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Some Effects of Specific Kinds of Interpersonal Responses on Specific Seventh Grade Students as Measured by Their Scores on a Personal Attitude Scale

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SOME EFFECTS OF SPECIFIC KINDS OF
INTERPERSONAL RESPONSES ON SPECIFIC SEVENTH GRADE
STUDENTS AS MEASURED BY THEIR SCORES ON A PERSONAL
ATTITUDE SCALE.

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It is my belief that varied concerns exist for the
 administrators in the public school system today. The concerns
 are widespread and exist within even school districts, each
 school, each level and even individual class. Of particu-
 lar concern for the classroom teacher is the variety of students
 types found within class groups. Within the individual class
 group can be found students with personal backgrounds and
 current life styles representing a wide range of moral,
 cultural, intellectual and educational levels. Therefore,
 within a single class group a teacher may be expected to
 deal with students with a broad spectrum of needs: socio-
 logical, economic, philosophical, moral and affective. In
 addition, students with learning disabilities are quite
 often members of this class. Some of these learning dis-
 abilities are mental retardation, emotional problems,
 behavioral problems and actual physical handicaps.

The existence of students with diversified needs
 within the class group forces the teacher, to search for
 communication techniques to address the needs of these

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SOME EFFECTS OF SPECIFIC KINDS OF
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ATTITUDE SCALE

CHAPTER I

DEVELOPMENT OF THE PROBLEM

A. Introduction

It is my belief that varied concerns exist for the educator(s) in the public school system today. The concerns are widespread and exist within each school district, each school, each age level and each individual class. Of particular concern for the classroom teacher is the variety of student types found within class groups. Within the individual class group can be found students with personal backgrounds and current life styles representing a wide range of moral, cultural, intellectual and educational levels. Therefore, within a single class group a teacher may be expected to deal with students with a broad spectrum of needs: sociological, economic, philosophical, moral and affective. In addition, students with learning disabilities are quite often members of this class. Some of these learning disabilities are mental retardation, emotional problems, behavioral problems and actual physical handicaps.

The existence of students with diversified needs within the class group forces the teacher, to search for communication is ineffective or actually counterproductive

simply because the teacher is not aware of the various methods which will allow him to cut through these qualities of "individualness" to discover areas of shared commonality.

A primary tool for directing this search may be found in the area of interpersonal communications. To understand these students the teacher must achieve clear, open, and congruent interpersonal communications with them.

To achieve this kind of communication the teacher must be totally aware of the effects of his own communications upon his students. He must be able to both predict their impact and deliberately use them to achieve that predicted impact. Interpersonal communications at their most elemental level consist of both statement and response. The teacher can predict his own statement or response. He cannot predict his students' statement or response. He can, however, control his own statements and responses and thereby channel the direction of his students' statements and responses. Therefore, I believe, that one possibly significant method for directing the search for areas of shared commonality lies in the teachers use of deliberate, aware, controlled interpersonal verbal responses.

B. The Problem

A large part of what occurs in most classrooms revolves around verbal interpersonal communications between teacher and student. I believe that much of this interpersonal communication is ineffective or actually counterproductive

simply because the teacher is not aware of the various types of verbal interpersonal responses he is using, nor is he aware of the real, measurable effects of each of these response types upon his students.

This study attempts to use two specific interpersonal response techniques upon specific class groups of seventh grade students. It attempts further to measure the real impact of these specific techniques upon those students. The students' attitudes as they relate to self, school, and peers will be used as the vehicle for measuring the effectiveness of these response techniques.

C. Definitions of Terms

1. Binding Responses - responses which tend to diminish another's autonomy by increasing his sense of subordination.
2. Freeing Responses - responses which tend to increase another's autonomy as a person and increases his sense of equality.
3. Teacher Responses - verbal responses made by the teacher in direct response to specific student statements or questions.
4. Teacher - that person who is responsible for facilitating learning within the classroom; that person who is responsible for instruction, supplies and the general learning environment

of the classroom.

5. Interpersonal Responses - direct verbal responses of the teacher to real stated questions or statements initiated by the student.
6. Students - seventh grade students who are members of the researcher's three class groups used in the study.
7. Personal Attitude Scale - a Likert-type attitude inventory, developed by the researcher to measure students personal attitude toward school, peers, and self.
8. Above Average Class - a class group of students who all received individual objective recommendations from their sixth grade teacher indicating they had clearly demonstrated strong skills in both the math and language arts areas. (Group B "Binding" is designated an above average class.)
9. Average Class - a class group of students who all received individual objective recommendations from their sixth grade teacher indicating they had clearly demonstrated average skills in both the math and language arts areas. (Group A "Freeing" is designated an average class.)
10. Below Average Class - a class group of students who all received individual objective recommendations from their sixth grade teacher indicating

they had clearly demonstrated weak skills in both the math and language arts areas. (Group C "Control" is designated a below average class.)

11. A Year-Round School - a school system which operates twelve months of the year. (See appendix E.)
12. Likert-Type or Summated Rating Scale - these contain a set of items, all of which are considered approximately equal in attitude or value loading. The subject responds with varying degrees of intensity on a scale ranging between extremes such as agree-disagree, like-dislike or accept-reject. The scores of the position responses for each of the separate scales are summed, or summed and averaged to yield an individual's attitude score.

D. Hypothesis

E. Some Limitations of the Study

1. Seventh grade students will score higher on a personal attitude scale when teacher responses to their verbal questions or statements are of one of the following types: "FREEING"
 1. Active attentive listening
 2. Paraphrasing
 3. Perception checking
 4. Seeking information to help understand
 5. Offering information relative to others concerns

6. Sharing information that has influenced their own feelings and viewpoints
7. Directly report their own feelings
8. Offering new alternatives

2. Seventh grade students will score lower on a personal attitude scale when teacher responses to their verbal questions or statements are one of the following: "BINDING"

1. Commands, orders, telling the students what to do
2. Denial of the students feelings
3. Disapproval on personal grounds
4. Approval on personal grounds
5. Changing the subject without explanation
6. Vigorous advice and persuasion
7. Vigorous agreement

3. Seventh grade students' score on a personal attitude scale will show no significant change when teacher responses to their verbal questions or statements consist of an intermixture of the types stated in hypothesis 1 and 2.

E. Some Limitations of the Study

1. The researcher was personally involved in the research situation.
2. Only fifteen school days were available for the students' treatment portion of the study.
3. The year-round school aspect of the setting (see Subject Definition appendix E.)
4. It is possible that the pre-test served as a

learning experience for the students involved in the study.

5. Each of the three groups was at a different chronological point in the second semester of their seventh grade year at the time of the treatment. On the first day of treatment Group "A" was beginning its fourth week of school in the nine week sequence. On the first day of treatment Group "B" was beginning its seventh week of school in the nine week sequence. On the first day of treatment Group "C" was beginning its first week of school in the nine week sequence.

F. The Experimental Setting

This research took place in a junior high school in St. Charles County, Mo. St. Charles County is a rapidly growing residential community. It serves the housing needs of many individuals who are employed elsewhere in the greater St. Louis metropolitan area. The majority of residents are middle-class caucasian, suburban families.

At the time of the research the junior high school had an enrollment of 1137, of this number 591 were seventh grade students. (See appendix E,F)

G. Subject Definition

All of the students used as subjects in this research

TABLE I
COMPARISON OF INDIVIDUAL STANFORD
ACHIEVEMENT TEST SCORES BY GROUP

Group A	Group B	Group C
"Freeing"	"Binding"	"Control"
Mean-6.88	Mean-7.96	Mean-4.46
M-Male	M-Male	M-Male
F-Female	F-Female	F-Female
M-4.1	M-5.5	M-3.0
F-5.5	M-5.7	M-3.0
M-5.6	M-5.8	M-3.7
F-5.8	M-5.9	M-3.7
M-5.9	M-6.0	M-3.9
M-6.1	M-6.1	F-4.0
F-6.1	M-6.3	F-4.0
M-6.2	F-6.4	F-4.1
M-6.3	F-6.8	F-4.2
M-7.0	F-6.9	F-4.3
F-7.3	F-7.0	M-4.3
M-7.3	M-7.0	M-4.7
M-7.4	M-7.2	M-4.4
F-7.7	M-7.3	M-5.0
M-8.0	M-7.6	M-5.0
M-8.2	M-7.6	F-5.1
M-8.5	M-7.7	F-5.1
F-8.6	M-8.0	M-5.2
M-9.3	F-8.8	M-5.2
	M-9.1	M-5.2
	M-9.2	M-5.2
	M-9.5	M-5.4
	M-9.7	
	M-9.8	
	F-9.8	
	F-11.1	
	M-12.4	
	M-12.8	

N. Cogen, "Behaviors of Teachers and the Behavior of their Pupils," Journal of Experimental Education, 1958, 27, p. 89-104.

REVIEW OF THE LITERATURE

A. Introduction

The review of the literature has been divided into two parts: (1) the role of the teacher: (2) verbal response types and their characteristics.

B. Role of the Teacher

There has been a good deal of research and writing done which concerns itself with the role of the teacher. Through a review of this literature one finds that a consensus of opinion is developed concerning the undeniably important role of the teacher as "communicator." As early as the 1940's, specifically 1947, in his analysis of the personality traits of the effective teacher Witty pointed out the central importance of how a teacher communicated what he knew. In 1958 in a large scale study involving 33 teacher and approximately 1000 students from 5 junior high school Cogan found that "Teacher communication style and warmth are related to the amount of self-initiated work students are willing to do."¹

Tyler, in the early 1960's, found the most ideal teacher-student relationship was characterized by "positive communication

¹ M. Cogan, "Behaviors of Teachers and the Behavior of their Pupils," Journal of Experimental Education, 1958, 27, p. 89-124.

factors, a peer relationship status, and emotional closeness."

He further determined that "the least ideal relationship was characterized by lack of communication autocratic teaching behaviors and emotional distance."² Stern's review of the literature, in 1963, (34 Studies) suggested six attitudes of the effective teacher, one of these was "the use of a conversational manner in teaching-and informal, easy style of communicating."³ In 1969 after a review of the literature on characteristics of good teachers Hamachek stated "what seems to make a difference is the teachers personal style in communicating what he knows (as opposed to simply how much he knows)."⁴ Finally, in his book Teacher and Child, Dr. Haim Ginott, a noted child psychologist, asks the following question:

Where do we start if we are to improve life in the classroom? By examining how we respond to children. How a teacher communicated is of decisive importance. It effects a child's life for good or bad.⁵

² L. Tyler, "The Concept of an Ideal Teacher Student Relationship," Journal of Educational Research, 1964, 58, p. 112-117.

³ G. Stern, Handbook of Research on Teaching, (Chicago: Rand McNally, 1963.)

⁴ D. Hamachek, "Characteristics of Good Teachers and Implications for Teacher Education," Phi Delta Kappan, 1969, 50, p. 341-344.

⁵ H. Ginott, Teacher and Child, (New York: Avon, 1972), p. 69.

C. Verbal Response Types and Their Characteristics

What is communication? The term COMMUNICATION, in a narrow sense, may be defined as any method by which meanings are exchanged between individuals. Many different methods can be employed to facilitate this exchange at the personal level. Verbal, graphic, physical and symbolic methods are available. Each can be effective. For the purpose of this study, however, only the verbal method was considered. At its most basic level the verbal exchange form of communicating may be broken down or separated into two distinct acts; the act of initiation and the act of response. Only the response half of this communications form is being researched here.

This study began with and is largely based upon the assumption that students have a deeper interest in and commitment to teacher responses to questions they themselves initiated, than they have to teacher initiated questions or statements. Ginott in his book Teacher and Child indicates that the kind of communication taking place within the classroom, especially that taking place between teacher and student, can determine the effectiveness of that classroom as a learning environment. He divides all verbal responses into two types. They are "acceptance responses" and "rejection responses." He further states that

Usually we (teachers) are not overly concerned whether our responses convey acceptance or rejection. Yet to a

child this difference is fateful, if not fatal. Teachers who want to improve relations with students need to unlearn their habitual language of rejection and acquire a new language of acceptance.⁶

Mager states that "at the most basic level there are only two types of verbal responses, moving away from or avoidance responses which express negative attitudes, and, moving toward or contact responses which express positive attitudes."⁷

Dr. William Glasser writes of a need for communication which expresses involvement whose qualities include congruity, warmth and positive "involvement" as opposed to one of "uninvolvement" whose qualities include aloofness, coldness, force, threat and shame. "Teachers and therapists too often stand aloof from children; they do not get emotionally involved; they are not warm, personal and interested; they do not reveal themselves. As a result they do not communicate."⁸

Wellen divides responses into two types based upon what he sees as their interpersonal effects. The first type he

⁶ H. Ginott, Teacher and Child, (New York: Avon, 1972), p. 69-99.

⁷ R. Mager, Developing Attitudes Toward Learning, (Palo Alto: Fearon, 1968).

⁸ W. Glasser, Schools Without Failure, (New York: Harper, 1969).

⁹ J. Wellen, The Interpersonal Effects of Verbal Responses, (Portland, Oregon: N. W. Regional Laboratories, 1965).

refers to as "Freeing" and states that it "increases other's autonomy and increases their sense of equality." The second type he refers to as "Binding-Cueing" and states that this type "diminishes other's autonomy by increasing senses of subordination."⁹

This specific research study is concerned with two verbal response types and their potential for promoting growth, stagnation or regression within the attitudinal framework of the individual. These two types of verbal response are called "Freeing" and "Binding" responses. Characteristics of "Freeing" response types are:

- 1. Active attentive listening
- 2. Paraphrasing
- 3. Perception checking
- 4. Seeking information to help understand
- 5. Offering information relative to other concerns
- 6. Sharing information
- 7. Directly reporting feelings
- 8. Offering new alternatives

Characteristics of "Binding" response types are:

- 1. Commands, orders
- 2. Denial of others feelings
- 3. Disapproval on personal grounds
- 4. Approval on personal grounds
- 5. Changing the subject
- 6. Vigorous advice and persuasion
- 7. Vigorous agreement

A great deal of research and writing has been done in recent years which pertains to similar divisions of response

⁹ J. Wellen, The Interpersonal Effects of Various Responses, (Portland, Oregon: N. W. Regional Laboratories, 1965).

In terms of the research study, the two types "Freeing" and "Binding" are also viewed as having positive and negative connotations. The "Freeing" responses are viewed as being positive and having the potential for developing autonomy, self-esteem and positive attitudinal shifts. The "Binding" responses are viewed as being negative and having the potential for the development of dependence, reliance and negative attitudinal shifts.

A high degree of correlation between Dr. Gordon's two response types and the two response types used in the study may be noted. This correlation is especially striking when the study type "Binding" and the Gordon type "Roadblock" are compared. Each of these types represent a negative, authoritarian, limiting and devaluing kind of communications. Each of them require that an individual be in an inferior position when compared with another. Each involves judging, measuring and manipulating of one by another. Each ultimately involves the development of a dependence-reliance relationship. Neither, in any way promote growth, self esteem or an increased sense of autonomy.

A high degree of correlation may be noted, as well, between the predicted effects of the response types within the research study and the effects predicted by Dr. Gordon for his response types. Both predict that the positive ("Freeing"- "Facilitating") types of response will promote positive attitudinal shifts. Both predict that the negative ("Binding"- "Roadblock") type

of response will result in limiting growth and in negative attitudinal shifts. It would appear that, in this particular area, Dr. Gordon's research supports the hypothesis of this study.

Charles B. Truax, researcher and psychotherapist, has done extensive research into questions involving communication techniques and their effects upon therapist-client interpersonal relationships. While this research does not dovetail completely with the subject of this research paper, it does suggest interesting relationships and parallels. Through early research, Truax isolated what he calls the "Central Therapeutic Ingredients" present in all effective therapeutic relationships. He states that these ingredients are prerequisite qualities of the effective therapist. He further states that successful therapy cannot take place where these qualities are not present within the character of the therapist. He identifies and defines these "Ingredients" as:

1. Accurate Empathy, the ability to "be with", "grasp the meaning of," or to accurately and emphatically understand the client on a moment to moment basis.
2. Unconditional Positive Regard, the ability to provide a non-threatening, safe, trusting or secure atmosphere by his acceptance, love, or nonpossessive warmth.
3. Self-Congruance, that the therapist be integrated, non defensive and authentic or genuine in his therapeutic encounters.

According to Truax, each of these ingredients represents a

therapeutic pre-condition and their absence precludes the possibility of effective therapy.

If one accepts, even partially, the idea that the teacher-student relationship is a quasi-therapeutic one then Truax's "Central Therapeutic Ingredients" become clearly applicable to this study. Each of these three ingredients correlate well with the "Freeing" type of response used in the study and with the "Facilitating" responses of Dr. Gordon's work. The absence of all three of the ingredients correlates well with the "Binding" response types used in the study and with the "Roadblock" response types of Dr. Gordon's work. The presence of these qualities necessitates the use of responses which have the characteristics of the "Freeing" and "Facilitating" types. The absence of these qualities necessitates the use of responses which have the characteristics of the "Binding" and "Roadblock" types. It would appear then, that in this particular area, Truax's research supports the hypothesis of this study.

D. Summary

A review of the literature led to the following conclusions.

Role of the Teacher

Communication is a prime tool of the effective teacher. How he communicates may be more important than what he communicates. His personal style of communication should be open,

warm, involved, non-threatening and accepting. His communication can have positive or negative effects. His communication can increase his students sense of autonomy or their sense of subordination.

Verbal Response Types and Their Characteristics

There exist two basic types of interpersonal responses. These types may be termed positive and negative or productive and non-productive. The identifying characteristics of these two types of interpersonal verbal responses as indicated by the review of the literature are presented below in table form.

<u>Verbal Response Types</u>	
Positive Productive	Negative Non-Productive
1. Acceptance	1. Rejection
2. Contact	2. Avoidance
3. Acceptance	3. Unacceptance
4. Involvement	4. Uninvolvement
5. Freeing	5. Binding-Cueing
6. Constructive	6. Deteriorative

The researcher's own seventh grade classes were used in the study. Six classes were available. Four class groups were needed for the study. Three classes were selected and assigned their role positions within the study by drawing their assignments from a hat. The three positions assigned were Group A

Group A position was drawn by a homogeneously grouped class rated average. Group B position was drawn by a homogeneously

DESCRIPTION PROCEDURE AND DATA COLLECTION

A. Introduction

A review of the available literature leads this researcher to the conclusion that the literature does indeed seem to support the Likert-type attitude inventory. Briefly restated these hypothesis are: (1) positive, "Freeing" kinds of responses will cause a significant improvement in the subjects score on the attitude inventory. (2) Conversely, negative or "Binding" kinds of responses will cause a significant deterioration in the subjects score on the same attitude inventory. (3) Seventh grade students' "BINDING" interpersonal responses, was used. A Likert-type or summed Rating Scale attitude inventory was developed by the researcher. (See Appendix A) of an even intermixture of the types stated in hypothesis 1 and 2. Using the information gleaned from the review of the literature the researcher developed the various procedures designed to acquire the information needed to test these hypothesis.

B. Selection of Subjects

The researcher's own seventh grade classes were used in the study. Six classes were available. Four class groups were needed for the study. Three classes were selected and assigned their role positions within the study by drawing their assignments from a hat. The three positions assigned were Group A

"FREEING," Group B "BINDING," and Group C "CONTROL." The Group A position was drawn by a homogeniously grouped class rated average. Group B position was drawn by a homogeniously grouped class rated above average. Group C position was drawn by a homogeniously grouped class rated below average. The fourth group, not picked in the drawing, was used to pre-test the Likert-type attitude inventory.

C. Methods of Study

The action research method was used for the study. The randomized Control-Group pretest-posttest design extended to the study of two independent variables, "FREEING" and "BINDING" interpersonal responses, was used. A Likert-type or summated Rating Scale attitude inventory was developed by the researcher. (See Appendix A)

D. Treatment

The study involved the use of three separate groups each receiving a specific type of treatment.

Group A "FREEING"

Hypothesis No. 1 applies to this group.

1. Seventh grade students will score higher on a personal attitude scale when teacher responses to their verbal questions or statements are of one of the following

types: "FREEING"

1. Active attentive listening

2. Paraphrasing
3. Perception checking
4. Seeking information to help understand
5. Offering information relative to others concerns
6. Sharing information that has influenced their own feelings and viewpoints.
7. Directly report their own feelings
8. Offering new alternatives.

Fifteen class days were used for the treatment of the study. As far as was humanly possible, during this time, all teacher initiated input was group directed and of a sharing or exploratory nature. All other communication was student initiated. Teacher response or reaction to these student initiated questions or statements were of the types listed in hypothesis No. 1.

Group B "BINDING"

Hypothesis No. 2 applies to this group.

2. Seventh grade students' will score lower on a personal attitude scale when teacher responses to their verbal questions or statements are one of the following: No. 1 and 2.

"BINDING"

1. Commands, orders, telling the students what to do
2. Denial of the students feelings
3. Disapproval on personal grounds
4. Approval on personal grounds
5. Changing the subject without explanation
6. Vigorous advice and persuasion
7. Vigorous agreement

Fifteen class days were used for the treatment period of the study. As far as was humanly possible, during this time, all teacher initiated input was group directed and of a commanding, ordering nature. All other communication was student initiated.

Teacher responses or reactions to these student initiated questions or statements were of the types listed in hypothesis No. 2.

The Stanford Attitude Inventory Battery Group C "CONTROL" Hypothesis No. 3 applies to this group.

3. Seventh grade students' score on a personal attitude scale will show no significant change when teacher responses to their verbal questions or statements consist of an intermixture of the types stated in hypothesis 1 and 2.

Fifteen class days were used for the treatment period of the study. As far as was humanly possible, during this time, all teacher initiated input was group directed and of an intermixture of a freeing or controlling nature. All other communication was student initiated. Teacher responses or reactions to these student initiated questions or statements consisted of an intermixture of the types listed in hypothesis No. 1 and 2.

E. Data Collection

Two basic types of data were collected during this study. A Likert-type or summated Rating Scale attitude inventory developed by the researcher served as the pretest-posttest vehicle for data collection. The second type of data collected consisted of a log kept of the researcher's observations in each group setting. All instances of observable behavior change, criticism, reaction, praise etc. were recorded. Subjects were

pretested March 27, 1977 and posttested April 18, 1977.

F. Instruments Used

The Stanford Achievement Test, 1973 edition, Form (A) Battery Class List, administered in October, 1976 was used to define individual grade level achievement and class group grade level achievement. A Likert-type or summated attitude inventory, developed by the researcher was used as a pre-test, post-test.

G. Treatment of the Data

Reproductions of the pre-test post-test may be found in the designated appendix. The individual Stanford Achievement Test results both by individual and by group may be found in the designated appendix. Statistical treatment information pertaining to each of the above tests may be found in chapter 4.

Teacher Response Types By Groups

Group A	1. Active Listening
	2. Paraphrasing
	3. Perception Checking
	4. Seeking Information
	5. Offering Information
	6. Offering Information That Has Influenced Their Own Feelings And Viewpoints
	7. Directly Reporting Their Own Feelings
	8. Offering New Alternatives

TABLE II

Teacher Response Types By Groups

"Freeing"	"Control"	"Binding"
Group A	Group C	Group B
<ol style="list-style-type: none"> 1. Active Listening 2. Paraphrasing 3. Perception Checking 4. Seeking Information 5. Offering Information Relative to Others Concerns 6. Sharing Information That Has Influenced Their Own Feelings And Viewpoints 7. Directly Reporting Their Own Feelings 8. Offering New Alternatives 	<p style="text-align: center;">Intermixture of "Freeing" and "Binding"</p>	<ol style="list-style-type: none"> 1. Commands, Orders 2. Denial of Feelings 3. Disapproval On Personal Grounds 4. Approval On Personal Grounds 5. Changing The Subject 6. Vigorous Advice And Persuasion 7. Vigorous Agreement

PRESENTATION AND DISCUSSION OF DATA AND RESULTS

A. Hypothesis

Research Hypothesis A

Ho: Seventh grade students' score on a personal attitude scale will not be significantly

altered as a result of treatment by "Freeing" type responses.

Ha: Seventh grade students will score higher on a personal attitude scale as a result of treatment by "Freeing" type responses.

Research Hypothesis B

Ho: Seventh grade students' score on a personal attitude scale will not be significantly

altered as a result of treatment by "Binding" type responses.

Ha: Seventh grade students will score lower on a personal attitude scale as a result of treatment by "Binding" type responses.

Research Hypothesis C

Ho: Seventh grade students' score on a personal attitude scale will not be significantly

altered as a result of treatment by an even intermixture of "Freeing" and "Binding" types of responses.

Ha: Seventh grade students' score on a personal attitude scale will be significantly altered as a result of treatment by an even intermixture of "Freeing" and "Binding" types of responses.

Decision:

Reject the H_0 since it exceeded the critical table

value at the .05 level of significance.

B. Selection of the Instruments

The Stanford Achievement Test individual scores, by group, were used to discover whether on the basis of ability level as measured by the test the three groups were the same.

The Likert-type or Summated Rating scales Attitude Inventory was used to measure change which occurred as a result of the treatment portion of this study. The test was administered in both the pre-test and post-test forms.

The T-test (one and two-tailed) was used to measure change within the individual group as it related, directly, to the hypothesis appropriate to that group.

C. Findings

Stanford Achievement Test As A Measure Of Ability

A One-Way Analysis of Variance (ANOVA) and a Scheffe statistical test were done comparing the Stanford Achievement Test scores of the three groups to test the following hypothesis.

H_0 : The ability level, as measured by the Stanford Achievement Test, is the same in all groups.

H_a : The ability level, as measured by the Stanford

Decision: Achievement Test, is not the same in all groups.

Decision:

Reject the H_0 since it exceeded the critical table value at the .05 level of significance.

Conclusion:

There is a statistical difference between the groups in terms of ability level. Groups A and B compared are statistically of the same ability level as measured by the Stanford Achievement Test. Groups B and C compared are statistically of different ability levels as measured by the Stanford Achievement Test. Groups A and C compared are statistically of different ability levels as measured by the Stanford Achievement Test.

Likert-type Attitude Inventory (Pre-test)

A One-Way Analysis of Variance (ANOVA) and a Scheffe statistical test were done comparing the Attitude Response scores of the three groups to test the following hypothesis.

H_0 : The attitudes of the students, as measured by the attitudinal survey, are the same in all groups.

Decision:

H_a : The attitudes of the students, as measured

by the attitudinal survey, are not the same in all groups.

Decision:

Reject the H_0 since it exceeded the critical table value at the .05 level of significance.

Conclusion:

There is a statistical difference between the groups in terms of attitude as measured by the attitudinal survey. Groups A and B compared are statistically the same in terms of attitude. Groups B and C compared are statistically the same in terms of attitude. Groups C and A compared are statistically different in terms of attitude.

Likert-type Attitude Inventory (Post-test)

A One-Way Analysis of Variance (ANOVA) and a Scheffe statistical test were done comparing the Attitude Response scores of the three groups to test the following hypothesis.

H_0 : The attitudes of the students, as measured by the attitudinal survey, are the same in all groups.

H_a : The attitudes of the students, as measured by the attitudinal survey, are not the same in all groups.

Decision:

Reject the H_0 since it exceeded the critical table value at the .05 level of significance.

Conclusion:

There is a statistical difference between the groups in terms of attitude as measured by the attitudinal survey. Groups A and B compared are statistically the same in terms of attitude. Groups B and C compared are statistically the same in terms of attitude. Groups C and A compared are statistically different in terms of attitude.

The T-Test As A Measure Of Change Resulting From The Treatment

A T-Test (one or two-tailed) was done to determine the effect of the specific treatment on the individual group as it relates to the hypothesis postulated for that group.

Research Hypothesis ADecision:

Accept the Ho. The attitude scores provide data that accept the Ho at the .05 (one-tailed) level of confidence.

Conclusion:

The difference detected in the pre and post scores is not statistically significant. Post attitude scores were not different (higher) in this group due to exposure to "Freeing" type responses.

Research Hypothesis BDecision:

Reject the Ho. The attitude scores provide data that

reject the H_0 at the .05 (one-tailed) level of confidence.

Conclusion:

The difference detected in the pre and post attitude scores is statistically significant. There was a loss in attitude scores on the posttest in this group due to exposure to "Binding" type responses.

Research Hypothesis C

Decision:

Reject the H_0 . The attitude scores provide data that reject the H_0 (two-tailed) level of confidence (.05)

Conclusion:

The difference detected in the means of the pre and post attitude scores is statistically significant. The attitudes of students on the pretest is different than that registered on the posttest.

D. Interpretations

The information gained from the statistical test done comparing the Stanford Achievement Test scores of the groups indicates that the groups are, in fact, significantly different in terms of ability.

The information gained from the statistical tests done comparing the Attitude Inventory Pretest response scores of the groups indicates that the groups are, in fact, significantly

TABLE III

COMPARISON OF ATTITUDE

INVENTORY SCORES BY GROUP (PRETEST)

Statement	Group A	Group B	Group C
	Treatment	Treatment	Control
	"Freeing"	"Binding"	"Control"
1.	54	62	51
2.	42	63	57
3.	65	98	67
4.	61	88	67
5.	60	74	55
6.	59	90	62
7.	52	67	57
8.	54	83	68
9.	63	90	69
10.	45	56	48
11.	39	56	38
12.	35	44	33
13.	67	91	68
14.	56	88	59
15.	41	59	40
16.	57	78	54
17.	50	66	52
18.	65	87	66
19.	48	69	53
20.	38	63	47
21.	48	81	57
22.	56	84	55
23.	52	68	47
24.	48	60	57
25.	46	55	55
26.	50	66	55

different in terms of attitude. TABLE IV

COMPARISON OF ATTITUDE INVENTORY SCORES BY GROUP (POSTTEST)

Statement	Group A	Group B	Group C
	Treatment	Treatment	Control
	"Freeing"	"Binding"	"Control"
1.	50	58	43
2.	45	53	57
3.	69	87	58
4.	56	83	56
5.	60	58	55
6.	55	75	53
7.	43	63	46
8.	57	68	54
9.	60	85	58
10.	41	54	36
11.	34	50	43
12.	33	46	38
13.	59	94	68
14.	52	76	50
15.	40	50	43
16.	54	70	51
17.	49	66	51
18.	61	95	61
19.	48	70	54
20.	34	57	41
21.	46	58	46
22.	57	82	62
23.	43	66	35
24.	48	58	44
25.	43	57	36
26.	53	64	56

scores of GROUP A "Freeing" indicates no statistically significant effect.

The information gained from the statistical tests concerning the attitude inventory response Group B Posttest scores of GROUP B "Binding" indicates statistically significant effect.

different in terms of attitude at the pretest level.

The information gained from the statistical tests done comparing the Attitude Inventory Posttest response scores of the groups indicates that the groups are, in fact, significantly different in terms of attitude at the posttest level.

The information gained from the statistical tests done comparing the attitude inventory response scores of Groups B and A Pretest to Groups B and A Posttest indicates no statistically significant shift in attitude.

The information gained from the statistical tests done comparing the attitude inventory response scores of Groups C and A Pretest to Groups C and A Posttest indicates no statistically significant shift in attitude.

The information gained from the statistical tests done comparing the attitude inventory response scores of Groups B and C Pretest to Groups B and C Posttest indicates no statistically significant shift in attitude.

The information gained from the statistical tests done comparing the attitude inventory response Pretest to Posttest scores of Group A "Freeing" indicates no statistically significant effect.

The information gained from the statistical tests done comparing the attitude inventory response Pretest to Posttest scores of Group B "Binding" indicates a statistically significant effect.

The information gained from the statistical tests done comparing the attitude inventory response Pretest to Posttest scores of Group B "Control" indicates a statistically significant change.

E. Summary

This chapter dealt with the data in its statistical form. This statistical information allowed me to reach conclusions pertaining to the intellectual and attitudinal composition of the three groups. Comparisons were made, within groups and between groups, at the pre-treatment level and at the Post-treatment level.

Hypothesis 2

Seventh grade students will score lower on a personal attitude scale when teacher responses to their verbal questions or statements are of a "binding" type.

Hypothesis 3

Seventh grade students score on a personal attitude scale will show no significant change when teacher responses to their verbal questions or statements consist of an intermixture of "freeing" and "binding" types.

Hypothesis C relates to Chapter V groups in the study called the "control" group.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Three class groups of seventh grade students were chosen

A. Summary in the study. They were chosen solely on the basis of a study was undertaken to determine the effects upon students of particular types of interpersonal verbal responses. These verbal response types were called "Freeing" and "Binding" (See table two for characteristics of "Freeing" and "Binding") and the following hypothesis were stated in relation to each of them.

Hypothesis A

Seventh grade students will score higher on a personal attitude scale when teacher responses to their verbal questions or statements are of a "Freeing" type.

Hypothesis B

Seventh grade students will score lower on a personal attitude scale when teacher responses to their verbal questions or statements are of

a "Binding" type.

Hypothesis C

Seventh grade students will score higher on a personal attitude scale when teacher responses to their verbal questions or statements are of a "Freeing" type. or statements consist of an intermixture of

"Freeing" and "Binding" types.

Reject the hypothesis since there has been no statistically

Hypothesis C relates to the third group in the study called the "Control" group.

Three class groups of seventh grade students were chosen to take part in the study. They were chosen solely on the basis of availability. The three groups were assigned their roles by the luck of the draw.

A Likert-type attitude inventory was developed by the researcher to be used as both a pre-treatment and a post-treatment test. Statistical information in the form of Stanford Achievement Test scores for each individual in each group were acquired.

Pressures of the existing school situation limited the treatment period of the study to 15 school days. The subjects were pretested on March 27th and posttested April 18th.

Data collected from the Stanford Achievement Test as well as from the attitude inventory pretest-posttest was statistically treated to arrive at conclusions pertaining to the three hypothesis postulated.

B. Conclusion

Hypothesis A

Seventh grade students will score higher on a personal attitude scale when teacher responses to their verbal questions or statements are of a "Freeing" type.

Decision:

Reject the hypothesis since there has been no statistically

significant effect at the .05 level of significance.

Conclusion:

The "Freeing" treatment did not have the effect predicted for it.

Hypothesis B

Seventh grade students will score lower on a personal attitude scale when teacher responses to their verbal questions or statements are of a "Binding" type.

Decision:

Accept the hypothesis since there has been a statistically significant effect at the .05 level of significance.

Conclusion:

The "Binding" treatment had the effect predicted by the hypothesis.

Hypothesis C

Seventh grade students' score on a personal attitude scale will show no significant change when teacher responses to their verbal questions or statements consist of an intermixture of "Freeing" and "Binding" types.

Decision:

Reject the hypothesis since there has been no statistically significant effect at the .05 level of significance.

Conclusion:

The intermingling of the "Freeing" and "Binding" treatments

had a statistically significant effect.

C. Recommendations and Personal Conclusions

Above-Average
(see p.4)

Recommendations

Below-Average
(see p.4)

I was unable to locate a single research study which concerned itself with this particular subject matter. I believe that this study could and should be attempted again, with the following modifications:

1. A more careful selection of the groups.
2. A more comprehensive attitude inventory.
3. A longer "treatment" period.
4. In-classroom observers.
5. The researcher should not be the active classroom teacher.
6. Sub-categorization of the attitude inventory.

Personal Conclusions

A peripheral concern surfaced during the early stages of this study. This concern involved the composition of the three groups in terms of academic ability. Supposedly each group is a homogenous class composed of individuals with similar academic skill levels. (See p.4) (See table 1) In reality, however, the Stanford Achievement Test results indicate that the range of skill levels within a group is vast. They further indicate that students with a very similar academic skill levels can be found within each of the three

TABLE V

A COMPARISON OF STANFORD
ACHIEVEMENT TEST SCORES AND CLASS PLACEMENT

Group B "Binding"	Group A "Freeing"	Group C "Control"
Above-Average (see p.4)	Average (see p.4)	Below-Average (see p.4)
S.A.T. Range 5.5-12.8 (see table 1)	S.A.T. Range 4.1-9.3 (see table 1)	S.A.T. Range 3.0-5.4 (see table 1)
17 (of 28) below 7.9	14 (of 19) below 7.9	All Below 7.9
28 Students	19 Students	22 Students
Mean 7.96	Mean 6.88	Mean 4.46
75% (21 of 28) of this group scored in the same abil- ity range as 93% (13 of 14) of those placed in the average group	5% (1 of 19) of this group scored in a lower ability range than 64% (14 of 22) of those placed in the below average group	
	95% (18 of 19) of this group scored in the same ability range as 75% (21 of 28) of those placed in the above average group	
Only 25% (7 of 28) in this group scored higher in ability range than any mem- ber of the average group		
		64% (14 of 22) of this group scored in a higher ability range than 5% (1 of 19) of those placed in the average group

classifications, above-average, average and below-average.

The following observations can be made, based upon the Stanford Achievement test results:

1. Sixty-one percent of those students in the above average group scored lower than the national average for their age group.
2. Seventy-four percent of those students in the average group scored lower than the national average for their age group.
3. Seventy-five percent of those students in the above average group scored within the same range as ninety three percent of those in the average group.
4. Ninety-three percent of those students in the average group scored within the same range as seventy five percent of the above average group.
5. Only twenty-five percent of those students in the above average group scored in a higher ability range than any member of the average group.

The conclusions which may be drawn from these observations and from those observations outlined in table 5 are many. Fully seventy-five percent of the above average group is entirely interchangeable with ninety-five percent of the average group in terms of academic ability as measured by the Stanford Achievement Test. Grouping by academic ability does not, in fact, exist in this situation, except possibly in the mind and curriculum of the classroom teacher who uses these group designations as a guide to the level of work quality and personal expectations. What impact does an incorrect group skill level designation have upon the individual students within that group? What impact does an incorrect group skill level designation have upon the teacher?

APPENDIX

- A. Copies of the Likert-Type Attitude Inventory Pre-Test and Post-Test.
- B. Group A information.
- C. Group B **APPENDIX**.
- D. Group C information.
- E. Year-Round school concept.
- F. Experimental setting information.
- G. Sub-Group Categorization Descriptions

APPENDIX

- A. Copies of the Likert-Type Attitude Inventory Pre-Test and Post-Test.
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- D. Group C information.
- E. Year-Round school concept.
- F. Experimental setting information.
- G. Sub-Group Categorization Comparisons

The Attitude Inventory System

The following is an exact reproduction of the Libart-type attitude inventory used in this study. It consists of thirty eight statements. Twenty six of these statements are actually part of the eventual attitude contrast comparison.

This is not a test. There are no right or wrong answers. This is a questionnaire which asks you to express your opinion on a variety of topics. It is, in fact, an opinionnaire not a questionnaire. The opinion you express about each statement should be your own opinion and no one else's. Please try to be as accurate as possible.

APPENDIX A

You may express one of four possible opinions in reaction to each statement. After each statement you will find four separate initials or sets of initials. Those initials or sets of initials have the following meanings.

1. S.S. These initials mean I strongly agree with this statement.
2. A. This initial means I agree with this statement.
3. D. This initial means that I disagree with this statement.
4. S.D. These initials mean that I strongly disagree with this statement.

After reading each statement, please circle that initial or set of initials which most accurately expresses your opinion concerning that statement. Please circle only one answer for

The following is an exact reproduction of the Likert-type attitude inventory used in this study. It consists of thirty eight statements. Twenty six of these statements are actually part of the eventual pretest posttest comparison.

This is not a test. There are no right or wrong answers. This is a questionnaire which asks you to express your opinion on a variety of topics. It is, in fact, an opinionnaire not a questionnaire. The opinion you express about each statement should be your own opinion and no one else's. Please try to be as accurate as possible.

INSTRUCTIONS FOR COMPLETING THIS OPINIONNAIRE

You may express one of four possible opinions in reaction to each statement. After each statement you will find four separate initials or sets of initials. Those initials or sets of initials have the following meanings.

1. S.A. These initials mean I strongly agree with this statement.
2. A. This initial means I agree with this statement.
3. D. This initial means that I disagree with this statement.
4. S.D. These initials mean that I strongly disagree with this statement.

After reading each statement, please circle that initial or set of initials which most accurately expresses your opinion concerning that statement. Please circle only one answer for

each statement.

- | | | | | |
|---|------|----|----|------|
| 11. Our principal treats us all fairly. | S.A. | A. | D. | S.D. |
| 1. Most school rules make sense to me. | S.A. | A. | D. | S.D. |
| 12. Sometimes cheating is necessary. | S.A. | A. | D. | S.D. |
| 2. My class is a hard working group. | S.A. | A. | D. | S.D. |
| 13. Most students in my group do not work as hard as they should. | S.A. | A. | D. | S.D. |
| 3. Teachers are too "Bossy." | S.A. | A. | D. | S.D. |
| 14. My parents always feed my | | | | |
| 4. Low grades make me sad. | S.A. | A. | D. | S.D. |
| 5. Students who misbehave deserve to be punished. | S.A. | A. | D. | S.D. |
| 6. A lot of my class work is too easy. | S.A. | A. | D. | S.D. |
| 17. It is not the schools fault when kids misbehave. | S.A. | A. | D. | S.D. |
| 8. If you do not learn you should not pass. | S.A. | A. | D. | S.D. |
| 9. I am sometimes lonely at school. | S.A. | A. | D. | S.D. |
| 10. It makes my parents unhappy when I get low grades. | S.A. | A. | D. | S.D. |

11. Our Principal treats us all fairly. S.A. A. D. S.D.

12. Sometimes cheating is necessary. S.A. A. D. S.D.

13. Most students in my group not not work as hard as they should. S.A. A. D. S.D.

14. My parents always read my report cards. S.A. A. D. S.D.

15. Teachers are willing to help. S.A. A. D. S.D.

16. Going to school is a good way to become a better person. S.A. A. D. S.D.

17. Many people do not like me. S.A. A. D. S.D.

18. My friends think school is a waste of time. S.A. A. D. S.D.

19. Teachers expect us to learn too much. S.A. A. D. S.D.

20. A lot of our school work is boring. S.A. A. D. S.D.

21. It is seldom the teachers could understand their work. S.A. A. D. S.D.

21. I always try to do my best in class. S.A. A. D. S.D.

22. People ignore my opinions. S.A. A. D. S.D.
work should be punished. S.A. A. D. S.D.

23. School is not as important as most people think. S.A. A. D. S.D.
34. school rules. S.A. A. D. S.D.

24. Many times teachers will not listen. S.A. A. D. S.D.
35. most people. S.A. A. D. S.D.

25. It is not my fault if I get into trouble at school. S.A. A. D. S.D.

26. Most class assignments are too difficult. S.A. A. D. S.D.

27. Learning is important to me. S.A. A. D. S.D.
other students for help. S.A. A. D. S.D.

28. Counselors are not very helpful. S.A. A. D. S.D.
Thank you very much for your help.

29. Most students do not take bad progress reports home. S.A. A. D. S.D.

30. My friends cheat whenever they feel like it. S.A. A. D. S.D.

31. It is seldom the teachers fault when the students do not understand their work. S.A. A. D. S.D.

32. I don't enjoy helping other students with their work. S.A. A. D. S.D.

The following is an exact reproduction of the Likert-

33. Kids who do not do their work should be punished. S.A. A. D. S.D.

34. I believe in obeying all school rules. S.A. A. D. S.D.

35. I like most people. S.A. A. D. S.D.

36. Most of our school rules should be changed. S.A. A. D. S.D.

37. Teachers try to help everyone. S.A. A. D. S.D.

38. You can't always count on other students for help. S.A. A. D. S.D.

INSTRUCTIONS FOR COMPLETING THIS OPINIONNAIRE

You may express your opinion in relation to each statement. After each statement you will find four separate initials or sets of initials. These initials or sets of initials have the following meanings.

1. S.A. These initials mean I strongly agree with this statement.
2. A. This initial means I agree with this statement.
3. D. This initial means I disagree with this statement.
4. S.D. These initials mean that I strongly disagree with this statement.

The Attitude Inventory Posttest

The following is an exact reproduction of the Likert-type attitude inventory posttest used in this study. It consists of 26 statements. These 26 statements in correct numerical sequence correspond with 26 statements on the pretest in the following numerical sequence. 1, 2, 3, 5, 7, 8, 12, 15, 16, 18, 19, 20, 21, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 36, 37.

This is not a test. There are no right or wrong answers. This is a questionnaire which asks you to express your opinion on a variety of topics. It is, in fact, an opinionnaire not a questionnaire. The opinion you express about each statement should be your own opinion and no one else's. Please try to be as accurate as possible.

INSTRUCTIONS FOR COMPLETING THIS OPINIONNAIRE

You may express one of four possible opinions in reaction to each statement. After each statement you will find four separate initials or sets of initials. These initials or sets of initials have the following meanings.

1. S.A. These initials mean I strongly agree with this statement.
2. A. This initial means I agree with this statement.
3. D. This initial means I disagree with this statement.
4. S.D. These initials mean that I strongly disagree with this statement.

After reading each statement, please circle that initial or set of initials which most accurately expresses your opinion concerning that statement. Please circle only one answer for each statement.

1. Most school rules make sense to me. S.A. A. D. S.D.

2. My class is a hard working group. S.A. A. D. S.D.

3. Teachers are too "Bossy." S.A. A. D. S.D.

4. Students who misbehave deserve to be punished. S.A. A. D. S.D.

5. It is not the schools fault when kids misbehave. S.A. A. D. S.D.

6. If you do not learn you should not pass. S.A. A. D. S.D.

7. Sometimes cheating is necessary. S.A. A. D. S.D.

8. Teachers are willing to help. S.A. A. D. S.D.

9. Going to school is a good way to become a better person. S.A. A. D. S.D.

10. My friends think school is a waste of time. *Students do not understand their work.* S.A. A. D. S.D.

11. Teachers expect us to learn too much. *Helping other students with their work.* S.A. A. D. S.D.

12. A lot of our school work is boring. *Kids who do not do their work should be punished.* S.A. A. D. S.D.

13. I always try to do my best in class. *I believe in obeying all school rules.* S.A. A. D. S.D.

14. School is not as important as most people think. *Most of our school rules should be changed.* S.A. A. D. S.D.

15. Many times teachers will not listen. *Teachers try to help everyone.* S.A. A. D. S.D.

16. It is not my fault if I get into trouble at school. *Thank you very much for your help.* S.A. A. D. S.D.

17. Most class assignments are too difficult. S.A. A. D. S.D.

18. Learning is important to me. S.A. A. D. S.D.

19. Counselors are not very helpful. S.A. A. D. S.D.

20. My friends cheat whenever they feel like it. S.A. A. D. S.D.

21. It is seldom the teachers
fault when the students do
not understand their work. S.A. A. D. S.D.
-
22. I don't enjoy helping
other students with their
work. S.A. A. D. S.D.
-
23. Kids who do not do their work
should be punished. S.A. A. D. S.D.
-
24. I believe in obeying all
school rules. S.A. A. D. S.D.
-
25. Most of our school rules
should be changed. S.A. A. D. S.D.
-
26. Teachers try to help everyone. S.A. A. D. S.D.
-

Thank you very much for your help.

GROUP A STATISTICAL INFORMATION

Average Class

19 Students

13 Male Students

6 Female Students

7th Grade

This class is in its 4th, 5th, and 6th week of their 9 week sequence

Stanford Achievement Test Scores (Individually)

Test administered October, 1976

Students were at the 7th grade second month at the time of the test

APPENDIX B

Class range of test results 4.1--8.8

Individual test results.

Male - 4.1

Female - 7.3

Female - 5.5

Male - 7.3

Male - 5.6

Male - 7.4

Female - 5.8

Female - 7.7

Male - 5.9

Male - 8.0

Male - 6.1

Male - 8.2

Female - 6.1

Male - 8.6

Male - 6.2

Female - 8.6

Male - 6.5

Male - 8.3

Male - 7.0

GROUP A STATISTICAL INFORMATION

Average Class

19 Students

13 Male Students

6 Female Students

7th Grade

Statement	Pre-test Responses	Post-test Responses
1. This class is in its 4th, 5th, and 6th week of their 9 week sequence	42	45
2.		
3. Stanford Achievement Test Scores (Individually)		
4. Test administered October, 1976		
5. Students were at the 7th grade second month at the time of the test		
6. Class range of test results 4.1--9.3		
7. Individual test results.		
8. Male - 4.1	52	Female - 7.3
Female - 5.5	45	Male - 7.3
Male - 5.6	39	Male - 7.4
Female - 5.8	35	Female - 7.7
Male - 5.9	37	Male - 8.0
Male - 6.1	55	Male - 8.2
Female - 6.1	41	Male - 8.5
Male - 6.2	57	Female - 8.6
Male - 6.3	59	Male - 9.3
Male - 7.0	65	
19.	48	

GROUP A

COMPARISON OF SCORED GROUP RESPONSES ON THE
ATTITUDE INVENTORY

There are a total of 19 students in this group. The maximum response by each student for each statement equals 4 points. 19 students multiplied by 4 points equals a maximum group response on each statement of 76 points.

<u>Statement</u>	<u>Pre-test Responses</u>	<u>Post-test Responses</u>
1.	54	50
2.	42	45
3.	65	69
4.	61	56
5.	60	60
6.	59	55
7.	52	43
8.	54	57
9.	63	60
10.	45	41
11.	39	34
12.	35	33
13.	67	59
14.	56	40
15.	41	40
16.	57	54
17.	50	49
18.	65	61
19.	48	48

2

20. 38 34

21. 48 46

22. 56 57

23. 52 43

24. 48 48

25. 46 43

26. 50 53

8. 42 45

3. 60 60

6. 58 55

8. 54 57

9. 63 60

11. 39 34

16. 41 40

18. 48 48

21. 48 48

26. 50 55

SKIP

<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
3.	65	60
7.	52	43
12.	58	55
15.	57	58
14.	56	58
18.	57	54

17. GROUP A 49
18. COMPARISON OF SCORED GROUP RESPONSES OF 61
THE ATTITUDE INVENTORY
22. THREE ATTITUDINAL CATEGORIES 57
24. Maximum group response total possible is 76 points. 83
25. 48 43

EDUCATION

<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
1.	54	50
2.	42	45
4.	61	58
5.	60	60
10.	59	55
20.	54	57
23.	63	60
11.	39	34
15.	41	40
19.	48	48
21.	48	46
26.	50	53

SELF

<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
3.	65	69
7.	52	43
12.	35	33
13.	67	59
14.	56	52
16.	57	54

17.	50	49
18.	65	61
22.	56	57
24.	48	48
25.	46	43

PEERS

<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
4.	61	56
10.	45	41
20.	38	34
23.	52	43

APPENDIX C

GROUP 3 STATISTICAL INFORMATION

Above Average Class

There are 23 Students: 21 Male Students
2 Female Students
3rd Grade

This class is in its 7th, 8th, and 9th week of their 9 week sequence

Stanford Achievement Test Scores (Individually)

Test administered October, 1976

Students were at the 7th grade second month at the time of the test

Class range of test results 5.5--12.8

APPENDIX C

Individual Test Results

Male - 5.5		Male - 7.6
Male - 5.7		Male - 7.8
Male - 5.8		Male - 7.9
Male - 5.9		Male - 8.0
Male - 6.0		Female - 8.8
Male - 6.1		Male - 8.1
Male - 6.3		Male - 8.2
Female - 6.4		Male - 8.5
Female - 6.9		Male - 8.7
Female - 6.8		Male - 8.8
Female - 7.0		Female - 9.8
Male - 7.0		Female - 11.1
Male - 7.8		Male - 12.4
Male - 7.5		Male - 12.8

GROUP B STATISTICAL INFORMATION
 COMPARISON OF SCORES GROUP RESPONSES ON THE
 Above Average Class

There are 28 Students in this group. The maximum response 21 Male Students for each statement equals 4 points. 7 Female Students 4 points equals a maximum group 7th Grade on each statement of 112 points.

Question	This class is in its 7th, 8th, and 9th week of their 9 week sequence	Test Responses
1.		62
2.		63
3.	Stanford Achievement Test Scores (Individually)	63
4.	Test administered October, 1976	67
5.	Students were at the 7th grade second month at the time of the test	63
6.	Class range of test results 5.5--12.8	58
7.	Individual tests results	63
Male - 5.5		55
Male - 5.7		50
Male - 5.8		56
Male - 5.9		56
Male - 6.0		44
Male - 6.1		51
Male - 6.3		53
Female - 6.4		59
Female - 6.9		78
Female - 6.8		66
Female - 7.0		57
Male - 7.0		62
Male - 7.2		63
Male - 7.3		
Male - 7.6		68
Male - 7.6		66
Male - 7.7		54
Male - 8.0		50
Female - 8.8		46
Male - 9.1		54
Male - 9.2		76
Male - 9.5		50
Male - 9.7		70
Male - 9.8		56
Female - 9.8		56
Female - 11.1		50
Male - 12.4		57
Male - 12.8		

GROUP B
COMPARISON OF SCORED GROUP RESPONSES ON THE
ATTITUDE INVENTORY

There are a total of 28 students in this group. The maximum response by each student for each statement equals 4 points. 28 students multiplied by 4 points equals a maximum group response on each statement of 112 points.

<u>Question</u>	<u>Pre-test Responses</u>	<u>Post-test Responses</u>
1.	62	58
2.	63	53
3.	98	87
4.	88	83
5.	74	58
6.	90	75
7.	67	63
8.	83	68
9.	90	85
10.	56	54
11.	56	50
12.	44	46
13.	91	94
14.	88	76
15.	59	50
16.	78	70
17.	66	66
18.	87	95
19.	69	70
20.	63	57

21.	GROUP 815	58
22.	COMPARISON OF SCORED (84) RESPONSES OF THE ATTITUDE INVENTORY	82
23.	THREE ATTITUDE 68 CATEGORIES	66
24.	Maximum group response (60) possible is 112 per	58.

EDUCATION 55 57

Statement Pre-test 66 Post-test 64

<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
1.	68	58
2.	83	53
5.	74	58
6.	80	75
8.	83	80
9.	90	85
11.	56	60
15.	59	50
19.	69	70
21.	81	58
26.	55	64

SELF

<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
5.	93	87
7.	67	63
12.	44	40
13.	81	84
14.	88	78
16.	78	70
17.	66	68

18.

GROUP B

22. COMPARISON OF SCORED GROUP RESPONSES OF THE
 ATTITUDE INVENTORY
 24. THREE ATTITUDINAL CATEGORIES

25. Maximum group response total possible is 112 points.

EDUCATION

<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
1.	62	58
2.	63	53
5.	74	58
6.	90	75
8.	83	68
9.	90	85
11.	56	50
15.	59	50
19.	69	70
21.	81	58
26.	66	64

SELF

<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
3.	98	87
7.	67	63
12.	44	46
13.	91	94
14.	88	76
16.	78	70
17.	66	66

18.	87	95
22.	84	88
24.	60	58
25.	55	57

PEERS

<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
4.	88	83
10.	56	56
20.	63	57
23.	68	66

APPENDIX D

GROUP 2 STATISTICAL INFORMATION

Below Average Class

Grade 4 - 31 Students

Number of Male Students

Number of Female Students

Grade 4 - 7th Grade

This class is split 1st, 2nd, and 3rd week of school 3 week sessions

Stanford Achievement Test Scores (Individually) Test administered October, 1978

Students were at the 7th grade second month at the time of the test

Class range of test results 3.0-5.4

APPENDIX D Individual Scores

Male - 3.0

Male - 3.0

Male - 3.7

Male - 4.3.7

Male - 3.9

Female - 4.0

Female - 4.1

Female - 4.2

Female - 4.3

Female - 4.3

Male - 4.7

Male - 4.1

Male - 3.0

Male - 4.0

Female - 3.1

Female - 3.1

Male - 3.2

Male - 3.2

Male - 3.9

Male - 3.9

Male - 3.4

GROUP C STATISTICAL INFORMATION
COMPARISON OF SCORED GROUP RESPONSES OF THE
Below Average Class

There are 21 Students students in this group. The maximum response 15 Male Students for each statement equals 4 points. 6 Female Students by 4 points equals a maximum group response of 84 points.

Statement	This class is in its 1st, 2nd, and 3rd week of their 9 week sequence	Responses
1.	51	43
2.	57	57
3.	Stanford Achievement Test Scores (Individually) Test administered October, 1976	58
4.	67	56
5.	Students were at the 7th grade second month at the time of the test	55
6.	Class range of test results 3.0--5.4	
7.	Individual test results	48
Male - 3.0	58	Male - 4.4
Male - 3.0	59	Male - 5.0
Male - 3.7	40	Male - 5.0
Male - 3.7	38	Female - 5.1
Male - 3.9	33	Female - 5.1
Female - 4.0	58	Male - 5.2
Female - 4.1	59	Male - 5.2
Female - 4.2	40	Male - 5.2
Female - 4.3	54	Male - 5.2
Female - 4.3	52	Male - 5.4
Male - 4.7	66	61
19.	53	54

GROUP C
COMPARISON OF SCORED GROUP RESPONSES ON THE
ATTITUDE INVENTORY

There are a total of 21 students in this group. The maximum response by each student for each statement equals 4 points. 21 students multiplied by 4 points equals a maximum group response on each statement of 84 points.

<u>Statement</u>	<u>Pre-test Responses</u>	<u>Post-test Responses</u>
1.	51	43
2.	57	57
3.	67	58
4.	67	56
5.	55	55
6.	62	53
7.	57	46
8.	68	54
9.	69	58
10.	48	36
11.	38	43
12.	33	38
13.	68	68
14.	59	50
15.	40	43
16.	54	51
17.	52	51
18.	66	61
19.	53	54

20.	47	41
21.	57	46
22.	55	62
23.	47	35
24.	57	44

ADJUSTION

26.	55	56
1.	51	43
2.	37	37
3.	55	55
4.	62	53
5.	40	54
9.	49	60
11.	38	40
16.	40	45
19.	53	54
21.	37	46
25.	58	60

SELF

Statement	Pre-test	Post-test
3.	67	58
7.	57	48
12.	33	30
13.	60	48
14.	38	40
16.	54	51

17.	52	51
18.	66	61
22.	55	62
24.	57	44
25.	55	36

PEER

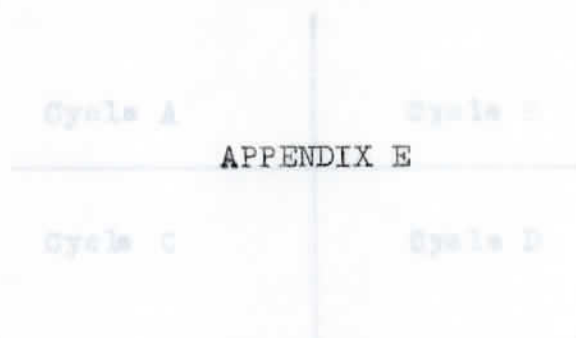
<u>Statement</u>	<u>Pre-test</u>	<u>Post-test</u>
4.	67	56
10.	48	36
20.	47	41
23.	47	35

APPENDIX B

YEAR-ROUND SCHOOL COUNTY

A normal school district follows the traditional nine month in-three month out schedule. Six months are devoted to school followed by three months devoted to vacation. A year-round school district is one in which this nine month in three month schedule has been replaced by a full twelve month of school.

The year-round district is divided, geographically, into four more or less equal segments, (equal as to the numbers of students residing in each segment.) These segments are called "Cycles."

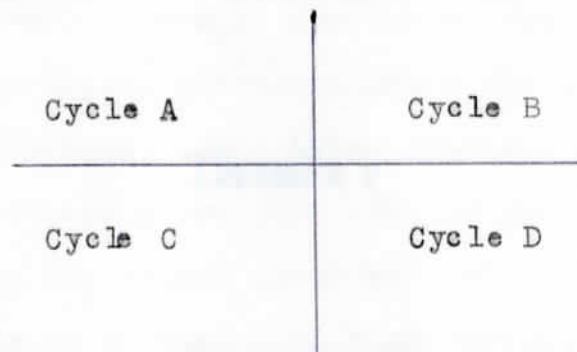


All students who are members of a given family or who reside in a given subdivision attend school as members of the same "Cycle." Each "Cycle" follows a similar schedule. Each "Cycle" spends nine weeks in school followed by a three week vacation period. This twelve week pattern occurs four times each year for each cycle. Thus each "Cycle" has four, three week, vacations yearly. At any given moment of the school year one "Cycle" is on vacation. One fourth of the student population (approximately) is always on vacation.

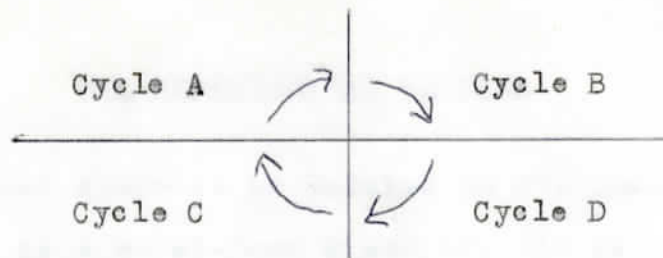
YEAR-ROUND SCHOOL CONCEPT

A normal school district follows the traditional nine month in-three month out schedule. Nine months are devoted to school followed by three months devoted to vacation. A year-round school district is one in which this nine month-three month schedule has been replaced by a full twelve months of school.

The year-round district is divided, geographically, into four more or less equal segments, (equal as to the numbers of students residing in each segment.) These segments are called "Cycles." The traditional nine-month three-month schedule:



All students who are members of a given family or who reside in a given subdivision attend school as members of the same "Cycle." Each "Cycle" follows a similar schedule. Each "Cycle" spends nine weeks in school followed by a three week vacation period. This twelve week pattern occurs four times each year for each cycle. Thus each "Cycle" has four three week vacations yearly. At any given moment of the school year one "Cycle" is on vacation. One fourth of the student population (approximately) is always on vacation.



This revolving vacation pattern allows the district to provide the necessary education space for four students at the normal cost for three.

All students attend school for four nine-week periods and have four three-week vacations. Year-round students spend exactly the same amount of time in school or on vacation as students within the traditional nine-month three-month schedules.

APPENDIX P

THE EXPERIMENTAL SETTING

This school district is located in St. Charles County, Missouri. It is a rural-urban district. It is in the process of becoming a suburb of St. Louis, Missouri. The persons of the district are, for the most part, white, middle class, middle income earners. It is a year-round school district. (See Appendix E) The district is rapidly growing. (1961-62 1,516 students, 1977-78 6,500 students.)

While there are approximately 8,500 students in the district this study is concerned only with students at the junior high school level. There is one junior high school in the district. It provides classroom space for 1,137 seventh and eighth grade students. Only three-quarters of these students are in school at any given time (See Appendix E.) There are 546 students in the eighth grade and 591 in the seventh grade.

APPENDIX F

Each grade is divided into four "cycles." Only the seventh grade class was involved in this study. Due to the year-round schedule and the time period shown on 3-"Cycle" seventh grade students participated in this study. Three classes, one from each of the remaining cycles, totaling 90 students took part in this study.

THE EXPERIMENTAL SETTING

This school district is located in St. Charles County, Missouri. It is a rural-form district. It is in the process of becoming a suburb of St. Louis, Missouri. The patrons of the district are, for the most part, white, middle class, middle income commuters. It is a year-round school district. (See Appendix E) The district is rapidly growing. (1961-62 1,516 students, 1977-78 6,500 students.)

While there are approximately 6,500 students in the district this study is concerned only with students at the junior high school level. There is one junior high school in the district. It provides classroom space for 1,137 seventh and eighth grade students. Only three-quarters of these students are in school at any given time (See Appendix E.) There are 546 students in the eighth grade and 591 in the seventh grade.

Each grade is divided into four "Cycles." Only the seventh grade class was involved in this study. Due to the year-round schedule and the time period chosen no B-"Cycle" seventh grade students participated in this study. Three classes, one from each of the remaining cycles, totaling 68 students took part in this study.

COMPARISON OF ATTITUDE INVENTORY

SCORES BY GROUP SUB-CATEGORY "EDUCATION" (PRETEST-POSTTEST)

Statement	1	2	3	4	5	6	7	8	9	11	15	19	21	26
Group A	Pre	14	22	40	29	24	28	29	33	43	42	42	46	50
	Post	23	25	20	25	27	20	24	40	40	40	46	46	52
Group B	Pre	62	65	74	70	75	70	68	68	69	69	62	61	66
	Post	67	63	56	75	66	60	60	60	60	70	70	58	54
Group C	Pre	51	50	48	45	46	46	46	46	40	50	47	47	58
	Post	42	37	35	35	34	33	33	33	43	43	44	46	46

APPENDIX G

COMPARISON OF ATTITUDE INVENTORY
 COMPARISON OF ATTITUDE INVENTORY
 SCORES BY GROUP SUB-CATEGORY "EDUCATION" (PRETEST-POSTTEST)

Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Group A	54	42	60	59	54	54	63	39	41	48	48	43	48	50												
Pre																										
Post																										
Group B	62	63	74	90	83	90	56	59	69	81	66															
Pre																										
Post																										
Group C	51	57	55	62	68	69	38	40	53	57	55															
Pre																										
Post																										

COMPARISON OF ATTITUDE INVENTORY

SCORES BY GROUP SUB-CATEGORY "SELF" (PRETEST-POSTTEST)

Statement	3	7	12	13	14	16	17	18	22	24	25
Group A "Freeing"	Pre	65	52	35	67	56	57	50	56	48	46
	Post	69	43	33	59	52	54	49	57	48	43
Group B "Binding"	Pre	98	67	44	91	88	78	66	84	60	55
	Post	87	63	46	94	76	70	66	88	58	57
Group C "Control"	Pre	67	57	33	68	59	54	52	55	57	55
	Post	58	46	38	68	50	51	51	62	44	36

COMPARISON OF ATTITUDE INVENTORY

SCORES BY GROUP SUB-CATEGORY "PEERS" (PRETEST-POSTTEST)

Statement	4	10	20	23	
Group A "Freeing"	Pre	61	45	38	52
	Post	56	41	34	43
Group B "Binding"	Pre	88	56	63	68
	Post	83	56	57	66
Group C "Control"	Pre	67	48	47	47
	Post	56	36	41	35

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