A STUDY OF THE EFFECTS OF ATTENDING A
HUMAN RELATIONS WORKSHOP ON TEACHER
ANXIETY SCORES

DISSERTATION

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This study was an investigation of the effects of attending a human relations workshop on the anxiety scores of teachers.

The purposes of the study were: (1) to determine whether the experience of attending a human relations workshop produces a change in anxiety levels as measured by two instruments, the Janet Taylor Manifest Anxiety Scale and the Anxiety Scale (Omnibus Personality Inventory); (2) to compare the mean anxiety scores of the experimental treatment group and the control group using the variables of sex, teaching level, and years of experience in public school teaching; and (3) to determine the retention effect on anxiety over an intervening time span of four months for the experimental treatment group.

The study compared teacher anxiety scores with a human relations workshop as the experimental treatment. The experimental treatment group was comprised of one hundred teachers who were enrolled to attend a human relations workshop in a large urban school district. The control group was comprised of one hundred teachers who had not participated in a human
relations workshop, and who had been chosen randomly from an official list of teachers in the district.

The two testing instruments were mailed to the subjects according to the following schedule: pretest--to experimental treatment group and the control group a week before the human relations workshop, first posttest--to experimental treatment group and the control group the week following the human relations workshop; second posttest--to the experimental treatment group four months after the human relations workshop.

Eleven hypotheses were developed and tested for the study which reported data concerning group and the interaction of variables sex, teaching level, and experience. No significant differences were reported between the experimental treatment group and the control group on the pretests. On the first posttest the only significant difference reported was between the experimental treatment group and the control group on the measures of the Anxiety Scale (OPI) reflecting the interaction of group and six or more years of experience, with the experimental treatment group indicating significantly lower anxiety. However, after a statistical analysis of the group mean scores from pretest to first posttest, less significance was attached to the difference between the two groups at this point because of the significant increase in anxiety for the control group on the same measures.
The following are conclusions derived from this study:

1. Whatever effect the experience of attending a human relations workshop had, it cannot be measured by the Anxiety Scale (OPI) or the TMAS.

2. No segment of a school population will experience increased anxiety as a result of attending a Thiokol human relations workshop (1).

3. No significant changes in levels of teacher anxiety can be expected from attending a one-week human relations workshop with the possible exception of individuals with six or more years experience who did report lowered anxiety.

4. There is no longitudinal effect on levels of anxiety for teachers as a result of a human relations workshop experience.
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CHAPTER I

INTRODUCTION

Numerous authors have included a study of anxiety as a part of the theory of personality development and behavior. This has been true, primarily, because anxiety is seen as an integral part of such a theory. Emphasizing this relationship Lundin writes that,

... factor analysts such as Cattell have examined the problem extensively and believe anxiety to consist of some unitary factor. That is, in all the measures Cattell could find--tests of steadiness, analysis of blood chemistry and the variety of verbal reports given--there was something in common in all, anxiety (13, p. 274).

Further evidence of the integral role anxiety has in personality development was given by Stagner. This author states that, "Anxiety is a major factor in virtually every form of personality breakdown and is a significant component of the normal personality as well" (14, p. 115).

The impact of anxiety on the individual personality is often evidenced by certain physiological, emotional, and mental behaviors (12). It is these behaviors, as they relate to teachers, which are the focus of this study of teacher anxiety.

There has been a continuing concern for many years about the incidence of maladjusted teachers as evidenced by
teacher behavior in the classroom. Earlier, however, Kaplan (11) found that the per capita number of teachers hospitalized for psychoses was not out of proportion to their total number in the population, i.e., 7 per cent. In a later study, Bentz, Hollister, and Edgerton (1) found that only 2.9 per cent of a group of 379 elementary and secondary school teachers actually had psychotic impairment, though 35.5 per cent had mild to moderate symptoms of mental illness.

On the other hand, teachers are representative of the entire population (4), and the words of Bonney in The Normal Personality would certainly seem to be applicable to them as they work in classrooms with students. This author writes, "... psychological health is not the absence of problems but a way of responding to them" (2, p. 75). Bonney goes on to state that

... our psychologically strong people are strong and sound, not because they possess some vague faculty called "will power," but because they can bear with anxieties and frustrations, hew to a stable course, and maintain direction toward goals significant to them (2, p. 107).

Most interesting of all, perhaps, is that teachers themselves are concerned about their own anxieties. For example, Jersild (10) found that teachers named anxiety as their number one concern as they went about their daily teaching tasks. One handicap which Jersild found, however, in helping teachers to handle this anxiety was that
individuals do not always recognize the anxiety in their own lives. Perhaps it is as Jersild suggests, that education must find a way for teachers to identify causes of their anxiety and to deal with these problems in a productive manner.

One such solution has been the recent trend in teacher in-service to humanize education by working with teachers in the affective domain. In these workshops teachers are encouraged to look at their own feelings and values as they relate to students and to other adults (18). A workshop such as this has been a part of teacher in-service training in a large urban school district. This study sought to determine the possible effects of the workshop on the self-reported behaviors of a large group of teacher-participants by comparing the anxiety scores of the group with the anxiety scores of another group of teachers who had not participated in human relations workshop training.

Statement of the Problem

The problem of this study was to determine the possible effects of a human relations workshop on the self-reported behaviors of a large group of teacher-participants in a large urban school district by studying the anxiety scores of the group.
Purposes of the Study

The purposes of this study were: (1) to determine whether the experience of attending a human relations workshop produces a change in anxiety levels on two measures: the Janet Taylor Manifest Anxiety Scale and the Anxiety Scale (Omnibus Personality Inventory); (2) to compare the mean anxiety scores of the experimental treatment group and the control group using the variables of sex, teaching level, and years of experience in public school teaching; and (3) to determine the retention effect on anxiety over an intervening time span of four months for the experimental treatment group.

Hypotheses

1. There will be no significant difference between the experimental treatment group and the control group on the pretest mean scores of the Janet Taylor Manifest Anxiety Scale (TMAS).

2. There will be no significant difference on pretest mean scores of the TMAS as reflected by interactions among the following variables:
   
   a. group and sex
   b. group and teaching level
   c. group and experience.

3. There will be no significant difference between the experimental treatment group and the control group on the pretest scores of the Anxiety Scale (OPI).
4. There will be no significant difference on the pretest mean scores of the Anxiety Scale (OPI) as reflected by interactions among the following variables:
   a. group and sex
   b. group and teaching level
   c. group and experience.

5. There will be no significant difference between the experimental treatment group and the control group on the posttest-1 mean scores of the TMAS.

6. There will be no significant difference on the posttest-1 mean scores of the TMAS as reflected by interactions among the following variables:
   a. group and sex
   b. group and teaching level
   c. group and experience.

7. There will be no significant difference between the experimental treatment group and the control group on posttest-1 mean scores of the Anxiety Scale (OPI).

8. There will be no significant difference on the posttest-1 mean scores of the Anxiety Scale (OPI) as reflected by interactions among the following variables:
   a. group and sex
   b. group and teaching level
   c. group and experience.

9. There will be no significant difference between posttest-1 and posttest-2 mean scores on the TMAS for the experimental treatment group.
10. There will be no significant difference between posttest-1 and posttest-2 mean scores on the Anxiety Scale (OPI) for the experimental treatment group.

11. On posttest-1 there will be a significant positive relationship between the total mean anxiety scores on the TMAS and the total mean anxiety scores on the Anxiety Scale (OPI).

**Definition of Terms**

For the purpose of this study the following terms are defined:

**Experimental group.**--The experimental group is defined as that group of teachers who chose to attend the human relations workshop in the spring semester, 1974. This group satisfied the criterion of randomness in this study since each teacher voluntarily chose, first of all, to attend the human relations workshop, and secondly, each teacher specifically and voluntarily chose to attend the spring semester session. Participation in this study was voluntary in that teachers agreed to complete the instruments of the measures of anxiety used in this study.

**Control group.**--The control group is defined as that group of teachers randomly chosen for this study who did not participate in a human relations workshop in the large urban school district.
Human relations workshop.--The experimental treatment in this study is designated as the human relations workshop. The workshop was required experience for all the teachers of the school system, their choice being which year and which workshop scheduled during that year to attend. The workshop was a week-long experience for which teachers were given released time from the classroom (17).

Anxiety.--Anxiety is a state of distress, uneasiness, disorder, or disturbance arising from some kind of stress within the personality (8).

Teaching level.--Teaching level is used in this study to designate teacher assignment to high school (grades nine through twelve), middle school (grades six through eight), or elementary school (kindergarten through grade five).

Experimental treatment.--The term experimental treatment describes the human relations workshop experience.

Limitations

The population in this study was limited to (1) those teachers attending the human relations workshop in the 1974 spring term, and (2) those teachers chosen randomly and who had not attended a human relations workshop in this school system. Conclusions and generalizations are limited to this population.
This study was also limited by the fact that the experimental treatment group could not be truly voluntary since all teachers in the large urban school district involved are required to participate in a human relations workshop during some semester.

Assumption

It was assumed in the study that teachers in the experimental treatment and control groups did not differ in significant ways from other teachers in the school system.

Background and Significance of the Study

Individual behavior in any given situation is a function of the personality dimensions of the individual involved and the environmental influences of the situation. One of the dimensions of personality consistently measured to assess individual behavior is anxiety. For example, Cattell and Scheirer (5) found that individual personality assessment of a patient could often be made by assessing the level of neurosis or anxiety of that patient.

Sullivan (16), too, viewed anxiety as important in personality assessment. This author defined anxiety as a state of being for an individual and named anxiety as one of the most frequently mentioned nonadjustive processes. Sullivan further classified anxiety as either major or mild. Major anxiety is experienced by individuals who undergo
intense fear with all the attendant symptoms such as tremor, blanching, irregularities of breathing rhythm, etc. Minor anxiety, on the other hand, can be expressed so frequently by some individuals that behaviors associated with such a state are accepted as peculiarities of the physiology, personal idiosyncrasies that are to be endured as part of the personality. However, these peculiarities of personality frequently tend to cause difficult interpersonal situations.

Horney (9), also, points to anxiety as an important personality determinant which develops as a result of threat to an individual's coping defenses and strategies. While these strategies may be the only measures an individual can possibly take at the moment and under the circumstances to protect himself against a sensed danger, they may become so strongly entrenched that they function like acquired personality traits. Anxiety arises when these strategies are threatened. According to Horney's concept there is a kind of basic anxiety experienced by an individual whose strategies are threatened.

Further evidence of the role anxiety has in personality development is found in Psychology of Personality by Stagner. This author writes,

In a sense, the emotion of anxiety is rather like aggression. Yet its ramifications through the personality are even more extensive, and the complications in which it becomes enmeshed are even more involved (14, p. 115).
Interestingly, each cultural group seems to have a mean anxiety score which is extremely sensitive to conflicts and problems centering around the life styles, the occupations, and the degree of affluency unique to the group (6). Further, not only do anxiety scores of different groups reflect the group's intrinsic differences, these scores tend to be stable in their unique means and mean distributions. But, for every group there are also anxiety scores which are polarized, high and low, and it is the high scores, particularly, which cause concern: Cattell (5) notes that neurotics score significantly higher than normals on anxiety scales.

Too, Lazarus reports that

Cattell and Scheier distinguish between anxiety as a state and anxiety as a trait. . . . The main difference between these two forms of anxiety, state and trait, lies not in the response itself, but in the methodological perspective we are employing. In trait anxiety the reaction is treated as an independent variable useful in predicting other behaviors. In state anxiety we are concentrating on the conditions that inspire the reaction. . . . The trait of anxiety is thus a state of anxiety that occurs often or continually (12, pp. 332-333).

Extremely high anxiety tends to have varying effects on behavior. Some of these effects are physiological in nature and some are motor-sensory in nature. Lazarus (12) lists some of the physiological observable effects of anxiety as hunger and food intake, changes in body temperature, various degrees of sleepiness to being wide awake or excited, muscular movement and exertion, and diurnal variation. Motor-sensory changes noted by this author include speech
disturbances, and rapid eye movements. Lazarus also states that the effects of anxiety on performance are complicated and depend both on the difficulty and the degree of mastery of the task. Apparently anxiety serves to make the utilization of stimulus cues in performance ineffective by narrowing the range of attention (12).

In the field of education Kaplan (11) writes of teacher maladjustment as a problem. Although a small percentage of teachers are seriously impaired psychologically, according to Kaplan, there are many others who struggle with emotional problems so great that they are under great strain as they go about their teaching duties.

Recently, Brenton (3) also voiced concern about the effects of possibly maladjusted teachers on children in classrooms. Brenton wrote that even though these maladjusted teachers constitute a small portion of the profession, parents and educators should strive to find ways to help them.

Teachers are feeling the tensions of fast-moving, war-threatened, competition-charged world, according to Stevenson and Milt (15). Simply being a member of the teaching profession puts them in a high-anxiety position, according to Cattell (5, p. 267). Because they have chosen to teach and to help others deal with their anxieties these teachers are bearing a double burden and need special help in handling their own anxieties.
Jersild adds emphasis to this same concept with these words,

The concept of anxiety should be regarded as the key concept in education. . . . Anxiety is an important element in the personal lives of teachers, and it penetrates variously into the lives of all pupils. If in education we try to evade anxiety, we thereby try to evade the challenge of facing ourselves; we evade an essential task and make added trouble for ourselves and others (8, p. 26).

The literature reflects a need for educators to focus on the affective domain in the area of teacher education and the dimension of in-service (7). Human relations workshop experiences, such as the one utilized in this study, provide techniques for attempting to help teachers better understand themselves, their students, and classroom interaction (17). If such an experience does provide a better understanding of these areas of self-awareness for teachers, it should also provide them with more awareness of the total situation, and perhaps, a lessening of anxiety. Thus, it should enable them to interact in a more open manner, always raising the question of personal significance in connection with everything either learned or taught (8).

Chapter Summary

In this chapter studies are reviewed which emphasize that the mental health of teachers as indicated by their classroom behavior is of continuing concern to educators. Other studies indicate that anxiety measurement is an integral part of personality assessment, and that an individual's
anxiety level may be an accurate predictor of that individual's consistent behavior patterns. The problem was to determine the possible affects of a human relations workshop on the self-reported behavior of a large group of teacher-participants by studying the anxiety scores of the group. Specific purposes, hypotheses, limitations, and assumptions of the study are also presented. In addition, the terms which are unique to the study are briefly defined. Finally, a review of the literature is presented to establish the background and significance of this study.
CHAPTER BIBLIOGRAPHY


CHAPTER II

SURVEY OF THE LITERATURE

The survey of the literature for this study is presented under four separate headings: (1) Psychological Aspects of Anxiety, (2) Teacher Anxiety/Stress, (3) Humanizing Teaching Education and In-Service, and (4) Thiokol Interaction Laboratory for Teachers.

Psychological Aspects of Anxiety

In view of the numerous authors who have included the study of anxiety in the study of personality and behavior, the search of the literature in this chapter is limited to those authors and their studies which have special significance relating anxiety to mental, emotional, and physiological behaviors particularly applicable to the subjects of this study.

It is recognized that difficulty arises when anxiety is treated as a separate dimension of personality study because it is such an integral part of personality functioning. And yet, anxiety must be treated separately to adequately understand the total personality impact. Cattell and Scheirer clarify this by stating that "The entire personality tends to be involved in the determination and expression of a given patient's neurosis or anxiety" (12, p. 18).

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Further evidence of the role anxiety has in personality development is expressed by Lazarus. After reviewing a portion of the extensive literature pertaining to anxiety, Lazarus writes,

This extensive research activity on anxiety scales and signs of anxiety reflects the need for reliable and valid behavioral indicators of affective states such as anxiety. The search continues because so many professional persons, whether research-minded or application-oriented, consider threat or anxiety as a key variable in the study of personality and adaptation (27, p. 330).

This same idea is recognized in Lundin's treatment of anxiety.

Before we delve into the study of anxiety, which many personality theorists agree is a more important aspect of personality study, we would do well to consider for a moment the meaning of a class of behavior that is ordinarily referred to as "emotional" . . . Some might say that emotion was a disturbed state of the organism, and acquired drive, changes in physiological "freezing" (29, p. 274).

More emphasis is added to this idea by Lazarus who noted that "anxiety disorganized the utilization of stimulus cues in learning and performance by narrowing the range of attention and limiting perceptual-cue utilization" (27, p. 355). The Moffitt-Stagner study of perception and anxiety also noted that "Some inefficiency of functioning, consequently, may be anticipated in persons with high anxiety level, frequent changes of moods, depressions and daydreams" (42, p. 290).
Lazarus goes on to explain further about the effects of anxiety on performance. "Anxiety, as measured by the Taylor scale, is best regarded as the disposition to be anxious in situations of threat. Its effects on performance are complicated, depending on the difficulty of the task and degree of mastery of the task" (27, p. 327).

The emotional impact of anxiety is described by Jersild in the following terms:

Anxiety can be described as a state of distress, uneasiness, disorder, or disturbance arising from some kind of stress within the personality. The essential feature of this stress is that it is due, at least in part, in inner or subjective conditions as distinguished from external or objective threats and dangers. Where there is anxiety, there is some kind of threatening condition, dislocation, rift, disharmony, or inconsistency within the self (24, p. 27).

This same idea appears again when Lundin writes that the anxious person reports a "feeling of dread, impending doom, or disaster. He is apprehensive about the future" (29, p. 288). Gibson further expands this concept of the emotional impact of anxiety with these words,

Anxiety is an internal anticipatory fear response generalized to many stimuli and which does not lead to a particular goal object. . . . It is generally regarded by the anxious individual as unpleasant (21, p. 286).

According to the literature there is a differentiation between persons considered "normal" in respect to anxiety and those considered "neurotic" or "pathological" in this aspect. Janet A. Taylor writes that research in the
development of the Janet Taylor Manifest Anxiety Scale pointed to the conclusion that the "... distributions of scores for the patient and the normal group are markedly different" (45, p. 290).

Cattell (12), too, notes that neurotics score significantly higher than normal on anxiety scales. Further, not only do anxiety scores of different groups reflect the group's intrinsic differences, these scores tend to be stable in their unique means and mean distributions.

Again, pathological anxiety reactions are described by Lundin as "... merely direct exaggerations of the normal anxiety..." (29, p. 288). Pathological anxiety is identified by three behavioral patterns: chronic anxiety, panic, and phobia.

The physiological conditions resulting from anxiety are described by various authors. Stagner writes that,

The modern view of psychosomatic disease suggests gastric ulcers, asthma, chronic hypertension, and other disorders may be due to persistent emotional stress. It seems probable, for example, that an individual beset by conflicts involving inhibition of strong aggression may develop arterial hypertension. Either the blood-vessel reaction has become habitual, or permanent damage has been done by the stress reaction. [This condition] is sometimes associated with gastric ulcers (42, p. 130).

Lundin, too, notes evidence of physiological conditions resulting from anxiety in reporting that gastric reactions in anxiety "which exist for long times in the chronically anxious person, can readily render him susceptible to the formulation
of such an ulcer" (29, p. 290). It is noted by this author, also, that anxiety can result in heart disease, disorders of the skin, high blood pressure, and respiratory disorders such as hay fever and asthma. It is explained by Lundin that, "These afflictions have frequently been interpreted as the consequences of the bodily changes that participated in a number of anxiety responses" (29, p. 291). Lazarus lists some of the physiological observable effects of anxiety as "changes in body temperature, muscular movement and exertion, diurnal variation, hunger and food intake, and various degrees of sleepiness to being wide awake or excited" (27, p. 400).

The literature is replete with accounts of research and theory concerning anxiety. Studies have consisted of almost every possible design. It is interesting to note that factor analysts such as Cattell have examined the problem extensively and believe anxiety to consist of some unitary factor. This author writes that there are "at least five important and distinct first-order factors in anxiety, . . . and analysis of the correlations between these first-orders shows that they group in a single second-order dimension. . . . Thus, at present, the best conclusion seems to be that anxiety is a unitary concept. . . ." (12, p. 55).

These reports from the literature were chosen to describe the psychological aspects of anxiety as these relate to this study. Some of these reports have described the mental aspects of anxiety, some the emotional aspects and some the
physiological behaviors of anxiety which seemed most applicable to the subjects in this study.

Teacher Anxiety/Stress

A search of the literature revealed few articles related directly to teacher anxiety/stress. Some of these articles reported research conducted to actually measure teacher anxiety and others were articles simply noting the presence of teacher anxiety with an author-suggested solution to the attendant situation.

Jakobovits (23), a psycholinguistic, writes that language teachers often suffer from neurotic systems of confusion, anxiety, and uncertainty in connection with their work. Jakobovits suggests that teachers should redirect their educational philosophy and teach toward a heightening and expansion of their own personal consciousness.

Another author, Schmuck (40), discusses a similar problem in the article, "Self-Confrontation of Teachers" (40). Schmuck tells of the confusion and anxiety some teachers experience when their observed actual classroom behavior does not coincide with their ideal classroom behavior. To remedy these feelings the author directs philosophical remarks towards teachers encouraging them to examine their own educational philosophies. The next step is to restructure this philosophy, if need be, to include an ever increasing self-awareness.
Sheviakon (41) writes of troubled, angry children and the resulting teacher anxiety in the classroom. He urges a nonjudgmental, patient, and humanitarian approach to be used by the teacher working with such children.

There were, also, a limited number of articles which reported actual research concerning teacher or student teacher anxiety. In one article Parsons (35) tells of research using the Teaching Anxiety Scale. This scale is described as an easily administered, machine scorable, self-report instrument designed to measure specific situation anxiety. Parsons administered this test to student teachers and reported from the data that Teaching Anxiety Scale scores decreased significantly over two to four months of pre-service education.

In a similar study Eder (17) administered the State-Trait Anxiety Inventory to student teachers using a repeated measures design. The experimental variable was group counseling. Results showed no significant differences between the experimental group and control group in percentage of decrement of anxiety.

A report of a study done at the University of California by McNeil (32) in 1968 involved ninety-seven elementary teachers. Forty-three of these teachers were assigned to poverty schools and the remaining forty-four were assigned to affluent schools. At the end of ten weeks a fourteen-item inventory was administered to measure stress. It was
found that there was no significant difference in the mean scores in stress level between the two groups.

Davidson and Sarason (13) studied children's anxiety level in relation to observed teacher behavior reflecting teacher values and beliefs. These authors concluded that teacher values and beliefs do affect their own and children's anxiety.

Jersild (24) reports in his book, *When Teachers Face Themselves*, that the main concern of teachers as they relate their needs is to find more productive ways to handle their own anxieties.

This portion of the survey of the literature for this study has included some studies related directly to teacher anxiety/stress. It has also included articles reporting research conducted to actually measure teacher anxiety. Other articles simply noted the presence of teacher anxiety with an author-suggested solution to the attendant situation.

**Humanizing Teacher Education and In-Service**

General acceptance of the idea of humanizing teacher education and in-service is reflected in the frequency of articles concerning this area in the current literature. While the idea itself is generally accepted, the suggestions for implementation are as varied as the number of authors as may be seen in the following review of the literature.
Ottaway (34) reports an in-service experience for teachers and social workers in which they met in group sessions to improve their understanding of human relations and personality development. The focus was to help group members to move toward deeper personal involvement. At the conclusion of the in-service experience participants reported gaining a better understanding of themselves and their relations to other people.

In an article entitled "Stress," Brown (8) defines a possible source of stress or anxiety in the classroom as that of teachers not understanding or, perhaps, not being aware of underlying causes and motives of children's behavior. Brown recommends in-service meetings planned to help teachers to better understand the possible psychological causes of such behavior.

Implying that feelings of futility and hostility create anxiety and stress in schools among Negroes, Proctor (36) suggests that these conditions can be reversed by competent, dedicated teachers and recommends that teacher education programs should be humanitarian in tone and based on a belief in the equality of human beings.

"Mental Health of Teachers--Still a Problem" by Delp (14) states that research indicates that while teaching is not one of the direct causes of maladjustment, the factors involved do include personal problems, community pressures, and professional problems. Delp goes on to state that the
frequency of maladjustment among teachers is such that in twelve years of public education the chances are seven to one that a child will have at least two maladjusted teachers. The author seeks to remedy this by suggesting that schools should establish broader training for better teacher understanding of human nature and its problems, and assisting teachers by means of in-service training programs.

An interesting deviation in focus of suggestions for humanizing education through teachers comes from Eggert (18) in "A New Way of Looking at What I Am Doing." This author has developed a six-step program in which the teacher is given the responsibility of looking at and improving his relationship with students. The outlined steps lead the teacher to work toward experiencing accurate empathy, examples of rejection of the student and of acceptance and caring for the student, genuineness, and video tapes of classroom action. After the teacher has worked through all these steps, suggestions are given as to how to ascertain whether the program for the teacher has resulted in the students developing a positive attitude toward learning.

The title of Bingman's (3) study was "An Investigation Into the Effects of a Humanistic Training Method on the Perceptions of Elementary Teacher-In-Training." The research dealt with effects of a two-week humanistic training program, a four-week participation observation experience, and a seven-week special methods program on the perceptions of
prospective elementary school teachers from West Virginia University with a sample population of sixty-six. One of the implications drawn from this study was that sequential humanistic programs should be implemented early in the college program.

A report from Harris Teachers' College in St. Louis, Missouri (21), described its **Personalized Experimental Preparation Program** in an article entitled "Personalized Experimental Preparation." As reported in January, 1974, the program is individualized and flexible enough to allow each participant to set his own goals. It has a strong human relations thrust, i.e., a personal and interpersonal development component which enables participants to improve their own personal and interpersonal skills and to learn to work with others in small and large group situations in a variety of settings. The college also extends this program as an in-service for teachers.

In the late spring of 1972 the city of San Francisco was faced with implementing racial desegregation immediately in public schools. To accomplish this, Steelman and Murphy (43) developed a series of five ethnic workshops. In their paper entitled "Increasing Compatibility in Desegregated Schools Between Elementary Educational Practices, The Curriculum, and the Concept of Whiteness," they analyze one of the five workshops. The authors write that the workshop described was developed around the concept of the city as a
socializing institution and its humanizing effect through social encounter.

Carl and Jones (11) are authors of an article entitled "Some Preliminary Observations Regarding the Minnesota State Human Relations Requirement and Its Effect on In-Service Teachers." In this article a report is given of a study of a newly adopted course required for teacher certification and recertification, called "The Human Relations Component." It was the task of the study to determine the effects of the training of this course on teachers. From data collected through the use of questionnaires, the authors concluded that the course brought some increased flexibility, increased awareness of behavior that needs changing, and increased sensitivity to colleagues and students.

The article, "Human Relations Laboratory for Junior High School Personnel," by Israel and Savitsky (22) reports that sensitivity training was the focus of the human relations workshops in Quincy, Massachusetts, public schools. After the workshop experience some of the participants reported a heightened state of awareness in their own lives and began to think about how they affected other people, including students and staff. Interestingly, the authors also conclude that no one seems to have suffered ill effects.

Buchanan (10) writes that there is a very strong need for education in intergroup relations, particularly in predominantly white communities. This author continues by
expressing the thought that schools are in a unique position to help young people develop a humanistic attitude toward others by re-educating teachers in white communities. It is suggested that educators provide in-service programs which are aimed at re-educating those involved so that changes may occur in attitudes, values, and interpersonal relationship skills. Buchanan has also developed and described a research design to evaluate his suggested in-service program.

Interesting data is reported by Mosley and Flaxman (33) in "A Survey of In-Service Desegregation Workshops." Criteria were listed as realistic objectives, clear planning procedures, participant input in the planning, full evaluation, clear design, planning for followup, and planning and implementation for distributing outcomes and materials. One of the findings concluded that the most popular areas of content for such workshops were racial-cultural understanding, interpersonal-desegregation and general interpersonal relationships.

Doll and Harding (15) write in the book, A Human Relations Learning Experience, about developing an atmosphere in schools which will be conducive to helping individuals be open to all experiences and to grow in their sensitivity to others. The first unit of the book describes a project which suggests training teachers in methods and techniques in human relations. The next unit encourages teachers to incorporate these skills into a human relations curriculum
which they design. The third and last unit encourages teachers to implement both skills and curriculum in the classroom.

Barber (1) describes a program of teacher workshops designed to give teachers experience in human relations skills. This program includes several presentations to a group of teachers using lecture and slides as one format. Another format is to have teachers form discussion groups in their schools throughout the year. A third format provides an opportunity for teachers to learn interview techniques and to use these skills during the summer with some parents and children. The first two formats produced negative teacher feelings. The teachers reported that they felt forced to attend and insulted because they felt good teachers know how to teach all children. The children's reactions revealed much hostility and widespread misinformation. The third format, however, for which teachers were paid a stipend, was much more successful. The author concludes that real life experiences are more valuable than listening to talks and participating in small discussion groups.

Birnbaum and Wolcott (4) conclude from evaluation of their summer workshop program for teachers in New Brunswick that such workshops generate general morale and reactive behavior superior to that encountered in traditional courses. Back in the classroom the teachers who had participated in
the summer workshop felt that their problem children over-
came some of their problems, that their classrooms became
more permissive, and that they could adapt literature to
dealing with problems in human relations.

This portion of the survey of the literature for this
study has presented articles and books reporting various
attempts to humanize teacher education and in-service. Some
have reported plans and researches describing such attempts
both with individual teachers and with groups. All reflect
the general trend at the present to bring about change in
the classroom through humanizing teacher approach to students.

Thiokol Interaction Laboratory
For Teachers

A search of the literature for information concerning
the Interaction Laboratory for Teachers (44) used in the
present study revealed an abstract of a dissertation by
Kampsider (26). This abstract describes the study con-
ducted to explore the effectiveness of this laboratory.
More specifically, the goal was to determine whether or not
this training program would effect changes in teacher
attitudes of ressentience and dogmatism. (Ressentience is
related to the term "resentment" but it is less conscious
and represents repressed revenge, hatred, malice, envy or
the impulse to detract and spite.) A secondary aim was to
determine if the program was trainer dependent.
Kampsnider's (26) study included 300 teachers from 116 elementary and secondary schools in Fort Worth, Texas. These teachers were selected from a larger pool of teachers who were administratively assigned according to positive criteria of leadership and demonstrated teacher-pupil interaction skills. The 300 teachers were randomly assigned to experimental and control groups and a strictly posttest experimental design was utilized. The experimental group, separated according to elementary and secondary teaching levels, was balanced for race and sex, then assigned to ten separate training groups. Training of thirty hours was conducted over a one-week period by ten trainers who were teacher-educators from mixed ethnic and geographical backgrounds. The control group received no training. Upon completion of training all members of the experimental and control groups were given the National Teacher Questionnaire and the Rokeach Dogmatism Scale. These instruments were administered in a second posttest six months after treatment to determine if anticipated differences had been maintained.

After some loss of data, an analysis of test scores was completed on 125 experimental group subjects and 112 control group subjects. A comparison of mean score differences on measures of ressentience revealed a highly significant difference ($p < .001$) between experimental and controls. Mean score differences on measures of dogmatism were not
significant. An analysis of variance comparing mean score differences of ressentience and dogmatism revealed no significant differences among and between the ten training groups. This indicates that the use of different trainers did not have a differential effect on the results of the various training groups.

Data analyzed according to non-experimental biographical variables (i.e., sex, age, race, teaching level, teaching specialty and length of teaching experience) revealed results similar to those noted for the larger group with the following exceptions. No significant changes in ressentience scores were noted for physical science and special education teachers. There were, however, significant differences in dogmatism scores for the subgroup of female teachers and the total secondary teacher subgroup.

The highly significant differences in ressentience between the experimental and control group subjects appear to have been the result of training. Although differences noted for dogmatism scores were in the predicted direction, they were not significant. In view of the correlation between dogmatism and ressentience, the lack of a significant difference in dogmatism scores was surprising. The lack of differences in test scores among and within the ten training groups indicates that use of the Interaction Laboratory will yield similar results when repeated with different trainers. The test results for biographical subgroups indicate that
female secondary teachers seem to be most responsive to the training program since they showed significant differences on both instruments. The lack of significant differences in ressentience for physical science and special education teachers is questionable due to the small size and high variance of these subsamples.

A second posttest, in which both instruments were used again, was administered to both groups six months after completion of treatment to determine if the results noted previously were maintained. The number of experimental subjects was reduced to 103 and the control subjects to eighty-seven. This longitudinal data revealed that mean scores on the ressentience for the experimentals differed from those of the controls significantly ($p < .001$), indicating that the initial differences found earlier had been maintained over the post-treatment period. Again, mean dogmatism scores between the two groups revealed no significant differences.

The *Interaction Laboratory for Teacher Development* (44) effectively changed attitudes of ressentience for in-service teachers of the Fort Worth, Texas, School District. On the other hand, the training program did not appear to influence attitudes of dogmatism for this population. It was also concluded that differences in ressentience resulting from experience in the *Interaction Laboratory* were maintained over a substantial period of time.
Kampsnider (26) recommended after this study that future research should include post-treatment observation of teacher behavior as it actually occurs in the classroom setting, and a comparative study of the effects of the training program should be made.

Additional research concerning Interaction Laboratory for Teacher Development (44) is a report of field testing results. These results indicate a high degree of operational effectiveness in providing learning experiences that are equally well received at three distinct participant levels: professional educators, para-professional teacher aides, and education students. Additionally, program reviews at several major American universities provide positive support for use of the materials in teacher education institutions and public schools.

The Interaction Laboratory for Teacher Development (44) was initially subjected to a two-phase field testing schedule that included operational testing of individual exercises and evaluation of the total program. The forty-hour program was field tested again with two separate groups of fifteen trainees. The program was then revised. A third field test was conducted with twenty trainees. All three of these field tests were conducted at Weber State College during the 1969-1970 winter quarter.

Weber State School of Education faculty members conducted the training using Weber State education students as
trainees. Debriefing sessions with both students and trainers resulted in general enthusiastic support for the program. As a result, the Weber State School of Education faculty adopted the program in the fall quarter of the 1970-1971 school year as a permanent component of the college's curriculum. The course is designated Education 300 and is required of all students majoring in education.

Four additional field tests have been conducted to determine the applicability of the Interaction Laboratory to populations other than undergraduate education majors. In July of 1970 the entire faculty of the School of Education at Weber State College participated in the Interaction Laboratory program. Training also was provided as an in-service program for teachers and counselors of the Tooele, Utah, School District and for teachers at the Clearfield Job Corps Center in Clearfield, Utah. Results of these field tests confirmed the laboratory as a valuable training tool for older and professionally experienced teaching personnel, as well as for education students and teacher-interns.

Further field testing was conducted with a group of twenty-five teacher aides employed as para-professionals in several public elementary and secondary schools in the greater Ogden, Utah area. The majority of these para-professionals were Mexican-American females having a wide age range and limited educational backgrounds. The training
for this group was conducted by the Thiokol senior author and a faculty member from the School of Education, Weber State College. With the exception of minor language problems, the Interaction Laboratory was well received and effective in gaining the interest and involvement of the participants.

These reports from the literature describe research concerning the Interaction Laboratory for Teachers (44). These two studies are the only ones available at this time according to the authors.

Chapter Summary

Chapter II has included reports from the literature concerning the four different aspects of this study: (1) Psychological Aspects of Anxiety, (2) Teacher Anxiety/Stress, (3) Humanizing Teaching Education and In-Service, and (4) Interaction Laboratory for Teachers.

The reports of the literature concerning the Psychological Aspects of Anxiety included in this chapter were selected because of the special relevance to this study. Thus, from the literature reviewed it was found that anxiety is generally considered to be an integral part of personality assessment. Further, the literature indicates that anxiety has effects on the psychological behavior, emotional reaction, and motor performance of individuals.
The reports of the literature concerning Teacher Anxiety/Stress reflected the relatively few studies done to measure teacher anxiety. It was found that there was more literature simply noting the presence of teacher anxiety. Some authors, however, not only noted the presence of teacher anxiety, but included suggested solutions to the attendant situations.

The reports of the literature concerning Humanizing Teacher Education included in this chapter indicate a trend among educators to be increasingly aware of the need for including humanizing activities in teacher education programs. Some authors wrote of the philosophy behind the humanizing process, some wrote of the implementation of the concept, and some wrote of the apparent outcomes of such implementation.

Finally, a complete description of the Interaction Laboratory for Teachers (44) was included in Chapter II. This included an account of research using the laboratory done in Fort Worth Public Schools in 1972 and the field testing done at Weber State College in Utah in 1969-1970. The workshop was described as effective in humanizing teacher behavior.

A composite review of the literature for this study concludes that anxiety is an integral part of personality, and that the presence of anxiety is often indicated by certain behaviors. Since very little research was noted
concerning teacher anxiety, it was concluded that there is need for such research. Too, one important aspect of teacher education programs recently has been the humanizing trend. Thus, educators have moved towards humanizing teachers through in-service programs such as Interaction Laboratory for Teachers in order to provide an opportunity for more self-understanding and more understanding of others.
CHAPTER BIBLIOGRAPHY


CHAPTER III

PROCEDURES

The problem of this study was to determine the effects of attending a human relations workshop on the anxiety levels of a group of public school teachers.

Chapter I presents an introduction to the study, a statement of the problem, the purposes, the hypotheses, the limitations and assumptions of the study. Chapter II reviews selected empirical studies and other pertinent literature and presents the theoretical position of the study. Chapter III presents information needed to understand the procedures followed in developing the study. This information includes: (1) a description of the instruments used to measure anxiety, (2) the design of the study, (3) the testing procedures, and (4) a description of the experimental treatment. Finally, the methods used to prepare and analyze the data complete the chapter.

The Instruments

In the background and significance of the literature presented in Chapter I, it was found that there are two general classifications of anxiety: trait and situational. While anxiety in either classification was seen as having an effect on behavior, trait anxiety was considered to be
more of an indicator of behavior in overall personality assessment than situational anxiety.

Since the background literature substantiates that global personality effects are either enhanced or blocked by the measure of anxiety present, the instruments used in this study were chosen because they were designed to measure anxiety as one of the many variables included in multifaceted personality inventories. This choice was based on the assumption that trait measures could detect anxiety identified as a part of overall personality, and thus, be more constant as an indicator to behavior than anxiety measured as a result of participation in a crisis situation. Each instrument for this study was designed to be administered individually.

**Anxiety Scale (Omnibus Personality Inventory)**

The Anxiety Scale used in this study is one of the fourteen scales in the Omnibus Personality Inventory (OPI). The OPI was constructed to assess selected attitudes, values, and interests, chiefly relevant in the areas of normal ego-functioning and intellectual activity. Almost all dimensions included in the OPI were chosen either for their particular relevance to academic activity or for their general importance in understanding and differentiating among college students in an educational context. The major purposes of the OPI
were to provide a meaningful, differentiating description of students and a means of assessing change (1).

In this study the title of the Anxiety Scale was the Biographical Inventory #1 as a differentiation of the two testing instruments used in this study. The scale was made up of twenty items. In this study low scorers deny that they have feelings or symptoms of anxiety, and do not admit to being nervous or worried (low anxiety). High scorers describe themselves as tense and high strung. Therefore, it is important to note the direction of scoring on this scale in this study: a low score indicates a low anxiety level and vice versa.

Information concerning the estimation of the reliability of the Anxiety Scale (OPI) using the Kuder-Richardson Formula 21 and the Spearman-Brown Formula is given as follows:

1. An estimate of the reliability coefficient of the Anxiety Scale regarding internal consistency of the OPI measures is given as .82 (3, p. 49).

2. An estimate of the test-retest reliability coefficient (with a time interval of three and four weeks) is given as .89 (3, p. 49).

The authors of the OPI establish the validity of the Anxiety Scale with the following information:

1. The Anxiety Scale coefficients show the following coefficients with the Guilford-Zimmerman Temperament Test: .40 with Sociability, .77 with Emotional Stability, .67 with Objectivity, and .43 with Personal Relations (3, p. 31).
2. The Anxiety Scale (OPI) correlates above .70 in the appropriate direction with the Anxiety Scale of the Minnesota Multiphasic Personality Inventory (3, p. 31).

The scores of men and women for the Anxiety Scale (OPI) are reported the same. The overall normative mean for the scale was reported as 12.3 (correct responses counted). However, since the other instrument used in the study was scored by counting incorrect responses, it was decided that the Anxiety Scale (OPI) should be scored in the same way for this research. Therefore, the incorrect responses were counted and a corresponding normative mean of 7.7 was established. Thus, low score indicates low anxiety.

The Janet Taylor Manifest Anxiety Scale

The Taylor Manifest Anxiety Scale (TMAS) was first constructed by Janet Taylor using approximately two hundred items from the Minnesota Multiphasic Personality Inventory. Subsequently, the scale went through several modifications. At present, it consists of fifty items and is administered under the innocuous title of Biographical Inventory.

In this study the form used was entitled Biographical Inventory #2 as a differentiation of the instruments used in this study.

The data provided on reliability coefficients includes:

1. Retest scores after an intertest interval of four weeks provided a product-moment correlation of .88 (5, p. 286).
2. In a test-retest study with a lapse of five months since the first testing the reliability coefficient was .82 (5, p. 286).

3. In the test-retest study with a lapse of nine to seventeen months the reliability coefficient was .81 (5, p. 286).

Taylor concluded that both the relative position of the individual in the group and the absolute score tended to remain constant over relatively long periods of time.

Data concerning correlation between the TMAS and the Minnesota Multiphasic Personality Inventory (MMPI) included:

1. The correlation between the two sets of measures obtained by determining the scores of the fifty anxiety items of each test was .68 (5, p. 287).

2. The forms of the distributions were statistically different as indicated by a chi-square test of homogeneity. Taylor suggests that this discrepancy results from the radical change filler items may exert on anxiety scores (5, p. 287).

Further data described by Taylor concerned sex differences in scores on the TMAS and the scores of different populations:

1. A comparison of the scores of males and females in this total sample revealed that the mean score of the women was somewhat higher. The difference between the two means, however, was not statistically significant. For this reason, both sexes have been included in a single distribution (5, p. 286).

2. Distributions for airmen tested at the beginning of basic training and for night-school students of introductory psychology show essentially the same form while the quartiles are in close agreement (5, p. 286).
Finally, Taylor cited data which illustrated the use of TMAS scores to discriminate between normal and psychotic individuals:

1. For the normal group of individuals the fiftieth percentile fell at about 13. The mean of the distribution was 14.56. The median score was approximately 14 (5, p. 285).

2. For the psychotic group of individuals the median score was approximately thirty-four, a score equivalent to the 98.8 percentile of the normal subjects (5, p. 290).

Validity and reliability of the TMAS were accepted as satisfactory for this study.

Design of the Study

The problem of this study was to determine the effects of attending a human relations workshop on the self-reported behaviors of a group of public school teachers as measured by the groups' anxiety scores. However, only the effects produced by a one-week experience were measured. It was anticipated that it is possible to effect only limited changes in so short a time. Therefore, the design chosen needed to be one which provides for precision in determining the effects of the treatment conditions.

One design, the Pretest-Posttest Control Group Design, allows for various comparisons in an effort to determine the change in subjects. Campbell and Stanley describe the merits of this design as follows: "Design 4 [The Pretest-Posttest Control Group Design] is the most used of the three
[the three true experimental designs] . . . the design so neatly controls for all of the seven rival hypotheses. . . ." (2, p. 13).

The randomness for the experimental treatment group in this study was accepted because of the unique condition of teacher enrollment: Teachers in the large urban school system involved in this study are required to attend a human relations workshop. However, each teacher in the system has a choice of: which year to attend, and which human relations workshop session in that year to attend. These conditions coupled with the voluntary nature of the participation in this study fulfilled the requirement for random selection of the experimental treatment group in the design chosen for this study.

The control group for this study was a random sample drawn from the listing of teachers in the Teacher Directory of the school system involved in this study. The control group fulfilled the conditions for this study that: no subject in the control group had previously attended a session of a human relations workshop in this school system, and the participants had voluntarily agreed to participate in this study.

Preliminary Arrangements

In 1974 the superintendent of the large urban school system involved approved teacher participation in this study.
Teachers representing all teaching levels who attended a human relations workshop in the spring semester, 1974, comprised the experimental treatment group. The control group was chosen randomly from a teacher listing and excluded any teacher who had ever attended a human relations workshop in that school district. The control group also included all teaching levels.

Prior to pretesting a list was compiled which included the names of one hundred teachers who were enrolled to attend a human relations workshop scheduled for the spring term of 1974. This list was assigned as the experimental treatment group and included thirty-nine men and sixty-one women. The assigned teaching levels of these teachers were listed as forty-nine elementary school teachers, thirty-two middle school teachers, and nineteen high school teachers.

Another list was compiled at the same time which included the names of one hundred teachers who had not participated in a human relations workshop, and who had been chosen randomly from a teacher listing. This second list was assigned as the control group and included forty-six men and fifty-four women. The assigned teaching levels of these teachers were listed as fifty-three elementary school teachers, twenty-two middle school teachers, and twenty-five high school teachers.
Testing Procedures

A schedule for completion of the testing instruments for both the experimental treatment group and the control group was established. A description of this schedule is presented under the following headings: Pretesting, Posttesting-1, and Posttesting-2.

**Pretesting**

The pretesting procedure which involved both the experimental treatment group and the control group was carried out in the sequence and manner below:

1. The TMAS and the Anxiety Scale (OPI), along with a letter of explanation were mailed during the spring term to the one hundred teachers comprising the experimental treatment group and the one hundred teachers comprising the control group. This mail-out was ten days before the experimental group attended the human relations workshop.

2. The letter of explanation to both groups included information concerning the study and a request of return within ten days in the enclosed, stamped, self-addressed envelope. The explanatory letter also included a special instruction stating that if the addressee did not participate in the scheduled workshop, the testing instruments were not to be completed and returned.

3. Only those forms returned within the requested time were included in the study.
Posttesting-1

Similar procedures were followed for posttesting-1 as were followed for pretesting. The steps below outline the process utilized for gathering the data at this point in the study design:

1. The TMAS and the Anxiety Scale (OPI) were mailed to the same experimental treatment group the week following completion of the workshop experience. At the same time the TMAS and the Anxiety Scale (OPI) were mailed to the control group.

2. An accompanying letter was mailed to both groups which included information about the posttest. It also included a request of return of the completed measurements within ten days in the enclosed, stamped, self-addressed envelope.

Posttesting-2

A posttest-2 was included in this study for the purpose of testing hypotheses number nine and ten. Posttest-2 was designed to test for retention of change over an intervening time span (four months), and included only the experimental treatment group. A schedule for posttesting-2 is outlined below:

The TMAS and the Anxiety Scale (OPI) were mailed to the experimental treatment group four months after the completion of the human relations workshop experience.
2. An accompanying letter was mailed to the experimental treatment group which included information about posttest-2. It also included a request of return of the completed measurements within ten days in the enclosed, stamped, self-addressed envelope.

The Treatment

Experimental

The one hundred subjects in the experimental treatment group participated in a week-long human relations workshop experience. The time involved for each participant was forty hours based on eight hours each day for five days.

Specifically, the workshop was the Interaction Laboratory for Teachers, developed by Thiokol, Incorporated (6). The training methodology of this laboratory stressed trainee re-examination of personal attitudes and perceptions. The group process method was used to achieve this goal.

Through the group process, responsibility for interaction and learning was placed directly on the trainees. Resources for the course content were found in each trainee's reaction to the structured problems presented in the training exercises. Problems were presented to the group through the use of such simulation techniques as role playing, action mazes, case studies, and problem solving situations. Once the situation was identified and developed, trainees had to find their own solutions to the problems. The trainer,
through discussion or written evaluation, elicited solutions from persons in the group. Group members then assessed together all of the individual solutions in terms of reality and overall effectiveness. This process allowed trainees to construct their own conclusions inductively, which then had to be validated, modified, or rejected by the group. The trainer served as a resource for reality testing and provided technical input as required by the group.

Although some elements common to "sensitivity training" were employed in the Interaction Laboratory, the personal threat and subordination of the individual to the group so often associated with sensitivity training, were avoided. This was accomplished by the carefully sequenced structure of the laboratory, and the commitment of each exercise to a basic conceptual goal. (See Appendix C.)

The trainer's role in an Interaction Laboratory group reflects a departure from the role in the traditional educational setting. Here the trainer supports and facilitates the development of interaction in the group process. He becomes a catalyst for individual and group action to ensure that participants develop their own professional styles and skills. The trainer functions as a stimulator rather than as a director of group activity.

Continuous interchange of reactions, perceptions, and judgments is stressed through the participatory nature of the group process. Thus, the group becomes the information
source for each trainee in determining individual effectiveness in working with others. Group evaluation, supported by the reality orientation of the trainer, provides participants with an understanding of their own strengths and weaknesses in dealing with people encountered in a school setting. When trainees have achieved this level of understanding, they are expected to be able to react to new situations rationally and objectively and will understand more clearly the effect of their behavior on others (6).

**Trainer preparation.**—The four trainers for the Interaction Laboratory for Teachers were individuals who had been selected from the school personnel in the large urban school system involved in this study. These trainers were chosen primarily because of their interpersonal relationship skills and because of their special knowledge of and sensitivity to the group process. The trainers were not selected because of special certification beyond teacher certification. Each trainer was assigned to work with a group of approximately twenty-five teachers. The preparation for these trainers included: (1) participation in a Thiokol human relations workshop, (2) participation in trainer workshop led by experienced trainer in the school system involved in the study, (3) trainer-assistant role for several workshops, and (4) trainer role.
Control

The one hundred subjects in the control group did not participate in a week-long human relations workshop experience and were not treated in any other special manner. The subjects were teachers currently assigned in the school system involved in this study.

The one hundred subjects in the control group received a letter explaining that their names had been chosen randomly from the Teacher Directory. The letters also stated the research purpose of the study. The control group was pre-tested and posttested in May, 1974, as was the experimental treatment group.

Procedure for Analysis of the Data

After the data were collected, the answer sheets for each subject's responses to the two instruments selected for use in this study were handscored and the results transcribed onto data sheets. A key-punched four-way analysis of variance program was conducted by the North Texas State University Computer Center to test the tenability of this study.

The four-way analysis of variance was chosen to statistically test the hypotheses of this study because

... it provides the researcher with a technique for simultaneously testing whether means of two or more groups are significantly different. [There were four groups in this study.] This statistical
model capitalizes on the integral relationship between the mean and the variance so that, by analyzing variances of several groups, conclusions can be drawn regarding the similarity of the means of those groups. . . . Analysis of variance has the advantage of comparing means of many groups in a single statistical test (4, p. 176).

Popham explains further "In cases where the null hypothesis is tenable, relatively little difference between means will exist. . . . In cases where the null hypothesis is untenable, differences between the means of the separate groups will be of a greater magnitude" (4, p. 170).

Hypothesis Eleven was stated in research form and was tested by computing a Pearson-R correlation coefficient. The other ten hypotheses were stated in null form for testing. The appropriate F-ratios and probability levels were calculated by computer. In all cases, a probability level of \( P < .05 \) was arbitrarily selected as necessary to reject the null hypothesis of no significant differences between the groups.

For clarity of presentation these mathematical computations are entered into tables. These tables and an analysis of the data are reported in Chapter IV.

Chapter Summary

Chapter III has presented the procedures followed in carrying out this study. The Anxiety Scale (OPI) and the TMAS were described to establish reliability and validity acceptable for this study. The Pretest-Posttest Control
Group Design reflected the need of this study for a design allowing for various comparisons in an effort to determine the change in subjects and to provide for precision in determining the effects of the treatment conditions. Preliminary arrangements were described in detail to indicate the sequence of these steps of the study. These preliminary arrangements included: (1) seeking approval from the superintendent of the large urban school district for involving its teachers in this study; (2) establishing the experimental treatment group as comprised of one hundred teacher participants in a human relations workshop scheduled for the spring of 1974; and (3) establishing the control group as comprised of one hundred teachers who had not been participants in a human relations workshop. Testing procedures were outlined for pretesting, posttesting-1, and posttesting-2. The treatment for the experimental treatment group was described in detail as was the procedure for conducting the study with the control group. Finally, the procedure for analysis of the data gathered for this study was outlined and information was given for locating tables presenting data and an analysis of these data in Chapter IV.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

PRESENTATION AND ANALYSIS
OF DATA

The assumption that a selected training experience can affect teacher anxiety scores underlies the present investigation. The ultimate objective was to make recommendations concerning the continued inclusion of human relations training in teacher education programs.

Chapter IV is an exposition of the findings which resulted from the procedures previously described. It should be noted here that the N's varied for the pretest, posttest-1, and posttest-2 measures due to attrition. The group N is presented below each table. Group and subgroup N's are presented in Table X and Table XI (see Appendix D).

It should also be noted at this point that although a four-way analysis of variance and a three-way analysis of variance of the data were computed, the results were not statistically significant and, so, are not reported. Only findings resulting from the two-way analysis of variance and the one-way analysis of variance of the data are reported. The findings relevant to each hypothesis are presented in order.
Data Related to the Eleven Hypotheses

Presentation of Hypothesis One

There will be no significant difference between the experimental treatment group and the control group on the pretest mean scores of the Janet Taylor Manifest Anxiety Scale (TMAS). Data relative to the hypothesis are presented in Table I. The F-value of .0158 was not significant at the .05 level. Therefore, the null hypothesis was retained.

Presentation of Hypothesis Two

There will be no significant difference on pretest mean scores of the TMAS as reflected by interactions among the following variables: (a) group and sex; (b) group and teaching level; and, (c) group and experience. Data relative to the hypothesis are presented in Table I. The following F-values were not significant at the .05 level: H₂(a) 1.7377; H₂(b) 1.2677; H₂(c) 1.9246. Therefore, the null hypothesis was retained.

Table I

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</table>
Presentation of Hypothesis Three

There will be no significant difference between the experimental treatment group and the control group on the pretest mean scores of the Anxiety Scale (OPI). Data relative to the hypothesis are presented in Table II. The F-value of .215 was not significant at the .05 level. Therefore, the null hypothesis was retained.

Presentation of Hypothesis Four

There will be no significant difference on the pretest mean scores of the Anxiety Scale (OPI) as reflected by interactions among the following variables: (a) group and sex; (b) group and teaching level; and, (c) group and experience. Data relative to the hypothesis are presented in Table II. The following F-values were not significant at the .05 level: $H_4(a), .478; H_4(b), 2.042; H_4(c), 1.543$. Therefore, the null hypothesis was retained.

TABLE II

SUMMARY OF DATA FOR PRETEST MEASURES OF ANXIETY SCALE (OPI) (N = 145)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>1.633</td>
<td>1</td>
<td>1.633</td>
<td>.215</td>
<td>.644</td>
</tr>
<tr>
<td>Group x Sex</td>
<td>3.638</td>
<td>1</td>
<td>3.638</td>
<td>.478</td>
<td>.409</td>
</tr>
<tr>
<td>Group x Level</td>
<td>31.105</td>
<td>2</td>
<td>15.525</td>
<td>2.042</td>
<td>.134</td>
</tr>
<tr>
<td>Group x Experience</td>
<td>11.734</td>
<td>1</td>
<td>11.734</td>
<td>1.543</td>
<td>.217</td>
</tr>
<tr>
<td>Within</td>
<td>919.037</td>
<td>121</td>
<td>7.595</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>967.147</td>
<td>126</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Presentation of Hypothesis Five**

There will be no significant difference between the experimental treatment group and the control group on the posttest-1 mean scores of the TMAS. Data relative to the hypothesis are presented in Table III. The F-value of .0027 was not significant at the .05 level. Therefore, the null hypothesis was retained.

**Presentation of Hypothesis Six**

There will be no significant difference on the posttest-1 mean scores of the TMAS as reflected by interactions among the following variables: (a) group and sex; (b) group and teaching level; (c) group and experience. Data relative to the hypothesis are presented in Table III. The following F-values were not significant at the .05 level: $H_6(a) = .117; H_6(b) = .023; H_6(c) = 2.59$. Therefore, the null hypothesis was retained.

**TABLE III**

**SUMMARY OF DATA FOR POSTTEST-1 MEASURES OF JANET TAYLOR MANIFEST ANXIETY SCALE**

(N = 94)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>.063</td>
<td>1</td>
<td>.063</td>
<td>.00267</td>
<td>.960</td>
</tr>
<tr>
<td>Group x Sex</td>
<td>2.761</td>
<td>1</td>
<td>2.761</td>
<td>.11701</td>
<td>.738</td>
</tr>
<tr>
<td>Group x Level</td>
<td>1.074</td>
<td>2</td>
<td>.537</td>
<td>.02275</td>
<td>.970</td>
</tr>
<tr>
<td>Group x Experience</td>
<td>61.044</td>
<td>1</td>
<td>61.044</td>
<td>2.5872</td>
<td>.119</td>
</tr>
<tr>
<td>Within</td>
<td>1554.010</td>
<td>74</td>
<td>23.5945</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Total</td>
<td>1618.942</td>
<td>79</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>
Presentation of Hypothesis Seven

There will be no significant difference between the experimental treatment group and the control group on the posttest-1 mean scores of the Anxiety Scale (OPI). Data relative to the hypothesis are presented in Table IV. The F-value of 2.90 was not significant at the .05 level. Therefore, the null hypothesis was retained.

Presentation of Hypothesis Eight

There will be no significant difference on the posttest-1 mean scores of the Anxiety Scale (OPI) as reflected by interactions among the following variables: (a) group and sex; (b) group and teaching level; (c) group and experience. Data relative to the hypothesis are presented in Table IV. The following F-values were not significant at the .05 level: $H_8(a)$ .362; $H_8(b)$ .224. The F-value of 6.344 for $H_8(c)$ was significant at the .05 level. Therefore, the null hypothesis was retained for $H_8(a)$ and $H_8(b)$. However, the null hypothesis was rejected for $H_8(c)$.

TABLE IV

SUMMARY OF DATA FOR POSTTEST-1 MEASURES OF ANXIETY SCALE (OPI)  
(N = 94)

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>15.381</td>
<td>1</td>
<td>15.381</td>
<td>2.898</td>
<td>.093</td>
</tr>
<tr>
<td>Group x Sex</td>
<td>1.920</td>
<td>1</td>
<td>1.920</td>
<td>.362</td>
<td>.549</td>
</tr>
<tr>
<td>Group x Level</td>
<td>2.378</td>
<td>2</td>
<td>1.189</td>
<td>.224</td>
<td>.800</td>
</tr>
<tr>
<td>Group x Experience</td>
<td>33.671</td>
<td>1</td>
<td>33.671</td>
<td>6.344*</td>
<td>.014</td>
</tr>
<tr>
<td>Within</td>
<td>392.7515</td>
<td>74</td>
<td>5.3074</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>446.1015</td>
<td>79</td>
<td>.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
Since the interaction between group and experience was found to be significant, a presentation of cell means allowed closer inspection of the nature of that interaction. Means for cells relative to group and experience are presented in Table V.

**TABLE V**

**SUMMARY OF GROUP AND EXPERIENCE CELL MEANS FOR POSTTEST-1 MEASURES OF ANXIETY SCALE (OPI)**

(\(N = 94\))

<table>
<thead>
<tr>
<th>Group</th>
<th>Five Years or Less</th>
<th>Six Years or More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>3.47</td>
<td>2.46</td>
</tr>
<tr>
<td>Control</td>
<td>3.32</td>
<td>4.91</td>
</tr>
</tbody>
</table>

To determine where significant differences lay between cell means Tukey's Multiple Range Test was performed. The results of this analysis are presented in Table VI.

**TABLE VI**

**SUMMARY OF THE ANALYSIS OF TUKEY'S MULTIPLE RANGE TEST**

(\(N = 94\))

<table>
<thead>
<tr>
<th>A Experimental Six or More Years Exp.</th>
<th>B Control Five or Less Years Exp.</th>
<th>C Experimental Five or Less Years Exp.</th>
<th>D Control Six or More Years Exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-2.46</td>
<td>. . .</td>
<td>1.86</td>
<td>2.09**</td>
</tr>
<tr>
<td>B-3.32</td>
<td>. . .</td>
<td>1.38</td>
<td>1.67</td>
</tr>
<tr>
<td>C-3.47</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
</tr>
<tr>
<td>D-4.91</td>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
</tr>
</tbody>
</table>

\*\(p < .05\).

As can be seen the significant difference was between the experimental treatment group and the control group with six or more years experience. It should be noted in this study that the lower anxiety score reflects less anxiety. In this case, the experimental treatment group mean anxiety score was 2.46 and the control group mean anxiety score was 4.91, indicating that the experimental treatment group was less anxious than the control group.

Although there were significant differences favoring the experimental treatment group over the control group with six or more years experience an examination of pretest and posttest-1 means for these subgroups posed the question as to whether the difference resulted from a decrease in anxiety for the experimental treatment group or an increase in anxiety for the control group or both. Data relative to the question are presented in Table VII.

TABLE VII
SUMMARY OF GROUP AND EXPERIENCE MEANS FOR PRETEST AND POSTTEST-1 MEASURES OF ANXIETY SCALE (OPI)
(N = 94)

<table>
<thead>
<tr>
<th>Group</th>
<th>Five Years or Less</th>
<th>Six Years or More</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre- 3.39</td>
<td>Pre- 4.54</td>
</tr>
<tr>
<td></td>
<td>Post- 3.97</td>
<td>Post- 2.50</td>
</tr>
<tr>
<td>Experimental Treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Group</td>
<td>Pre- 3.68</td>
<td>Pre- 3.37</td>
</tr>
<tr>
<td></td>
<td>Post- 3.32</td>
<td>Post- 4.91</td>
</tr>
</tbody>
</table>
As shown in Table VII the experimental treatment group with six years or more experience decreased in anxiety mean score from 4.54 to 2.50. The control group increased in anxiety mean score from 3.37 to 4.90.

To explore this occurrence the one-way analysis of variance was run on pretest to posttest-l scores for the experimental treatment and control groups. The results are presented in Table VIII.

**TABLE VIII**

**SUMMARY OF DATA RESULTING FROM ONE-WAY ANALYSIS OF VARIANCE USING GROUP AND EXPERIENCE MEANS FOR PRETEST AND POSTTEST-1 MEASURES OF ANXIETY SCALE (OPI)**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N = 117)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>38.2910</td>
<td>1</td>
<td>38.2910</td>
<td>5.0715*</td>
<td>.0309</td>
</tr>
<tr>
<td>Within</td>
<td>256.7090</td>
<td>34</td>
<td>7.5503</td>
<td>...</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>295.0000</td>
<td>35</td>
<td>...</td>
<td>...</td>
<td></td>
</tr>
<tr>
<td><strong>Control Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N = 122)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>28.7018</td>
<td>1</td>
<td>28.7018</td>
<td>4.7480*</td>
<td>.0344</td>
</tr>
<tr>
<td>Within</td>
<td>284.1145</td>
<td>47</td>
<td>6.0450</td>
<td>...</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>312.8163</td>
<td>48</td>
<td>...</td>
<td>...</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.
As shown in Table VIII the F-value of 5.07 for the experimental treatment group was significant at the .05 level, indicating a significant reduction in anxiety for the experimental treatment group. Table VIII also indicates that the increase in anxiety was statistically significant at the .05 level for the control group. These findings reduce the importance that can be attached to interaction between group and experience.

**Presentation of Hypothesis Nine**

There will be no significant difference between posttest-1 and posttest-2 mean scores on the **TMAS** for the experimental treatment group. Data relative to the hypothesis are presented in Table IX. The F-value of .0542 was not significant at the .05 level. Therefore, the null hypothesis was retained.

**Presentation of Hypothesis Ten**

There will be no significant difference between posttest-1 and posttest-2 mean scores on the **Anxiety Scale (OPI)** for the experimental treatment group. Data relative to the hypothesis are presented in Table IX. The F-value of .639 was not significant at the .05 level. Therefore, the null hypothesis was retained.
### TABLE IX

**SUMMARY OF DATA FOR POSTTEST-1 AND POSTTEST-2 MEASURES OF JANET TAYLOR MANIFEST ANXIETY SCALE AND ANXIETY SCALE (OPI) FOR EXPERIMENTAL TREATMENT GROUP (N = 91)**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TMAS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>1.1125</td>
<td>1</td>
<td>1.5004</td>
<td>.0542</td>
<td>.8164</td>
</tr>
<tr>
<td>Within</td>
<td>2518.1125</td>
<td>91</td>
<td>27.6716</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Total</td>
<td>2519.6129</td>
<td>92</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td><strong>OPI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between</td>
<td>3.1463</td>
<td>1</td>
<td>3.1463</td>
<td>.6385</td>
<td>.4264</td>
</tr>
<tr>
<td>Within</td>
<td>448.4236</td>
<td>91</td>
<td>4.9277</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Total</td>
<td>451.5699</td>
<td>92</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

**Presentation of Hypothesis Eleven**

On posttest-1 there will be a significant positive relationship between the total mean anxiety scores on the **TMAS** and the total mean anxiety scores on the **Anxiety Scale (OPI)**. A Pearson-R correlation was computed to test the hypothesis. The resulting correlation coefficient of .80 was \( p < .01 \) (2). Therefore, the research hypothesis was accepted.

**Discussion of the Findings**

The data indicated that the subjects in the experimental treatment group had mean anxiety scores which were
not significantly different from the mean anxiety scores of
the control group on the pretest measures. This supports
the rationale for homogeneity of groups before treatment.

The group mean anxiety scores on the posttest-1 measures
of the Anxiety Scale (OPI) provided the only significant
difference between the experimental treatment group and the
control group for this study. In the Hypothesis 8 (c) inter-
action between group and six or more years experience a
significant difference occurred in favor of the experimental
group. Even though a statistical analysis of the significant
difference tended to reduce the importance that can be attached
to the experimental treatment as reflected by the interaction,
still the difference could possibly be supported in the follow-
ing ways. First, the mean anxiety score for the experimental
treatment group did go down, as opposed to remaining the same
or going up as the control group did. This suggests that
the experimental treatment did have some positive effect.

Next, posttest-1 took place simultaneously with the
closing of school. This was a time of school year when
teachers were likely to experience mounting pressures and
tensions because of end-of-year activities, final grading
and summary recording. According to the background litera-
ture, as a response to these pressures and tensions, the
more anxious persons could be expected to respond with more
anxious behaviors as indicated by significantly higher
anxiety scores. At the same time, all teachers in the
school system were subject to the same pressures and tensions. Thus, the fact that the experimental treatment group did decrease in anxiety tends to support the significant difference reported in favor of the treatment group.

Another possible explanation for the lack of significant difference in anxiety levels between the experimental treatment group and the control group was the fact that the group means in the study on the pretest for both the Anxiety Scale (OPI) and the TMAS were lower than the reported normed averages (Appendix D). These low anxiety scores raise the question of the actual felt personal need of the subjects for lowering anxiety. Also, the low average pretest scores point to the fact that it would be difficult for there to be a significant lowering of anxiety as there was on the Anxiety Scale (OPI) for the experimental treatment group with six or more years experience.

The question comes to mind of why the group mean anxiety scores for the study were lower than the normed averages. The one obvious reason would be the result of differences in population. However, the observations of tests returned add another dimension of reasoning here. Many of the tests were returned incomplete or partially incomplete and could not be used in the research. In addition to varying stages of completeness, many of the tests had hostile remarks boldly written across the page. Too, many subjects inquired by phone as to the purpose and use of the data. Apparently,
many subjects who would likely be more anxious than some others screened themselves from the study with the possible effect of lowering the group means.

Since both groups had low anxiety scores as compared to norms it appears that the more highly anxious teachers were less likely to respond accurately in terms of their feelings because of a perceived threat to their positions in the school system, lowering the group mean score.

Another aspect of the study which is of interest is the inspection of the subgroup mean scores presented in Table X and Table XI (see Appendix D). It is interesting to note the trend toward lower anxiety for the experimental treatment group as indicated by pretest to posttest-1 measures and by pretest to posttest-2 measures of the Anxiety Scale (OPI) and the TMAS. The trend is observable for all subgroups except those of males and those of five years or less experience. It should also be pointed out that inspection of the control subgroup means on pretest to posttest-1 measures of both instruments reveals a trend toward higher anxiety scores in a majority of cases. These trends further tend to support a possible positive effect of the experimental treatment.

Chapter Summary

Chapter IV presents the findings of the study. Hypotheses One, Two, Three, and Four, stated in null form, were all retained. The experimental treatment group and the control group
did not differ significantly on the pretest measures of the 
**Anxiety Scale (OPI)** and the **TMAS**.

Hypotheses Five, Six, and Seven, stated in null form, 
were also retained. The experimental treatment group and the 
control group did not differ significantly on the first post-
test measures of the **Anxiety Scale (OPI)** and the **TMAS** indi-
cated by the hypotheses.

Hypothesis Eight, stated in null form, was partially 
rejected and partially retained. No significant differences 
were found between the experimental treatment group and the 
control group reflected by the interaction of group and sex, 
group and teaching level, and group and five or less years 
experience on the first posttest measures of the **Anxiety Scale 
(OPI)**. Therefore, this part of the hypothesis was retained. 
The experimental treatment group was found to have signifi-
cantly lower anxiety scores than the control group reflected 
by the interaction of group and six or more years experience 
on the first posttest scores of the **Anxiety Scale (OPI)**. 
Therefore, this part of the hypothesis was rejected.

Hypotheses Nine and Ten, stated in null form, were both 
retained. There were no significant differences between the 
first posttest and second posttest scores for the experimental 
treatment group on the **Anxiety Scale (OPI)** and the **TMAS**.

Hypothesis Eleven, stated in research form, was retained. 
On the first posttest there was a significant positive rela-
tionship between the total mean anxiety scores on the **Anxiety 
Scale (OPI)** and the total mean anxiety scores on the **TMAS**.
CHAPTER BIBLIOGRAPHY


CHAPTER V

SUMMARY OF THE RESEARCH, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Research

Purpose of the Study

The purposes of this study were: (1) to determine whether the experience of attending a human relations workshop produces a change in anxiety levels on two measures: the Janet Taylor Manifest Anxiety Scale and the Anxiety Scale (Omnibus Personality Inventory); (2) to compare the mean anxiety scores of the experimental treatment group and the control group using the variables of sex, teaching level, and years of experience in public school teaching; and (3) to determine the retention effect on anxiety over an intervening time span of four months for the experimental treatment group.

Hypotheses

To carry out the purposes of the study eleven hypotheses were tested. Ten of the hypotheses were stated in null form; the eleventh hypothesis was stated in research form.
Design of the Research

Description of the subjects.--This study compared anxiety scores of subjects using a human relations workshop as the experimental treatment. The experimental treatment group was comprised of one hundred teachers who were enrolled in a human relations workshop during the spring term of 1974. The group was composed of thirty-nine men and sixty-one women, of which forty-nine were elementary school teachers, thirty-two middle school teachers, and nineteen high school teachers.

The control group was comprised of one hundred teachers who had not participated in a human relations workshop, and who had been chosen randomly from an official list of teachers in the district. The group included forty-six men and fifty-four women, of which fifty-three were elementary school teachers, twenty-two were middle school teachers, and twenty-five were high school teachers.

Experimental treatment.--The one hundred subjects in the experimental treatment group participated in a week-long human relations workshop experience. The time involved for each participant was forty hours based on eight hours each day for five days.

Specifically, the workshop was the Interaction Laboratory for Teachers, developed by Thiokol, Incorporated. The training methodology of this laboratory stressed trainee
re-examination of personal attitudes and perceptions. The group process method was used to achieve this goal.

Through the group process, responsibility for interaction and learning was placed directly on the trainees. Resources for the course content were found in each trainee's reaction to the structured problems presented in the training exercises. Problems were presented to the group through the use of such simulation techniques as role playing, action mazes, case studies, and problem solving situations. Once the situation was identified and developed, trainees had to find their own solutions to the problems. The trainer, through discussion or written evaluation, elicited solutions from persons in the group. Group members then assessed together all of the individual solutions in terms of reality and overall effectiveness. This process allowed trainees to construct their own conclusions inductively, which then had to be validated, modified, or rejected by the group. The trainer was a school employee especially trained to serve as a resource for reality testing and provide technical input as required by the group.

Although some elements common to "sensitivity training" were employed in the Interaction Laboratory, the personal threat and subordination of the individual to the group so often associated with sensitivity training were avoided. This was accomplished by the carefully sequenced structure
of the laboratory, and the commitment of each exercise to a
basic conceptual goal (See Appendix C).

**Instrumentation.**--The Anxiety Scale (OPI) and the Janet
Taylor Manifest Anxiety Scale (TMAS) were administered in the
study. Both tests were administered to the experimental
treatment group and the control group in a pretest before the
human relations workshop and in a first posttest after the
human relations workshop. These same instruments were admin-
istered in a second posttest to the experimental treatment
group after an intervening time interval of four months.

The two tests, a letter of explanation and instruction
(see Appendix A), and a stamped self-addressed envelope were
mailed to each of the one hundred subjects in both the experi-
mental treatment group and the control group for pretest and
first posttest. The same materials were mailed to each of
the hundred subjects in the experimental treatment group for
the second posttest.

**Procedures for collecting the data.**--In the spring of
1974 the two tests and return instructions were mailed to
the experimental treatment group and to the control group
for pretest and first posttest measures. The two tests and
return instructions were mailed to the experimental treatment
group only for the second posttest. Group means for each of
the groups were calculated from these measures.
Statistical treatment of the data.—The eleven hypotheses formulated in the study were tested with the following statistical treatment: hypotheses one through eight were tested by computing the four-way analysis of variance; hypothesis nine and ten were tested by computing a one-way analysis of variance; hypothesis eleven was tested by computing a Pearson-R correlation coefficient.

For hypotheses one through nine a mean was calculated for the experimental treatment group and the control group on the pretest and first posttest measures of the Anxiety Scale (OPI) and the TMAS. Thus, a single mean was calculated for each of these hypotheses concerned only with comparing group anxiety scores; however, for the hypotheses which compared anxiety scores as reflected by interactions of the sub-groups three mean scores were calculated. An F-value was obtained to indicate the significant difference between the group means on the measures of the two testing instruments for hypotheses one through nine.

For hypothesis ten an F-value was obtained to indicate any significant difference between the group means calculated from the first posttest and the second posttest measures of the Anxiety Scale (OPI) and the TMAS for the experimental treatment group only. Finally, a Pearson-R correlation coefficient was computed to indicate the direction of the relationship between the two testing instruments used in the study and was analyzed according to Turney and Robb (2).
Presentation and Analysis of Data

Hypothesis One and Hypothesis Two.--The null hypotheses were related to the pretest group mean measures of the experimental treatment group and the control group on the TMAS. The data reflected comparisons of groups and interactions of group and sex, group and teaching level, and group and experience. The F-values were not significant. Therefore, the two null hypotheses were retained.

Hypothesis Three and Hypothesis Four.--The null hypotheses were related to the pretest group mean measures of the experimental treatment group and the control group on the Anxiety Scale (OPI). The data reflected comparisons of groups and interactions of group and sex, group and teaching level, and group and experience. The F-values were not significant. Therefore, the two null hypotheses were retained.

Hypothesis Five and Hypothesis Six.--The null hypotheses were related to the posttest-1 group mean measures of the experimental treatment group and the control on the TMAS. The data reflected comparisons of groups and interactions of group and sex, group and teaching level, and group and experience. The F-values were not significant. Therefore, the two null hypotheses were retained.

Hypothesis Seven.--The null hypothesis was related to the posttest-1 group mean measures of the experimental
treatment group and the control group on the Anxiety Scale
(OPI). The data reflected a comparison of the two groups. The F-value was not significant. Therefore, the null hypothesis was retained.

**Hypothesis Eight.**—The null hypothesis was related to the posttest-1 group mean measures of the experimental treatment group and the control group on the Anxiety Scale (OPI). The data reflected interactions between group and sex, group and teaching level, and group and experience. The F-value for group and sex, group and teaching level, and group and five or less years of experience were not significant. Therefore, this part of the null hypothesis was retained. However, the F-value for group and six or more years of experience was significant. Therefore, the latter part of the null hypothesis was rejected. Overall, the null hypothesis was partially retained and partially rejected.

**Hypothesis Nine.**—The null hypothesis was related to the posttest-1 and posttest-2 group mean measures of the experimental treatment group on the TMAS. The data reflected a comparison of the two measures. The F-value was not significant. Therefore, the null hypothesis was retained.

**Hypothesis Ten.**—The null hypothesis was related to the posttest-1 and posttest-2 group mean measures of the experimental treatment group on the Anxiety Scale (OPI). The data
reflected a comparison of the two measures. The F-value was not significant. Therefore, the null hypothesis was retained.

**Hypothesis Eleven.**—The research hypothesis was related to the relationship of the total posttest-1 group mean measures of both the **TMAS** and the **Anxiety Scale (OPI)**. The data indicated a significant correlation coefficient in the positive direction; therefore, the research hypothesis was retained.

**Conclusions**

Based on the data presented, and within the limitations of the study, the following conclusions have been formulated:

1. Whatever effect the experience of attending a human relations workshop had, it cannot be measured by the **Anxiety Scale (OPI)** or the **TMAS**.

2. No segment of a school population will experience increased anxiety as a result of attending the Thiokol human relations workshop (1).

3. No significant changes in levels of teacher anxiety can be expected from attending a one-week human relations workshop with the possible exception of individuals with six or more years experience who did report lowered anxiety.

4. There is no longitudinal effect on levels of anxiety for teachers as a result of a human relations workshop experience.
Recommendations for Further Study

The following recommendations are derived from analysis of the data collected in this study and the findings of related research:

1. It should be determined whether there is a difference in anxiety levels when testing is done during the workshop itself as opposed to the anxiety levels when tests are mailed.

2. An attempt should be made in future studies of this type to compare the effects of several human relations workshop experiences which are scheduled throughout a school year for more reliable data.

3. Future studies for the purpose of determining the possible effects of a human relations workshop experience by studying the anxiety scores of teachers should include special activities specifically intended to be anxiety-reducing for teachers with six or more years experience since the data in the study suggest that anxiety levels for this group are most likely to be affected.

4. The effects of the experience of participating in the Interaction Laboratory for Teachers by Thiokol, Incorporated should be compared with effects of other human relations workshops dealing with teacher anxiety levels.

5. Future studies should explore the effects of teacher anxiety on classroom performance since the literature related to this study implies such a relationship.
CHAPTER BIBLIOGRAPHY


APPENDIX A
Dear

How often most of us have noted and wished for certain changes in education! Of course, we all know that the most important reason such change has been so slow is the lack of educational research. Thus, as professional educators we are always eager to contribute in any way we can to data which could make the school scene brighter!

I am enclosing just such an opportunity for you. The empirical data from these completed, returned questionnaires could begin to answer some important educational questions. You should note that your responses are not identified by your name or school. Too, the data will be analyzed as group data, thus assuring you of complete anonymity. Finally, the questions were designed to be quickly answered, approximately 20-30 minutes. (I know too well how limited your time is!)

Please take these few minutes, answer the questions, and send them back to me within the week you receive them, in the stamped, enclosed envelope. I need YOUR in-put in this important project!

Sincerely,

Margaret Milling

Mrs. Margaret Milling

M:vh

Encl.
Dear Fellow Educator:

Just a few weeks ago I wrote to you and asked you to participate in a study by answering two sets of questions. Your response was great and I appreciate it. Because I am going to be in contact with you this time and once more in the fall, I feel I would like to give you a little more information about my project.

Recently you have been a participant in a workshop which helped you "get it all together" about your feelings and thoughts in classroom interaction. Obviously, classroom interaction is such a complex area that it would be impossible to investigate it thoroughly in one dissertation research. Thus, my questionnaires were chosen to help me look at the feelings of just one of the participants--namely you, the teacher. I feel I cannot be more explicit at this point without negating the validation of the questionnaires. However, when the data has been analyzed I will be happy to share the conclusions with you.

Since you are unique in our school system I have chosen you to be a part of my research sample and it is extremely important that I have three responses from you. As I have pointed out I will be contacting you now and again in the fall with these same questions.

I, too, am an educator in the Fort Worth Public Schools. You may reach me at 738-6553 during the day and at 292-5840 in the evening. If you have any questions please call me.

Sincerely,

Margaret Milling

Mrs. Margaret Milling

MM: vh
Dear Fellow Educator:

This is the last time! You were so great to respond before and now I need to have you answer these questions once more as a delayed post-test to complete my research.

I know how busy you are; opening school is tough! But this time of the school year is a critical variable of my testing design. Please take a few minutes and get these back to me within 10 days.

Remember, if you want a copy of the results of my research please either indicate this on the questions, call me, or write me a note denoting same.

Thank you for helping me collect this data for my dissertation.

Sincerely,

Margaret Milling

Mrs. Margaret Milling
Principal
E. M. Daggett Elementary

MM:vh
Dear Fellow Educator:

I am currently working on a dissertation research which involves sending these questionnaires to a rather large sampling of teachers and I have chosen your name randomly. You will notice that I do not identify your questionnaire by name or school because the data will be analyzed as group data.

My research design calls for me to ask you to answer these same questionnaires twice—this time, and again very soon. I realize all too well what a busy time of the year this is and I do appreciate your help so very much.

My results should be analyzed in the fall and if you want to know these I will be so glad to share them with you if you will contact me.

I, too, am an educator in Fort Worth schools. If you would like further information, please call me at 738-6553 or 292-5840.

Sincerely,

Margaret Milling

Mrs. Margaret Milling

MM:vh
Encl.
Dear Fellow Educator:

I am currently working on a dissertation research which involves sending these questionnaires to a rather large sampling of teachers and I have chosen your name randomly. You will notice that I do not identify your questionnaire by name or school because the data will be analyzed as group data.

My research design calls for me to ask you to answer these same questionnaires two times. I realize all too well what a busy time of the year this is and I do appreciate your help so very much.

As I wrote you before, the results should be analyzed in the fall and if you want to know these I will be so glad to share them with you if you will contact me.

I, too, am an educator in Fort Worth schools. If you would like further information, please call me at 738-6553 or 292-5840.

You will note this is the second time I am asking you to respond.

Sincerely,

Margaret Milling

Mrs. Margaret Milling

MM:vh
Encl.
APPENDIX B
Sex:

Present Teaching Level:

Years of Public School Experience (include current year):

Elementary  ___

Middle  ___

Senior Hi  ___

Answer the following questions True or False by placing T or F in front of the item number.

1. I am happy most of the time.
2. I am inclined to take things hard.
3. I have more trouble concentrating than others seem to have.
4. I have had more than my share of things to worry about.
5. I am a high-strung person.
6. I am not unusually self-conscious.
7. I shrink from facing a crisis or difficulty.
8. I am usually calm and not easily upset.
9. I frequently find myself worrying about something.
10. I have sometimes felt that difficulties were piling up so high that I could not overcome them.
11. I am certainly lacking in self-confidence.
12. I cannot keep my mind on one thing.
13. I believe I am no more nervous than most persons.
14. Life is a strain for me much of the time.

15. I find it hard to keep my mind on a task or job.

16. I am more sensitive than most people.

17. I sometimes feel that I am about to go to pieces.

18. I have feelings of anxiety about something or someone almost all the time.

19. I have periods of such great restlessness that I cannot sit for long in a chair.

20. I enjoy chatting and playing with children.
Biographical Inventory--2

Sex:

Present Teaching Level: Elementary

Years of Public School Experience (include current year): Senior Hi

Answer the following questions True or False by placing T or F in front of the item number.

1. I do not tire quickly.
2. I am often sick to my stomach.
3. I am about as nervous as other people.
4. I have very few headaches.
5. I work under a great deal of strain.
6. I cannot keep my mind on one thing.
7. I worry over money and business.
8. I frequently notice my hand shakes when I try to do something.
9. I blush as often as others.
10. I have diarrhea once a month or more.
11. I worry quite a bit over possible troubles.
12. I practically never blush.
13. I am often afraid that I am going to blush.
14. I have nightmares every few nights.
15. My hands and feet are usually warm enough.
16. I sweat very easily even on cool days.
17. When embarrassed I often break out in a sweat which is very annoying.
18. I do not often notice my heart pounding and I am seldom short of breath.
19. I feel hungry almost all the time.
20. Often my bowels don't move for several days at a time.
21. I have a great deal of stomach trouble.
22. At times I lose sleep over worry.
23. My sleep is restless and disturbed.
24. I often dream about things I don't like to tell other people.
25. I am easily embarrassed.
26. My feelings are hurt easier than those of most people.
27. I often find myself worrying about something.
28. I wish I could be as happy as others.
29. I am usually calm and not easily upset.
30. I cry easily.
31. I feel anxious about something or someone almost all the time.
32. I am happy most of the time.
33. It makes nervous to have to wait.
34. At times I am so restless that I cannot sit in a chair for very long.
35. Sometimes I become so excited that I find it hard to get to sleep.
36. I have often felt that I faced so many difficulties I could not overcome them.
37. At times I have been worried beyond reason about something that really did not matter.
38. I do not have as many fears as my friends.
39. I have been afraid of things or people that I know could not hurt me.
40. I certainly feel useless at times.
41. I find it hard to keep my mind on a task or job.

42. I am more self-conscious than most people.

43. I am the kind of person who takes things hard.

44. I am a very nervous person.

45. Life is often a strain for me.

46. I am not at all confident of myself.

47. At times I feel that I am going to crack up.

48. I don't like to face a difficulty or make an important decision.

49. I am very confident of myself.

50. I do not smoke.
Exercise No. 19

TRAINER PREPARATION

GENERAL DESCRIPTION

This exercise is focused on an element of modern society that is of critical importance to teachers. Children are profoundly influenced by the conditions under which they live, and the pressures they feel as the direct result of societal forces in action. Teachers have often tended to ignore these influences as "something I can't do anything about," or as topics too sensitive to discuss. But since they are real problems, the need to acknowledge them also is real.

This exercise directs attention to the question of the disadvantaged in a slightly different light from that in which it is commonly seen today. The exercise is not intended to disparage the culture of ethnic groups that have felt the weight of prejudice through the years. It should serve, rather, to point out the special needs of children from diverse backgrounds and to suggest the importance of the teacher's responsibility to provide a warm, human relationship with the children he teaches. This exercise should not be interpreted as condoning the circumstances in which many "culturally different" people find themselves today. It says, rather, that until these conditions can be changed the school must take leadership by recognizing the effects of differing cultural origins, and working to use or offset them to offer the best possible learning opportunity for each child.

Activity in the exercise is built around the film strip, "Two Lives," which contrasts the lives of two ten-year-old boys. The exercise includes viewing the film strip, arriving at some perspective of what constitutes being disadvantaged, and discussion of the implications of situations like those depicted in the film strip for teachers.

OBJECTIVES

1. Participants should arrive at a broadened and clearer definition of the term "disadvantaged," and be able to identify a variety of origins of the condition.
2. Participants should recognize the critical position of the teacher in relating to children who come from backgrounds that are likely to adversely affect school behavior and achievement.

SPECIAL TECHNIQUES

1. See "Interpersonal Skills," Section II.
2. The examples in the film strip are slanted, and perhaps overdrawn to make a particular point. However, the trainer should take care to point out, drawing upon experiences of group members, if possible, that the situations in the film strip are very possible. They are, in fact, drawn from actual experience. It should also be stressed that the cultural settings of the cases in the film strip are in no way exclusive sources of the problems shown.
3. Because the materials in the exercise deal in a limited way with a racial issue, care should be taken to avoid a "showdown" among ethnic groups within a racially mixed Laboratory group, or racial stereotyping in groups where minorities are not represented. The exercise can serve to enhance understanding of other points of view if it is recognized that there are many ways in which those who are not poor might be disadvantaged, and by which a child might be expected to manifest all the problems of the disadvantaged may make a satisfactory adjustment to society.

EQUIPMENT, MATERIALS, AND FACILITIES

1. Trainer Aid No. 13 (film strip)
2. Trainer Aid No. 13a (cassette tape)
3. Film strip projector (35mm)
4. Cassette tape recorder
5. Screen

TRAINING PROCEDURES

1. Begin the session by stating that the topic for today is the disadvantaged. Ask each one to write three or four characteristics they think of as being associated with the disadvantaged. Do not spend time in discussing their list until after the film strip is shown.
2. Show the film strip without any discussion of the problem, then move directly into discussion following the film.
3. The film strip is prepared so that the audio tape provides the key to progress through the film. Set the film so that you are on the frame marked number one when the music begins on the audio tape, then advance the film one frame each time the tone is heard.

DISCUSSION NOTES

1. The trainer should begin the discussion with the following kinds of questions:
   a. Which is the disadvantaged child? (Do not accept immediately the answer that both are disadvantaged. Press initially for identification of one or the other, or for very strong reasons why both should be considered disadvantaged. The trainer eventually may allow the students to convince him that each boy is disadvantaged in a particular way.)
   b. Are the situations shown in film strip possible? How do they compare with actual situations?
   c. How does your list of characteristics of a disadvantaged child compare with how you look at the disadvantaged now?
   d. What would you expect the situation of each of the two boys to be at age 16? At age 21?
2. The trainer should focus the latter part of the discussion on questions like:
   a. What might a teacher do to help overcome the problems shown for each boy in the film?
   b. What particular kind of teacher might be best suited to help both boys?
   c. What skills are you learning in the Interaction Lab that will help you work with problems like those shown in the film?
   d. Since these are problems growing, at least in part, from modern culture, are there any characteristics of modern schools that might be particularly helpful in resolving these problems?
APPENDIX D
TABLE X

SUMMARY OF GROUP MEAN ANXIETY SCORES FOR ANXIETY SCALE (OPI)*

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<th>Anxiety Scale (OPI)</th>
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*Normed mean = 7.70.
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<th>Table XI</th>
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*Normed mean = 14.56
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