>
<td>65.66</td>
<td>65.18</td>
</tr>
<tr>
<td>S.D.</td>
<td>11.67</td>
<td>13.64</td>
<td>13.89</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>65</td>
<td>67</td>
<td>66</td>
</tr>
<tr>
<td>Mode</td>
<td>69</td>
<td>52</td>
<td>66</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.04</td>
<td>-0.55</td>
<td>0.18</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.41</td>
<td>1.17</td>
<td>-1.12</td>
</tr>
<tr>
<td>Maximum</td>
<td>91</td>
<td>91</td>
<td>90</td>
</tr>
<tr>
<td>Minimum</td>
<td>42</td>
<td>24</td>
<td>46</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>49</td>
<td>67</td>
<td>44</td>
</tr>
</tbody>
</table>
### Treatment Group--Teacher C

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Items on Test</strong></td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td><strong>Number of Students</strong></td>
<td>32</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>61.16</td>
<td>55.85</td>
<td>57.15</td>
</tr>
<tr>
<td><strong>S. D.</strong></td>
<td>11.57</td>
<td>16.16</td>
<td>14.13</td>
</tr>
<tr>
<td><strong>Standard Score Mean</strong></td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td><strong>Standard Score S. D.</strong></td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>60</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td>44</td>
<td>35</td>
<td>69</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>0.03</td>
<td>-0.12</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>-0.80</td>
<td>-0.98</td>
<td>-1.12</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>83</td>
<td>81</td>
<td>84</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>38</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td><strong>Range of Scores</strong></td>
<td>45</td>
<td>56</td>
<td>49</td>
</tr>
</tbody>
</table>

### Treatment Group--Teacher D

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Items on Test</strong></td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td><strong>Number of Students</strong></td>
<td>25</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>69.52</td>
<td>74.30</td>
<td>71.29</td>
</tr>
<tr>
<td><strong>S. D.</strong></td>
<td>12.28</td>
<td>11.82</td>
<td>13.58</td>
</tr>
<tr>
<td><strong>Standard Score Mean</strong></td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td><strong>Standard Score S. D.</strong></td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>72</td>
<td>76</td>
<td>73</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td>58</td>
<td>71</td>
<td>52</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>-0.41</td>
<td>-0.75</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>-0.42</td>
<td>-0.24</td>
<td>-0.70</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>94</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>45</td>
<td>48</td>
<td>49</td>
</tr>
<tr>
<td><strong>Range of Scores</strong></td>
<td>49</td>
<td>42</td>
<td>51</td>
</tr>
</tbody>
</table>
### Treatment Group--Teacher E

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Number of Students</td>
<td>30</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>Mean</td>
<td>69.37</td>
<td>65.68</td>
<td>64.50</td>
</tr>
<tr>
<td>S. D.</td>
<td>10.44</td>
<td>10.71</td>
<td>9.14</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S. D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>73</td>
<td>66</td>
<td>62</td>
</tr>
<tr>
<td>Mode</td>
<td>73</td>
<td>56</td>
<td>55</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.91</td>
<td>-0.35</td>
<td>0.89</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.30</td>
<td>0.09</td>
<td>-0.23</td>
</tr>
<tr>
<td>Maximum</td>
<td>84</td>
<td>88</td>
<td>85</td>
</tr>
<tr>
<td>Minimum</td>
<td>42</td>
<td>39</td>
<td>53</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>42</td>
<td>49</td>
<td>32</td>
</tr>
</tbody>
</table>

### Control Group--Teacher F

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Number of Students</td>
<td>27</td>
<td>27</td>
<td>23</td>
</tr>
<tr>
<td>Mean</td>
<td>55.70</td>
<td>58.56</td>
<td>57.17</td>
</tr>
<tr>
<td>S. D.</td>
<td>15.21</td>
<td>13.88</td>
<td>15.19</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S. D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>56</td>
<td>61</td>
<td>55</td>
</tr>
<tr>
<td>Mode</td>
<td>36</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.12</td>
<td>-0.41</td>
<td>0.05</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.83</td>
<td>-0.33</td>
<td>-0.86</td>
</tr>
<tr>
<td>Maximum</td>
<td>88</td>
<td>86</td>
<td>86</td>
</tr>
<tr>
<td>Minimum</td>
<td>28</td>
<td>27</td>
<td>32</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>60</td>
<td>59</td>
<td>54</td>
</tr>
</tbody>
</table>
## Control Group--Teacher G

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Number of Students</td>
<td>30</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Mean</td>
<td>56.23</td>
<td>62.40</td>
<td>61.73</td>
</tr>
<tr>
<td>S.D.</td>
<td>9.41</td>
<td>11.13</td>
<td>12.19</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>56</td>
<td>61</td>
<td>59</td>
</tr>
<tr>
<td>Mode</td>
<td>56</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.26</td>
<td>0.47</td>
<td>0.51</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.40</td>
<td>-0.71</td>
<td>-0.12</td>
</tr>
<tr>
<td>Maximum</td>
<td>71</td>
<td>87</td>
<td>92</td>
</tr>
<tr>
<td>Minimum</td>
<td>34</td>
<td>46</td>
<td>41</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>37</td>
<td>41</td>
<td>51</td>
</tr>
</tbody>
</table>

## Control Group--Teacher H

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Number of Students</td>
<td>36</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>Mean</td>
<td>61.42</td>
<td>64.81</td>
<td>65.00</td>
</tr>
<tr>
<td>S.D.</td>
<td>15.82</td>
<td>14.36</td>
<td>14.48</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>62</td>
<td>69</td>
<td>67</td>
</tr>
<tr>
<td>Mode</td>
<td>74</td>
<td>69</td>
<td>67</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.27</td>
<td>-0.94</td>
<td>-1.01</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-1.13</td>
<td>-0.21</td>
<td>0.81</td>
</tr>
<tr>
<td>Maximum</td>
<td>88</td>
<td>84</td>
<td>85</td>
</tr>
<tr>
<td>Minimum</td>
<td>33</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>55</td>
<td>53</td>
<td>63</td>
</tr>
</tbody>
</table>
### Control Group--Teacher I

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Number of Students</td>
<td>19</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Mean</td>
<td>74.32</td>
<td>75.62</td>
<td>79.50</td>
</tr>
<tr>
<td>S.D.</td>
<td>14.33</td>
<td>13.30</td>
<td>9.54</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>76</td>
<td>81</td>
<td>77</td>
</tr>
<tr>
<td>Mode</td>
<td>68</td>
<td>83</td>
<td>85</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.86</td>
<td>-1.45</td>
<td>-0.27</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.27</td>
<td>1.36</td>
<td>-1.02</td>
</tr>
<tr>
<td>Maximum</td>
<td>96</td>
<td>89</td>
<td>94</td>
</tr>
<tr>
<td>Minimum</td>
<td>41</td>
<td>40</td>
<td>62</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>55</td>
<td>49</td>
<td>32</td>
</tr>
</tbody>
</table>

### Control Group--Teacher J

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
<th>Post-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Number of Students</td>
<td>21</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>Mean</td>
<td>56.52</td>
<td>60.71</td>
<td>61.38</td>
</tr>
<tr>
<td>S.D.</td>
<td>18.94</td>
<td>10.37</td>
<td>13.03</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>60</td>
<td>56</td>
<td>62</td>
</tr>
<tr>
<td>Mode</td>
<td>48</td>
<td>48</td>
<td>54</td>
</tr>
<tr>
<td>Skewness</td>
<td>-1.17</td>
<td>0.61</td>
<td>-0.30</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.81</td>
<td>-0.64</td>
<td>-0.55</td>
</tr>
<tr>
<td>Maximum</td>
<td>81</td>
<td>83</td>
<td>84</td>
</tr>
<tr>
<td>Minimum</td>
<td>8</td>
<td>48</td>
<td>33</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>73</td>
<td>35</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Post-Post</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------</td>
<td>------</td>
<td>-----------</td>
</tr>
<tr>
<td>Number of Items on Test</td>
<td>104</td>
<td>104</td>
<td>104</td>
</tr>
<tr>
<td>Number of Students</td>
<td>17</td>
<td>38</td>
<td>31</td>
</tr>
<tr>
<td>Mean</td>
<td>60.53</td>
<td>57.05</td>
<td>41.39</td>
</tr>
<tr>
<td>S.D.</td>
<td>12.56</td>
<td>11.89</td>
<td>12.67</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>62</td>
<td>54</td>
<td>40</td>
</tr>
<tr>
<td>Mode</td>
<td>59</td>
<td>51</td>
<td>24</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.16</td>
<td>0.23</td>
<td>0.19</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.89</td>
<td>0.27</td>
<td>-1.30</td>
</tr>
<tr>
<td>Maximum</td>
<td>83</td>
<td>85</td>
<td>63</td>
</tr>
<tr>
<td>Minimum</td>
<td>39</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>44</td>
<td>59</td>
<td>39</td>
</tr>
</tbody>
</table>
APPENDIX C

Subtest Score Distribution Summary
Statistics for Each Teacher

Subtest A--Schuman Student-Centeredness Scale

Subtest B--Modified Science Activity Checklist:
Student Perception

Subtest C--Barrett-Lennard Relationship Inventory
## Treatment Group--Teacher A

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th></th>
<th>Post</th>
<th></th>
<th>Post-Post</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
</tr>
<tr>
<td>Number of Items on</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Students</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>10.10</td>
<td>7.70</td>
<td>44.53</td>
<td>7.68</td>
<td>6.09</td>
<td>39.09</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.64</td>
<td>1.97</td>
<td>11.25</td>
<td>2.20</td>
<td>1.98</td>
<td>11.68</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>10</td>
<td>7</td>
<td>45</td>
<td>8</td>
<td>6</td>
<td>39</td>
</tr>
<tr>
<td>Mode</td>
<td>9</td>
<td>10</td>
<td>46</td>
<td>9</td>
<td>4</td>
<td>31</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.11</td>
<td>-0.08</td>
<td>0.16</td>
<td>-0.61</td>
<td>0.90</td>
<td>0.04</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.96</td>
<td>-1.03</td>
<td>-0.86</td>
<td>0.25</td>
<td>0.05</td>
<td>-0.63</td>
</tr>
<tr>
<td>Maximum</td>
<td>15</td>
<td>11</td>
<td>67</td>
<td>11</td>
<td>11</td>
<td>60</td>
</tr>
<tr>
<td>Minimum</td>
<td>5</td>
<td>4</td>
<td>23</td>
<td>2</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>10</td>
<td>7</td>
<td>44</td>
<td>9</td>
<td>7</td>
<td>45</td>
</tr>
</tbody>
</table>
## Treatment Group--Teacher B

<table>
<thead>
<tr>
<th></th>
<th>Pre Subtest A</th>
<th>Pre Subtest B</th>
<th>Pre Subtest C</th>
<th>Post Subtest A</th>
<th>Post Subtest B</th>
<th>Post Subtest C</th>
<th>Post-Post Subtest A</th>
<th>Post-Post Subtest B</th>
<th>Post-Post Subtest C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number of Students</td>
<td>29</td>
<td>29</td>
<td>29</td>
<td>29</td>
<td>29</td>
<td>29</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Mean</td>
<td>11.28</td>
<td>7.90</td>
<td>46.38</td>
<td>11.62</td>
<td>8.62</td>
<td>45.41</td>
<td>11.41</td>
<td>8.64</td>
<td>45.14</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.38</td>
<td>1.99</td>
<td>9.36</td>
<td>2.55</td>
<td>2.06</td>
<td>11.94</td>
<td>2.53</td>
<td>1.94</td>
<td>13.13</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>11</td>
<td>8</td>
<td>47</td>
<td>11</td>
<td>9</td>
<td>46</td>
<td>10</td>
<td>8</td>
<td>45</td>
</tr>
<tr>
<td>Mode</td>
<td>12</td>
<td>10</td>
<td>37</td>
<td>10</td>
<td>9</td>
<td>40</td>
<td>9</td>
<td>8</td>
<td>45</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.45</td>
<td>0.06</td>
<td>0.35</td>
<td>0.44</td>
<td>-0.17</td>
<td>-0.49</td>
<td>0.64</td>
<td>-0.52</td>
<td>-0.19</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.80</td>
<td>-1.35</td>
<td>-0.57</td>
<td>-1.03</td>
<td>-0.94</td>
<td>0.60</td>
<td>-0.74</td>
<td>-0.50</td>
<td>-0.14</td>
</tr>
<tr>
<td>Maximum</td>
<td>17</td>
<td>11</td>
<td>68</td>
<td>17</td>
<td>12</td>
<td>66</td>
<td>17</td>
<td>11</td>
<td>65</td>
</tr>
<tr>
<td>Minimum</td>
<td>4</td>
<td>5</td>
<td>29</td>
<td>8</td>
<td>5</td>
<td>11</td>
<td>8</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>13</td>
<td>6</td>
<td>39</td>
<td>9</td>
<td>7</td>
<td>55</td>
<td>9</td>
<td>7</td>
<td>45</td>
</tr>
</tbody>
</table>
### Treatment Group--Teacher C

<table>
<thead>
<tr>
<th></th>
<th>Subtest A</th>
<th>Subtest B</th>
<th>Subtest C</th>
<th>Subtest A</th>
<th>Subtest B</th>
<th>Subtest C</th>
<th>Subtest A</th>
<th>Subtest B</th>
<th>Subtest C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Items on Test</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Number of Students</strong></td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>26</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>9.69</td>
<td>8.09</td>
<td>43.38</td>
<td>9.15</td>
<td>7.30</td>
<td>39.41</td>
<td>8.92</td>
<td>7.62</td>
<td>40.62</td>
</tr>
<tr>
<td><strong>S. D.</strong></td>
<td>1.91</td>
<td>2.42</td>
<td>10.15</td>
<td>2.76</td>
<td>2.29</td>
<td>12.84</td>
<td>2.74</td>
<td>2.22</td>
<td>12.05</td>
</tr>
<tr>
<td><strong>Standard Score Mean</strong></td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td><strong>Standard Score S. D.</strong></td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>10</td>
<td>8</td>
<td>43</td>
<td>9</td>
<td>8</td>
<td>38</td>
<td>10</td>
<td>8</td>
<td>39</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td>10</td>
<td>6</td>
<td>28</td>
<td>8</td>
<td>9</td>
<td>58</td>
<td>10</td>
<td>8</td>
<td>29</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>0.67</td>
<td>0.05</td>
<td>-0.03</td>
<td>-0.59</td>
<td>-0.46</td>
<td>0.10</td>
<td>-1.62</td>
<td>-0.80</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>0.20</td>
<td>-0.77</td>
<td>-1.08</td>
<td>0.43</td>
<td>-0.78</td>
<td>-1.07</td>
<td>1.81</td>
<td>1.09</td>
<td>-0.96</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>15</td>
<td>12</td>
<td>62</td>
<td>14</td>
<td>11</td>
<td>59</td>
<td>12</td>
<td>11</td>
<td>63</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>7</td>
<td>3</td>
<td>24</td>
<td>2</td>
<td>3</td>
<td>15</td>
<td>1</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td><strong>Range of Scores</strong></td>
<td>8</td>
<td>9</td>
<td>38</td>
<td>12</td>
<td>8</td>
<td>44</td>
<td>11</td>
<td>10</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Pre</td>
<td></td>
<td></td>
<td>Post</td>
<td></td>
<td></td>
<td>Post-Post</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-----------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
</tr>
<tr>
<td>Number of Items on Test</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number of Students</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Mean</td>
<td>10.20</td>
<td>8.08</td>
<td>51.24</td>
<td>12.95</td>
<td>8.55</td>
<td>52.80</td>
<td>13.08</td>
<td>7.96</td>
<td>50.25</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.06</td>
<td>1.83</td>
<td>10.85</td>
<td>2.13</td>
<td>1.99</td>
<td>10.93</td>
<td>2.31</td>
<td>2.64</td>
<td>12.16</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>10</td>
<td>8</td>
<td>52</td>
<td>13</td>
<td>8</td>
<td>53</td>
<td>13</td>
<td>7</td>
<td>51</td>
</tr>
<tr>
<td>Mode</td>
<td>8</td>
<td>7</td>
<td>38</td>
<td>14</td>
<td>8</td>
<td>47</td>
<td>13</td>
<td>6</td>
<td>35</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.05</td>
<td>-0.51</td>
<td>-0.43</td>
<td>-0.37</td>
<td>-0.21</td>
<td>-0.58</td>
<td>-0.24</td>
<td>0.17</td>
<td>-0.08</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.88</td>
<td>0.36</td>
<td>-0.76</td>
<td>-0.50</td>
<td>-0.84</td>
<td>-0.48</td>
<td>-1.00</td>
<td>-0.87</td>
<td>-1.21</td>
</tr>
<tr>
<td>Maximum</td>
<td>14</td>
<td>11</td>
<td>70</td>
<td>17</td>
<td>12</td>
<td>69</td>
<td>17</td>
<td>13</td>
<td>71</td>
</tr>
<tr>
<td>Minimum</td>
<td>6</td>
<td>3</td>
<td>29</td>
<td>9</td>
<td>5</td>
<td>28</td>
<td>9</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>8</td>
<td>8</td>
<td>41</td>
<td>8</td>
<td>7</td>
<td>41</td>
<td>8</td>
<td>10</td>
<td>41</td>
</tr>
</tbody>
</table>
## Treatment Group -- Teacher E

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th></th>
<th></th>
<th>Post</th>
<th></th>
<th></th>
<th>Post-Post</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
</tr>
<tr>
<td>Number of Items on</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Students</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Mean</td>
<td>10.60</td>
<td>8.23</td>
<td>50.53</td>
<td>10.09</td>
<td>7.36</td>
<td>48.23</td>
<td>10.30</td>
<td>7.05</td>
<td>47.15</td>
</tr>
<tr>
<td>S. D.</td>
<td>2.18</td>
<td>2.01</td>
<td>8.23</td>
<td>3.00</td>
<td>1.33</td>
<td>9.58</td>
<td>1.98</td>
<td>1.72</td>
<td>8.21</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S. D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>11</td>
<td>8</td>
<td>51</td>
<td>10</td>
<td>7</td>
<td>50</td>
<td>10</td>
<td>7</td>
<td>44</td>
</tr>
<tr>
<td>Mode</td>
<td>10</td>
<td>8</td>
<td>48</td>
<td>9</td>
<td>7</td>
<td>50</td>
<td>10</td>
<td>8</td>
<td>41</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.23</td>
<td>-0.39</td>
<td>-0.74</td>
<td>-0.69</td>
<td>0.01</td>
<td>-0.17</td>
<td>-0.03</td>
<td>0.22</td>
<td>0.56</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.19</td>
<td>-0.03</td>
<td>-0.23</td>
<td>0.41</td>
<td>-0.78</td>
<td>-0.73</td>
<td>-0.90</td>
<td>0.00</td>
<td>-0.62</td>
</tr>
<tr>
<td>Maximum</td>
<td>15</td>
<td>12</td>
<td>62</td>
<td>16</td>
<td>10</td>
<td>67</td>
<td>14</td>
<td>11</td>
<td>63</td>
</tr>
<tr>
<td>Minimum</td>
<td>6</td>
<td>3</td>
<td>31</td>
<td>3</td>
<td>5</td>
<td>30</td>
<td>7</td>
<td>4</td>
<td>34</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>9</td>
<td>9</td>
<td>31</td>
<td>13</td>
<td>5</td>
<td>37</td>
<td>7</td>
<td>7</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Pre Subtest A</td>
<td>Pre Subtest B</td>
<td>Pre Subtest C</td>
<td>Post Subtest A</td>
<td>Post Subtest B</td>
<td>Post Subtest C</td>
<td>Post-Post Subtest A</td>
<td>Post-Post Subtest B</td>
<td>Post-Post Subtest C</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------</td>
<td>---------------</td>
<td>---------------</td>
<td>----------------</td>
<td>----------------</td>
<td>---------------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Number of Items on Test</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Number of Students</strong></td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>23</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>8.48</td>
<td>6.19</td>
<td>41.04</td>
<td>8.07</td>
<td>6.30</td>
<td>44.19</td>
<td>8.35</td>
<td>5.61</td>
<td>43.22</td>
</tr>
<tr>
<td><strong>S.D.</strong></td>
<td>2.81</td>
<td>1.98</td>
<td>12.59</td>
<td>3.02</td>
<td>2.02</td>
<td>10.82</td>
<td>3.59</td>
<td>1.76</td>
<td>11.45</td>
</tr>
<tr>
<td><strong>Standard Score Mean</strong></td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td><strong>Standard Score S.D.</strong></td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>8</td>
<td>6</td>
<td>43</td>
<td>9</td>
<td>7</td>
<td>44</td>
<td>9</td>
<td>5</td>
<td>43</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td>6</td>
<td>5</td>
<td>48</td>
<td>11</td>
<td>7</td>
<td>55</td>
<td>7</td>
<td>5</td>
<td>58</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>0.05</td>
<td>0.11</td>
<td>-0.07</td>
<td>-0.59</td>
<td>-0.25</td>
<td>-0.12</td>
<td>-0.45</td>
<td>0.27</td>
<td>0.13</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>-0.01</td>
<td>-1.02</td>
<td>-1.08</td>
<td>-0.67</td>
<td>-0.36</td>
<td>-0.67</td>
<td>-0.64</td>
<td>-0.61</td>
<td>-0.94</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>15</td>
<td>10</td>
<td>63</td>
<td>12</td>
<td>10</td>
<td>67</td>
<td>14</td>
<td>9</td>
<td>66</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>2</td>
<td>3</td>
<td>17</td>
<td>1</td>
<td>2</td>
<td>23</td>
<td>1</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td><strong>Range of Scores</strong></td>
<td>13</td>
<td>7</td>
<td>46</td>
<td>11</td>
<td>8</td>
<td>44</td>
<td>13</td>
<td>6</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Pre Subtest A</td>
<td>Pre Subtest B</td>
<td>Pre Subtest C</td>
<td>Post Subtest A</td>
<td>Post Subtest B</td>
<td>Post Subtest C</td>
<td>Post-Post Subtest A</td>
<td>Post-Post Subtest B</td>
<td>Post-Post Subtest C</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------</td>
<td>---------------</td>
<td>---------------</td>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Number of Items on Test</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number of Students</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>26</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Mean</td>
<td>8.93</td>
<td>6.90</td>
<td>40.40</td>
<td>10.40</td>
<td>7.72</td>
<td>44.28</td>
<td>10.85</td>
<td>7.73</td>
<td>43.15</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.17</td>
<td>1.87</td>
<td>8.12</td>
<td>2.86</td>
<td>1.80</td>
<td>9.00</td>
<td>3.03</td>
<td>2.49</td>
<td>10.06</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>9</td>
<td>7</td>
<td>39</td>
<td>11</td>
<td>8</td>
<td>42</td>
<td>11</td>
<td>8</td>
<td>42</td>
</tr>
<tr>
<td>Mode</td>
<td>10</td>
<td>6</td>
<td>31</td>
<td>12</td>
<td>7</td>
<td>34</td>
<td>11</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.11</td>
<td>-0.07</td>
<td>0.11</td>
<td>-0.29</td>
<td>0.13</td>
<td>0.75</td>
<td>-0.52</td>
<td>-0.02</td>
<td>0.32</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.38</td>
<td>-0.28</td>
<td>-0.40</td>
<td>0.09</td>
<td>-0.32</td>
<td>-0.13</td>
<td>-0.24</td>
<td>-0.54</td>
<td>-0.53</td>
</tr>
<tr>
<td>Maximum</td>
<td>13</td>
<td>11</td>
<td>56</td>
<td>17</td>
<td>11</td>
<td>66</td>
<td>16</td>
<td>12</td>
<td>68</td>
</tr>
<tr>
<td>Minimum</td>
<td>4</td>
<td>3</td>
<td>21</td>
<td>4</td>
<td>4</td>
<td>31</td>
<td>4</td>
<td>3</td>
<td>28</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>9</td>
<td>8</td>
<td>35</td>
<td>13</td>
<td>7</td>
<td>35</td>
<td>12</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>Number of Items on Test</td>
<td>Number of Students</td>
<td>Pre</td>
<td>Post</td>
<td>Post-Post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------</td>
<td>-------</td>
<td>--------</td>
<td>-----------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
<td>Subtest A</td>
<td>Subtest B</td>
<td>Subtest C</td>
<td>Subtest A</td>
<td>Subtest B</td>
</tr>
<tr>
<td>1</td>
<td>36</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Mean</td>
<td>9.42</td>
<td>7.25</td>
<td>44.75</td>
<td>9.13</td>
<td>6.81</td>
<td>48.87</td>
<td>9.38</td>
<td>6.69</td>
<td>48.94</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.48</td>
<td>2.14</td>
<td>13.53</td>
<td>2.51</td>
<td>2.28</td>
<td>11.49</td>
<td>2.97</td>
<td>1.99</td>
<td>11.87</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>9</td>
<td>7</td>
<td>46</td>
<td>9</td>
<td>7</td>
<td>52</td>
<td>9</td>
<td>7</td>
<td>51</td>
</tr>
<tr>
<td>Mode</td>
<td>11</td>
<td>7</td>
<td>54</td>
<td>9</td>
<td>8</td>
<td>52</td>
<td>9</td>
<td>7</td>
<td>51</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.32</td>
<td>-0.48</td>
<td>-0.34</td>
<td>-0.26</td>
<td>0.06</td>
<td>-1.14</td>
<td>-0.86</td>
<td>0.08</td>
<td>-0.75</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-0.83</td>
<td>-0.33</td>
<td>-0.99</td>
<td>-0.07</td>
<td>-0.40</td>
<td>0.27</td>
<td>1.02</td>
<td>-0.05</td>
<td>-0.12</td>
</tr>
<tr>
<td>Maximum</td>
<td>13</td>
<td>11</td>
<td>65</td>
<td>14</td>
<td>12</td>
<td>62</td>
<td>14</td>
<td>11</td>
<td>65</td>
</tr>
<tr>
<td>Minimum</td>
<td>4</td>
<td>2</td>
<td>16</td>
<td>3</td>
<td>3</td>
<td>21</td>
<td>1</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>9</td>
<td>9</td>
<td>49</td>
<td>11</td>
<td>9</td>
<td>41</td>
<td>13</td>
<td>9</td>
<td>48</td>
</tr>
<tr>
<td>Number of Items on Test</td>
<td>Number of Students</td>
<td>Mean</td>
<td>S.D.</td>
<td>Standard Score Mean</td>
<td>Standard Score S.D.</td>
<td>Median</td>
<td>Mode</td>
<td>Skewness</td>
<td>Kurtosis</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------</td>
<td>------</td>
<td>------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>--------</td>
<td>------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>Pre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtest A</td>
<td>1</td>
<td>11.42</td>
<td>2.21</td>
<td>500.00</td>
<td>100.00</td>
<td>12</td>
<td>11</td>
<td>-1.83</td>
<td>4.07</td>
</tr>
<tr>
<td>Subtest B</td>
<td>1</td>
<td>9.89</td>
<td>2.43</td>
<td>500.00</td>
<td>100.00</td>
<td>10</td>
<td>10</td>
<td>-0.41</td>
<td>-0.10</td>
</tr>
<tr>
<td>Subtest C</td>
<td>1</td>
<td>53.00</td>
<td>12.09</td>
<td>500.00</td>
<td>100.00</td>
<td>55</td>
<td>48</td>
<td>-1.18</td>
<td>1.40</td>
</tr>
<tr>
<td>Post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtest A</td>
<td>1</td>
<td>11.69</td>
<td>2.52</td>
<td>500.00</td>
<td>100.00</td>
<td>12</td>
<td>14</td>
<td>-0.63</td>
<td>-0.41</td>
</tr>
<tr>
<td>Subtest B</td>
<td>1</td>
<td>7.92</td>
<td>1.94</td>
<td>500.00</td>
<td>100.00</td>
<td>7</td>
<td>7</td>
<td>-0.02</td>
<td>-0.53</td>
</tr>
<tr>
<td>Subtest C</td>
<td>1</td>
<td>56.00</td>
<td>11.08</td>
<td>500.00</td>
<td>100.00</td>
<td>61</td>
<td>62</td>
<td>-1.26</td>
<td>0.34</td>
</tr>
<tr>
<td>Post-Post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtest A</td>
<td>1</td>
<td>11.90</td>
<td>1.97</td>
<td>500.00</td>
<td>100.00</td>
<td>11</td>
<td>11</td>
<td>1.08</td>
<td>-0.32</td>
</tr>
<tr>
<td>Subtest B</td>
<td>1</td>
<td>9.90</td>
<td>2.02</td>
<td>500.00</td>
<td>100.00</td>
<td>9</td>
<td>8</td>
<td>0.50</td>
<td>-0.59</td>
</tr>
<tr>
<td>Subtest C</td>
<td>1</td>
<td>57.70</td>
<td>8.53</td>
<td>500.00</td>
<td>100.00</td>
<td>52</td>
<td>52</td>
<td>-0.21</td>
<td>-1.46</td>
</tr>
</tbody>
</table>
### Control Group--Teacher J

<table>
<thead>
<tr>
<th></th>
<th>Pre Subtest A</th>
<th>Pre Subtest B</th>
<th>Pre Subtest C</th>
<th>Post Subtest A</th>
<th>Post Subtest B</th>
<th>Post Subtest C</th>
<th>Post-Post Subtest A</th>
<th>Post-Post Subtest B</th>
<th>Post-Post Subtest C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Items on Test</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number of Students</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Mean</td>
<td>10.05</td>
<td>7.24</td>
<td>39.24</td>
<td>10.21</td>
<td>7.57</td>
<td>42.93</td>
<td>9.29</td>
<td>7.62</td>
<td>44.48</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.06</td>
<td>2.43</td>
<td>16.95</td>
<td>1.57</td>
<td>1.80</td>
<td>10.20</td>
<td>2.05</td>
<td>1.68</td>
<td>11.40</td>
</tr>
<tr>
<td>Standard Score Mean</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td>Standard Score S.D.</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td>Median</td>
<td>10</td>
<td>7</td>
<td>42</td>
<td>10</td>
<td>7</td>
<td>40</td>
<td>9</td>
<td>7</td>
<td>45</td>
</tr>
<tr>
<td>Mode</td>
<td>10</td>
<td>5</td>
<td>47</td>
<td>10</td>
<td>6</td>
<td>28</td>
<td>9</td>
<td>7</td>
<td>42</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.33</td>
<td>-0.14</td>
<td>-1.11</td>
<td>-0.25</td>
<td>0.21</td>
<td>0.37</td>
<td>0.57</td>
<td>0.55</td>
<td>-0.28</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.06</td>
<td>-1.04</td>
<td>0.35</td>
<td>-0.43</td>
<td>-1.02</td>
<td>-0.92</td>
<td>-0.32</td>
<td>-0.91</td>
<td>-0.80</td>
</tr>
<tr>
<td>Maximum</td>
<td>14</td>
<td>11</td>
<td>59</td>
<td>13</td>
<td>11</td>
<td>61</td>
<td>14</td>
<td>11</td>
<td>61</td>
</tr>
<tr>
<td>Minimum</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>5</td>
<td>28</td>
<td>6</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Range of Scores</td>
<td>9</td>
<td>8</td>
<td>59</td>
<td>6</td>
<td>6</td>
<td>33</td>
<td>8</td>
<td>6</td>
<td>41</td>
</tr>
</tbody>
</table>
## Control Group--Teacher K

<table>
<thead>
<tr>
<th></th>
<th>Pre Subtest A</th>
<th>Pre Subtest B</th>
<th>Pre Subtest C</th>
<th>Post Subtest A</th>
<th>Post Subtest B</th>
<th>Post Subtest C</th>
<th>Post-Post Subtest A</th>
<th>Post-Post Subtest B</th>
<th>Post-Post Subtest C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Items on Test</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Number of Students</strong></td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>10.65</td>
<td>7.35</td>
<td>42.53</td>
<td>8.95</td>
<td>7.92</td>
<td>40.18</td>
<td>5.87</td>
<td>5.32</td>
<td>30.19</td>
</tr>
<tr>
<td><strong>S.D.</strong></td>
<td>2.68</td>
<td>1.45</td>
<td>11.22</td>
<td>2.92</td>
<td>2.14</td>
<td>10.58</td>
<td>3.23</td>
<td>1.35</td>
<td>9.73</td>
</tr>
<tr>
<td><strong>Standard Score Mean</strong></td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
<td>500.00</td>
</tr>
<tr>
<td><strong>Standard Score S.D.</strong></td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>10</td>
<td>7</td>
<td>43</td>
<td>9</td>
<td>8</td>
<td>37</td>
<td>6</td>
<td>6</td>
<td>29</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td>8</td>
<td>7</td>
<td>33</td>
<td>6</td>
<td>9</td>
<td>36</td>
<td>3</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>0.67</td>
<td>0.75</td>
<td>-0.06</td>
<td>0.11</td>
<td>0.36</td>
<td>0.33</td>
<td>0.25</td>
<td>-0.21</td>
<td>0.28</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>-0.52</td>
<td>0.85</td>
<td>-1.22</td>
<td>-0.79</td>
<td>-0.74</td>
<td>0.10</td>
<td>-0.89</td>
<td>-0.84</td>
<td>-1.32</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>16</td>
<td>11</td>
<td>62</td>
<td>15</td>
<td>13</td>
<td>65</td>
<td>13</td>
<td>8</td>
<td>48</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>7</td>
<td>5</td>
<td>24</td>
<td>3</td>
<td>5</td>
<td>14</td>
<td>1</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td><strong>Range of Scores</strong></td>
<td>9</td>
<td>6</td>
<td>38</td>
<td>12</td>
<td>8</td>
<td>51</td>
<td>12</td>
<td>5</td>
<td>31</td>
</tr>
</tbody>
</table>

Growing up in a slum tenement is not quite like growing up in a comfortable country home, and if that is obviously common sense it nevertheless is a common sense that has to be stated and discussed--because it is ignored by all sorts of institutions: schools or courthouses or welfare agencies.

My children were born in hospitals, and once home were closely followed by a fine paediatrician. They came home to a snug, warm nursery and were brought home by a mother who wanted them, loved them, and had plenty of time to give them, not to mention plenty of food and good clothes; and as they grew older, games and toys and a room to own, to possess, to do things with. Our children look at a policeman or a fireman in Concord, Massachusetts, as a friend, as the man who helps people cross the street, or shows people those fascinating fire trucks.

They see a school building or a library as familiar and hospitable places. They were taken to the library as infants and toddlers, and at four they were read stories there by a librarian. Their mother taught school before she was married. Their father is associated with a university. They live in a home owned by their parents. Each of them has his own shoes and shirts and trucks and planes and picture books and animals--and on and on. There it is, give or take this or that, for millions of us in America.

In contrast, in the ghetto I meet and talk with children whose experiences in the world and assumptions about it are quite different. Some of them were born in the south, in sharecropper cabins. No doctor delivered them, and in the very act of being born they may have suffered all sorts of injuries. Once alive they immediately come to know the social and political system. That is to say, they felt the extreme coldness in winter, or the wet heat of summer, with its inevitable flies and mosquitoes.

In the rural south, and up north in the cities, I have seen those babies: lying cold without blankets, crying and shivering; or lying on a table or indeed the floor, at the constant mercy of buzzing, biting mosquitoes. Why should anyone think of screens or central heating or air-conditioning as psychological "factors" in child development--until he sees what cold or skin covered with bites does to a child's nerves?
Then there is the matter of food. In the south, thousands of black children, and not a few white ones, go hungry, as the Citizens' Board of Inquiry into Hunger and Malnutrition in the United States of America has recently documented. But that board's report—the result of many months of work by a group of distinguished Americans—showed that in the cities, too, families go hungry and, ironically, intact families go more hungry than others because the presence of a father makes a family ineligible for relief.

I visit homes in the south, in Appalachia, in Boston's ghetto, where the next meal is something that neither mother nor children can take for granted. Most of the children live in constant pain: their skin is sore or dry or itchy or infected; their stomachs hurt and they have colds in the summer as well as the winter, in fact all the time; they may have vitamin-deficiency diseases—yes, in America, in 1968; they need glasses and certainly they need a dentist, but somehow those needs, and many others, have not been met. In the past few decades psychiatrists have talked a good deal about "psychosomatic medicine." I can only ask that we consider not only what psychological tensions do to the body, but what bodily ills do to the mind. The children I know suffer from anaemia, parasitic infections and a host of chronic diseases—and as a result they feel weak, tired, grumpy, sad, fretful and petulant.

They also feel angry from time to time, and they know what anger is because they have lived with that emotion from the very beginning. Poor people are anxious and fearful and angry, and their children soon learn that. Poor people are fitful—at times desperately indulgent, at times moralistic (and fatalistic) to an extreme that might even unnerve John Calvin. I simply cannot understand those well-to-do conservatives who claim that, say, black parents in Harlem or Mississippi's Delta bring up their children to be lazy, careless and self-indulgent. In my experience penniless and exiled people constantly have to watch themselves, watch their every step; at any moment, for any mistake or miscalculation, however unmeant, or for no reason at all, they can be set upon, denied this, punished for that—without "due process," without warning, without the slightest effort at courtesy or kindness.

Here is the mother of six children talking to me—and in a few sentences a whole world of despair comes across, not to mention a lot about what I suppose people like me call her "philosophy of child rearing":


"I try to do the best I can for them. I give them the food we get, and toward the end of the month, when we're run out of money, I try to tell them that it won't be long until we have something real good to eat. You've got to give them something to hope for. Most of all, I teach them to mind me. They've got to learn it now, how to be careful. Later, it's too late. So I tell them that it's a very bad world, and everyone in it--well, most people--just can't be trusted, no sir. I keep on telling them that, and yes, sir, I hits them hard, because they've got to know. When I was a girl, back in Alabama, my mother used to beat us and beat us, and then make us listen to her, while she prayed to God, and asked Him to make us remember. She taught us what we had to know--that you either obey the white man and keep out of his way, or you'll get yourself killed.

"Now my kids have to learn that, too--even up here in the north they do. And I'm the one that has to teach them, that's for sure. Oh, I know what happens later around here. They get bigger and they leave and they get into trouble, a lot of them do. My son, when he turned nine or ten he stopped listening to me, for all the whippings I gave him, and he took to the streets. He just ran away. He comes back, yes sir, to eat and sleep, but he's all grown up, now that he's twelve. There just isn't a thing I can do--not with the younger ones to handle, too."

To get a bit categorical I must say that she and others like her try to be as close and intimate with their young infants as possible. There is a kind of desperate intimacy I have seen between exhausted but stubborn mothers, poor and frightened and worried all the time, and infants who are not getting the food they deserve, but are close to their mothers, and indeed older brothers and sisters. The word to use is huddled--as in Kathe Kollowicz's drawings, the children huddle.

Often the children do so quite apart from their parents. They don't demonstrate the "sibling rivalry" I see in middle class children--but rather a sense of oneness. They sleep together, three or four to a bed, and share clothes and feel part and parcel of each other. As they grow they may well face a sharp, strict unyielding morality--which, however, never pays off as it does among us. That is, there are few rewards to make the punishment somehow bearable. School seems boring and irrelevant, as indeed it is for many of their teachers; and soon, all too soon, the street and all its chaos beckons. Even within a particular ghetto the child feels at loose ends: his
family constantly, abruptly, arbitrarily moves from building to building--fleeing creditors, trying to make do in a new place, following any promise, any possibility.

"It's different here," one mother recently told me, really because she could feel me thinking that. I took a chance and said, "Yes, but you tell me how." I feared the banal and yet all-important answer that money was absent. She had another way of putting it, though: "When you don't have hope, you can't convince your kids they should be hopeful and what happens is they don't have much of it, hope, when they become big. They feel like losers, and it's not natural that a child should come to that, feeling like that."

After a slight pause she asked me a question: "Do your kids feel like that?" I had to say no, and I had to say to myself that a good deal of psychiatric talk--about "class differences in developmental psychology"--comes down to just that, to the summary she had made for me.
The United States of America has thousands of hungry, sick children, who are living at the edge of starvation, who suffer from vitamin deficiency diseases, who are infested with worms, and who are destined to die well before their time. In 1967 a committee of the United States Senate heard six physicians—I was one of them—describe the people from the state of Mississippi they had met and examined in the course of a foundation-sponsored tour. I had lived in the state for two years, and have worked there, off and on, for five years; but at last the Congress and indeed the whole country seemed ready to listen.

First we showed dozens of photographs, taken all over the rural south and in Appalachia. Then we described Americans, Americans all: white and black, young and old and in-between. We said that we had seen families that literally saw no money from week to week. We said that we saw children who get no breakfast, a piece or two of old, stale bread, dipped in gravy for lunch, and some fried fat and bread again for supper. We said that we saw children with deformed bones, with skin covered by sores, infections and scars. We showed the pictures and then talked. To quote myself: "I examined dozens of children, and I saw their skin, dry and excoriated and inflamed and discoloured and injured and oozing. I saw their teeth, never looked at by a dentist and full of decay. I saw their ankles, soft with edematous tissue, and their bellies, swollen and protruding. Worst of all, I saw their faces: tired, weary, apprehensive, confused, resigned—the faces of children ready to die! I found myself horrified at first, and unbelieving; but I have to admit that I have seen some of this repeatedly in recent years, and that the shock I experienced to some extent had to do with the concentration and intensity of our visit and our medical observations."

Mississippi's governor did not at all like what we said, nor did he believe us. He sent his own doctors out to follow us, look at the people we looked at, and report back to him, all of which they did, carefully and thoroughly. The United States Senate wanted to hear them also and in many respects their testimony was even more interesting and surprising and frightening than ours. With no possible interest in hurting their state or exaggerating and distorting what they saw the state's doctors essentially confirmed what we, the foreigners or visitors or outsiders, had reported. They recorded their dismay and their pain. They recorded the sights they had seen, we had seen: flimsy cabins, without proper sanitation or heat or
screens or even electricity; people who never see a doctor or a dentist or a lawyer, who go to schools infrequently, if at all, and never beyond, say, the age of ten; people who just don't eat very much, who in consequence are alive all right, but not much more.

We were all on television, and our testimony became news. Senator Robert Kennedy again and again insisted that the government do something—he even visited various sections of the country to document and emphasize the seriousness of the problem—and eventually the huge bureaucracy began to worry, then move. For years Washington has offered a "commodity food plan" and a "food stamp program" to any local (county) government that chooses either or both of them. The agriculture department is authorized to distribute free to very poor people an assortment of foods such as bread, lard, cereal—though until very recently the only foods distributed under the "commodity plan" were those that the government stored anyway, as part of its effort to keep America's enormously productive farms in business. They produce so much—those huge "factory-farms"—that the American people, through their government, has to pay already wealthy plantation owners, like Mississippi's Senator James Eastland, thousands and thousands of dollars every year not to plant certain crops; and other crops are bought up as authorized by Congress, and stored away, lest food prices go too far down.

The "food stamp program" tried another tack: sell stamps to poor people at one price, and let them go buy food with the stamps, worth much more in the market. It all seemed very nice in theory, but in actuality many of the poorest counties chose to ignore both programmes. Why, after all, feed those blacks, when a little hunger might persuade them to go north? Or why feed those white people up in the mountain hollows of Appalachia, and let them get full of energy and ideas and protest? The sheriffs and other county officials who for years have kept their eyes on the poor, kept them off the relief rolls, kept them exactly where they belong, at the bottom of everything, were not about to start distributing largesse, even if it did mean that children would have something halfway decent to eat now and then. As for those food stamps, even when they are made available they cost much more than thousands can afford.

Here it all is, tragically summed up: "No, I don't know what I'll be having for my kids to eat. We don't have money, so I can't buy the stamps. My husband is here, so they won't give us relief. We grow a little, and we're always borrowing, and the minister,
he'll help. But each day I wonder how I'll face it: the kids, crying, and telling me they want something to eat, and how it hurts here and it hurts there; and worst of all my own self, asking is it all worth it. I'll tell you, every once in a while I feel like I should give up. I feel like I should stop breathing and go let myself be buried right away."

Unbothered by people like her, but very much bothered by what the United States Senate and its witnesses were beginning to document, the Secretary of Agriculture began to move. He admitted that his programmes were inadequate and he promised action. But he needed more prodding before he would really move, and it came from a citizens' board of inquiry into hunger and malnutrition in the United States. The board was made up of distinguished Americans from all walks of life, who agreed to roam the country, talk to people, comb through all sorts of statistics, and come to some conclusion about whether citizens of the world's mightiest democracy do in fact go hungry, as a rule, and in significant numbers.

After months of hard work, after holding hearings in the north, the south, the east, the west, after talking with doctors and welfare officials and nutritionists and just plain people, the board came up with its findings, published as Hunger, USA. The title only seems dramatic. What else could a decent and honourable group of men do in the face of what they discovered: not only poverty, not only joblessness and discrimination and racism; but among thousands and thousands of Americans the daily presence of hunger, under-nutrition, malnutrition, and chronic, untreated diseases of all kinds. The board described its observations, but it also offered grim and shameful statistics, such as infant mortality rates that in some counties rival those found in Asia. America's overall rate anyway is higher than that of a dozen nations; but in certain sections of the country the rate soars to more than 100 per 1,000 births.

Yes, the facts are that some children in the United States are delivered by relatives in shacks that have no running water, no electricity, no heat but that provided by a small coal stove, no plumbing; and after birth those children crave food, crave warmth, crave what they will never get: the care of a mother who feels kind and loving and generous because she knows she has a lot to give--meals and clothes and medicines when needed, and in general a sense of hope and confidence about the future, which believe me, an infant can sense, or indeed sense lacking. In Hunger, USA, all that hundreds of thousands lack was spelled out, and the reader was left to
think about how the children among our hungry make sense of their fate.

But the board, too, had to make sense of its own discoveries. One of its members was Harry Huge, a distinguished Washington lawyer from the firm of Arnold and Porter. He was so shocked by what he saw that he took leave of absence to study other aspects of this rich nation's so-called "war on poverty." He is a very bright, kind and sensitive man—but also a practical person. I believe that he recently said just about all there is to say on the matter of hunger in America: "We'll never solve this awful problem, and all the others associated with it, until more people like me somehow get the kind of education I acquired as a member of the board of inquiry. The majority of the American people just don't know they are comfortable, and everything conspires to keep them comfortably unaware of poor and hungry people. The problem is not only hunger, but the political and social awakening that America must experience if hunger is to exist no longer. A year or two ago I wasn't worried about the fact that thousands of our children are slowly starving to death. I didn't know. I just didn't know. How do you get comfortable and comfortably indifferent people to know, to feel, to become activated? Isn't that the problem, all over the world?"
APPENDIX E

Teacher Biographical Information
Treatment Group

Teacher A

Sex: Male
Born: Columbus, Ohio
Age: 30

Educational Experiences:
B.S.-- The Ohio State University, 1965
M.A.-- Xavier University, 1972

Teaching Experience:
Four years--Junior High Social Studies
Four years--Senior High Social Studies

Teacher B

Sex: Female
Born: Columbus, Ohio
Age: 22

Educational Experience:
B.S. in Education--The Ohio State University, 1971

Teaching Experience:
Two years--Seventh Social Studies
Teacher C

Sex: Male

Born: Memphis, Tennessee

Age: 23

Educational Experiences:

B.S. in Elementary Education, 1971

Teaching Experience:

Two years--Seventh Social Studies

Teacher D

Sex: Male

Born: Cleveland, Ohio

Age: 31

Educational Experience:

B.A.--Capital University, 1963
B.S. in Education--The Ohio State University, 1965

Teaching Experience:

Seven years--Social Studies
Teacher E

Sex: Male

Born: Castalia, Ohio

Age: 56

Educational Experience:

B.A.—Capital University
M.A.—The Ohio State University

Teaching Experience:

32 years—Elementary through High School

Control Group

Teacher F

Sex: Male

Born: Columbus, Ohio

Age: 35

Educational Experience:

B.S.—The Ohio State University

Teaching Experience:

Nine years
Teacher G

Sex: Female

Born: Columbus, Ohio

Age: 26

Educational Experience:

B.S.--Ohio University, 1968

Teaching Experience:

Two years--Elementary School
Three years--Middle School Social Studies

Teacher H

Sex: Male

Born: Sarasota, Florida

Age: 30

Educational Experience:

B.S. in Secondary Education--The Ohio State University, 1971

Teaching Experience:

Two years--Middle School--Social Studies, Language Arts, and Math
**Teacher I**

**Sex:** Female  
**Born:** Halls, Tennessee  
**Age:** 41  
**Educational Experience:**  
B.S. & M.A.--Memphis State  
**Teaching Experience:**  
Five years--Elementary and Middle School  
Seven years--High School

---

**Teacher J**

**Sex:** Female  
**Born:** Massillon, Ohio  
**Age:** 24  
**Educational Experience:**  
Malone College, Canton, Ohio  
**Teaching Experience:**  
Three years--High School Social Studies
Teacher K

Sex: Male

Born: Connellsville, Pennsylvania

Age: 24

Educational Experience:


Teaching Experience:

Three years--Seventh Math, Reading, Science and Social Studies
APPENDIX F

Description of Observations Including Ratings of Lessons
TREATMENT GROUP

Teacher A (11th. U.S. History)

Observation 1

Description The following class discussion questions were given to the students.

1. Assuming you were George McGovern's campaign manager, what would you do in the remaining weeks of the campaign to narrow the 2 to 1 lead Nixon now has?

2. How do you explain the fact that although Republicans run third in registered voters (behind Dem's and Independents) Nixon has a 2 to 1 lead?

3. Why haven't the democrats been successful in capitalizing on Nixon's failure to end the war, the Watergate Affair, wide-spread unemployment, economic unrest, etc.?

4. If you were President Nixon, what would your strategy be for the remaining weeks of the campaign?

5. How do you explain the fact that every black person in the House of Representatives happens to be a Democrat while the lone black U.S. Senator is a Republican?

6. How might Nixon capture more of the votes of blacks in this year's election?

7. What strategy should the Republicans employ in the campaign in an effort to gain a control of Congress? (Note: The Republicans have not held a majority for the past 20 years.)

8. What is President Nixon referring to when he speaks of an "ideological majority?" Explain.
Rating (1, A) Teacher "A" asked open-ended questions, but did not feedback either information or feelings. He tended to dominate the discussion, and there was little student response because of his talking.

Observation 2--Poverty Lesson

Description Teacher "A" had the class read one article, "Growing Up In A Slum." He clarified terms.

Rating (3, C) His students sat in straight rows (this is not conducive to promoting discussions). He attempted to utilize modified active listening a total of eight times. One opportunity presented itself for an I-message, but this skill was not used. Once again Teacher "A" talked more than he should--students were unable to express themselves because of his dominance.

Observation 3

Description Once again Teacher "A" structured a current events discussion.

Rating (3, C) His use of active listening increased to a total of 13 times. His use of open-ended questions increased to a total of ten. However, once again teacher talk nullified the open-ended questions.
Teacher B (7th. Social Studies)

Observation 1

Description This observation was not recorded, as the students were working on projects. Most everyone seemed to be hard at work on their group project. The teacher went from group to group helping the students.

Observation 2--Poverty

Description An oral summary of the article, "Hunger In America" was presented to the students by the teacher. (The seats were organized in a U-shape.)

Rating This was an excellent example of a "content-centered" discussion utilizing the skills. This teacher used active listening thirty-one times, and sent six I-messages during the course of the discussion. The response of the students was good.

Observation 3

Description This class was involved in doing group work concerning the Roman Empire. Since there were not enough books to go around, group members took turns reading. The teacher circulated from group to group acting as a facilitator.
Rating (3, C) This writer only recorded the group he was sitting near, and only when the teacher came to that group. Some good I-messages were sent to students, with effect.

Teacher C (7th. Social Studies)

**Observation 1**

Description This lesson dealt with some ideas about archeology, but the main emphasis was upon geography.

Rating (1, A) The lesson was 99 percent cognitive and was essentially a question-answer lesson.

**Observation 2--Poverty**

Description The teacher read the article, "Hunger In America" to his students. He asked questions to clarify problems. (Students sat in straight rows.)

Rating (1, A) None of the course skills were utilized. The lesson was very teacher-centered.

**Observation 3**

Description The class lesson centered around a filmstrip-record presentation about how an archeologist works.

Rating (2, A) Some modified I-messages were sent, despite the fact that most of the period dealt with the filmstrip-record presentation.
Teacher D (8th. American History)

Observation 1

Description This class lesson dealt with a discussion and comparison of the colonies of Jamestown and Plymouth. The class was teacher oriented. Major points were outlined on the board. The teacher used many questions to elicit student response.

Rating (Students were seated in a horse-shoe shaped arrangement. This remained the same for all observations.)

Observation 2--Poverty

Description In this class session, the teacher asked students to take a piece of paper and jot down what they would expect to have for Christmas dinner, or what each student would like to have. The students were then to put themselves in the role of living in a slum. They were then to draw a line through those items not appearing on their table. They were then asked an open-ended question, "If what's left were to be your Christmas dinner, what would you feel?" A discussion followed.

Rating An excellent example of the use of the program skills.

I-messages were used eight times, active listening
Observation 3

Description  This class session dealt with a discussion of political parties prior to the Civil War. It involved some group work dealing with the 1860 party platform.

Rating  (4, C)  Once again the skills, particularly active listening were used frequently. (Active listening was utilized 13 times, and one I-message was sent.)

Teacher E (11th. American History)

Observation 2--Poverty

Description  A student had volunteered to moderate a discussion of the article, "Growing Up In A Slum." He did not attend class. The teacher suggested that another student volunteer to lead the discussion. A student
volunteered and the discussion was largely student centered with an occasional question interjected by the teacher.

**Rating**

(D) The rating was derived from the fact that the students conducted the discussion.

**Observation 3**

**Description** The ground work was laid for a Civil War simulation game. Class members volunteered for various roles in the game. They then went to the library to gather information about the individual whose role they were taking. The remainder of the class decided to use its time playing a game.

**Rating**

(D) The rating of the class was based on the fact that, for the remaining time left in the period, the class could choose its activity.

**CONTROL GROUP**

**Teacher F (8th. American History)**

**Observation 1**

**Description** A question-answer session dealing with the period of exploration served as a basis for this class.
Rating (2, A)

There occurred some feedback of opinion, but this was inconsistent.

Observation 2 -- Poverty

Description Both readings were discussed. In dealing with the article "Growing Up In A Slum," the teacher asked questions and there was isolated individual response. In the second reading, the class divided into groups and discussed the article, "Hunger In America" on the basis of the three questions that the teacher had listed on the board. These questions were: "What is the problem? What has the government done to solve the problem? In what ways do you think the problem can be solved?" The teacher made the decision as to how the groups would be divided and asked the group to select its spokesman and secretary. The groups then reported their findings to the class.

Rating (2, B)

The teacher sought right answers to the problems brought up in the readings, and dealt almost exclusively with facts.

Observation 3

Description This lesson dealt with the background for the Mexican War. The teacher lectured, with some questions and
answering interspersed in his presentation. An overhead projector was used to illustrate the battles. The following questions were asked near the end of the lesson: "Were the Texans justified in getting their independence the way they did? Why? What alternatives can you think of?"

Rating
(2, A)

Some feedback of information occurred, but in general, as one would expect, none of the course skills were exhibited.

Teacher G (7th Ancient History)

Observation 1

Description The teacher had the class answer questions concerning the following worksheet.

Worksheet on Prehistoric Man

1. What is meant by the term "prehistory?"
2. A group of people who are alike in physical appearance is known as a ________.
3. A period of time when men used tools and weapons made by mixing copper and tin was known as the ________.
4. ________ was a period when men's stone tools and weapons had polished surfaces.
5. ________ is the study of history by examining the remains of the past.
6. A long period, or division of time is called an ________.
7. ________ is a body of ice that once covered part of the earth.
8. _______ was a period of time when men's stone tools and weapons were made of iron.
9. _______ was a period of time when men's stone tools and weapons had rough surfaces.
10. What were some of the effects of the glaciers?
11. What is archeology?
12. What is an archeologist?
13. Find five different ages given for the earth.
   Give both the number found and where you found it.

Rating
(1, A)

The class was very teacher oriented and dealt with the cognitive domain.

Observation 2—Poverty

Description
This lesson was based on the Taba curriculum approach. Students contributed items descriptive of poverty. These were listed on the board. A tape recording had been made the previous day recording the discussion of the students about the issue of poverty. This was replayed. Additions were then made to the list. Terms were grouped to see which were alike. Seven groups of terms resulted. A title for each group was suggested by the students. The teacher asked these questions: "What if you had to do without these things? What would be the last things that you would want to do without?" A discussion followed.
The class involvement was good, although the lesson was teacher centered. Little emphasis was placed on feelings, rather most was cognitive oriented.

**Observation 3**

**Description** A map exercise was conducted. Students then read paragraphs from a work sheet dealing with what the Romans ate. There was a discussion of a Roman banquet. This was followed by a continuation of a role-playing of a Roman court skit which dealt with a trial of the murderers of Caesar.

**Rating (1, C)**

The class was less teacher centered than the others in the series had been. There was no evidence of program skills being utilized.

**Teacher H (8th. American History)**

**Observation 1**

**Description** This lecture lesson dealt with the origins of American political parties. The teacher outlined material on the board and the students took notes.

**Rating (1, A)**

The lesson was cognitively oriented. There was no attempt to pursue the underlying feelings of the student.
Observation 2 -- Poverty

Description This observation followed the Taba curriculum model of grouping of items, of listing them on the board and categorizing the factual aspects of the articles. The lead-off question was, "What can you tell me about the characteristics of poverty from what you read?"

Rating Although still concerned with the cognitive domain, in this lesson the teacher drew more material from the students than he had done in the first lesson.

Observation 3

Description A current-events filmstrip with no wording was shown. A question-answer approach was used by the teacher. A quiz followed the filmstrip.

Rating An opportunity was present for work in the affective domain--the lesson could have been structured around feelings, but remained centered around the cognitive domain.

Teacher I (12th. Sociology)

Observation 1

Description Teacher I's lesson started with the asking of a question as to whether the students were "fishers" or "hunters." Once that had been determined for each student, the
teacher asked the hunters to go fishing with her, thus
their cooperation was solicited and secured. The
lesson centered around student perception of the
pictures of five girls that were hanging on the wall.
Each student was to rate the girls as to intelligence,
beauty, dependability, ability to be fun-loving and the
amount of ambition the students thought each had. The
girls represented different nationalities and races.

While incorporating student contributions, the class
was still heavily teacher centered. The class would
ultimately deal with feelings, but to what degree was
undetermined.

Observation 2--Poverty

Description The class was asked to do the following worksheet and
to answer the questions sincerely.

Assuming that you have children of your own ten
to fifteen years from now:

Will You? Yes No

1. Provide them with a pair of shoes
that fit and several pair of socks?
2. See that they have enough nourishing
food so that they do not suffer from
malnutrition?
3. Take them to a physician when they
are ill?
4. Take them to a dentist if they have cavities?
5. See that they receive as much education as they can benefit from?

Situation:

Ten to fifteen years from now you find that you cannot financially afford to answer yes to any of the above. What will you do?

The class then read, "Growing Up In A Slum" and a discussion developed.

Rating

Although there was some minor feedback of student response concerning information, there was no feedback of feelings.

Observation 3

Description The class dealt with a problematical situation--developing a proposed budget for the future.

Rating

Here was an opportunity for much active listening. There was considerable student participation, but little in-depth response to feelings.

Teacher J (10th. World Cultures)

Observation 1

Description In this class session a test review was the subject under discussion. A game was played for reviewing the cognitive material.
Rating (1, A) This was a traditional approach dealing only with memorizing factual material.

Observation 2
Description This session concerned a discussion of a fight between several classes, including this teacher's class, with a black group of students, from another school, that occurred on a field trip to the Ohio Historical Museum. This discussion dealt with what happened and brought out many feelings. The principal sat in the class during this period and made several comments.

Rating (2, D) Due to the unusual nature of this class session, there was heavy student participation. This was a perfect opportunity for the use of the course skills had this teacher been trained in the program. The teacher presented two modified I-messages stating how she felt about the incident. There was no active listening.

Observation 3
Description Term papers were passed out and grades discussed. (One girl was told to leave because of her talking, but remained. She was later asked to leave again, after a heated discussion. The teacher informed her she would talk with her later. The girl left, slamming the door.) A filmstrip and record combination dealing
with the country of Puerto Rico was shown. A discussion of the filmstrip then followed.

**Rating**

Once again the cognitive domain was stressed to the exclusion of the affective.

---

**Teacher K (7th. Social Studies)**

**Observation 1**

**Description**
The object of this lesson was to teach students to differentiate between fact and opinions. A question-answer session was used by the teacher as a teaching strategy. Students wrote paragraphs illustrating either facts or opinions.

**Rating**

This lesson was based on the cognitive domain. Student participation tended to be good.

---

**Observation 2--Poverty**

**Description**
Students were given an opportunity to read both articles in class. They were then asked the question, "What is the problem stated in 'Hunger In America?'" The lesson was based on the Taba curriculum model. Questions were asked: "Who is the author? What is he saying about problems? Why does the problem exist? What factors are involved in the problem? What is the government doing about the problem?"
After a discussion, students read the second article, and questions were used to clarify viewpoints in the article.

Rating

(1, B)

The opportunity for dealing with the affective domain was present, but largely ignored.

Observation 3

Description The lesson dealt with a discussion of these questions: "How did Washington, D.C. become the nation's capital? What were our first political parties? What was the War of 1812?"

Rating

(1, A)

This lesson was primarily concerned with exploring the cognitive domain.
ALLEN, Dwight W. "And How They Mangle the Young." Psychology Today, 4, No. 10 (March, 1971), 71-72, 100.


------. "The Relationship Inventory, A Technique for Measuring Therapeutic Dimensions of an Interpersonal Relationship." Paper read at annual conference of S.P.A., April 24, 1959. (Mimeographed.)


BUTTS, David, and RAUSS, Chester. A Study In Teacher Change. Science Education Center, Texas University, Austin, 1967.


Foster, Richard and Dorough, Maxine. "Open Learning." Theory Into Practice, 8, No. 2 (April, 1969), 101-03.


