A STUDY OF THE EFFECT OF HOMOGENEOUS GROUPING ON SYSTEMATIC DESENSITIZATION FOR THE REDUCTION OF INTERPERSONAL COMMUNICATIVE APPREHENSION

Thesis for the Degree of Ph. D. MICHIGAN STATE UNIVERSITY CHARLES D. ERTLE 1969





This is to certify that the

thesis entitled

A STUDY OF THE EFFECT OF HOMOGENEOUS GROUPING ON SYSTEMATIC DESENSITIZATION FOR THE REDUCTION OF INTERPERSONAL COMMUNICATIVE APPREHENSION

presented by

Charles D. Ertle

has been accepted towards fulfillment of the requirements for

Ph.D. degree in Speech

Major professor

Date May 27, 1969

O-169



ABSTRACT

A STUDY OF THE EFFECT OF HOMOGENEOUS GROUPING ON SYSTEMATIC DESENSITIZATION FOR THE REDUCTION OF INTERPERSONAL COMMUNICATIVE APPREHENSION

Вy

Charles D. Ertle

A review of the literature discloses that communicative apprehension is a type of anxiety, that anxiety is a perceived state of mind accompanied by overt behavioral changes, and that communicative anxiety is a learned response associated with personal threat to one's self-esteem.

An individual tends to avoid communicative situations to reduce a high level of anxiety. If the situation cannot be avoided by the individual, which is the case with a required course in public speaking, his level of anxiety intensifies. Over time a specific anxiety generalizes to like situations causing a general level of debilitating communicative anxiety rendering the individual ineffective in his communicative interaction.

Systematic Desensitization (S.D.) training has been successfully employed for the reduction of test and speech anxiety on an individual and small group basis. If S.D. training is to be economical and efficient, it must be applied in large training groups. It then becomes important to

T

5

÷,

÷

. . determine possible detrimental effects to the extinction rate of the less anxious Ss caused by the slow pace of the highly anxious Ss when heterogeneously grouped.

Charles D. Ertle

The above problem led to the experimental hypothesis that homogeneously assigned training groups will report a significantly greater reduction of anxiety than heterogeneously assigned training groups, who will, in turn, show a significantly greater reduction of anxiety than a comparable control group.

Students enrolled in the basic public speaking course who indicated a high level of communicative anxiety and volunteered for training were assigned to either the heterogeneous training group, the homogeneous training group or the control group. Five hours of S.D. training were administered. A pretest, posttest and delayed posttest were administered and analyzed by analysis of variance with subsequent \underline{t} -test when justified.

Analysis of the data showed that the hypothesis was not confirmed. Although a significant F-ratio was obtained, subsequent \underline{t} -tests indicated a significant difference between the heterogeneous treatment and the control condition, between the homogeneous treatment and the control condition, and between the heterogeneous and homogeneous treatments in the opposite direction hypothesized. The difference between the heterogeneous and homogeneous treatments failed to reach significance over time.

A STUDY OF THE EFFECT OF HOMOGENEOUS GROUPING ON SYSTEMATIC DESENSITIZATION FOR THE REDUCTION OF INTERPERSONAL COMMUNICATIVE APPREHENSION

Ву

Charles D. Ertle

A THESIS

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Department of Speech

Accepted by the faculty of the Department of Communication of the College of Communication Arts, Michigan State University in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Thesis Director

Guidance Committee

Chairman

9 liam

ACKNOWLEDGMENTS

The writer would like to express his appreciation to all those who offered both their time and advice during the preparation of the thesis. Special credit and appreciation are due to the following people:

To Dr. James C. McCroskey for his advice, guidance, and encouragement during the planning, execution, and writing of this study;

To Dr. David C. Ralph, Dr. William B. Lashbrook, Dr. Lawrence E. Sarbaugh, and Dr. William E. Sweetland, members of the Thesis Committee, whose guidance and advice were instrumental in the completion of this study;

To the Junior Staff instructors of the Department of Communication for their assistance in securing class time for the administration of the pretest and posttest measurements;

To my wife, Marion, for her invaluable services as stenographer, her enthusiasm and motivation for my success, and endless patience as a graduate student wife;

To all these persons and many others who offered advice and encouragement, the writer expresses sincere thanks.

iii

TABLE OF CONTENTS

.

Chapter

Page

60

I.	INTRODUCTION	
	General Statement of the Problem Review of Anxiety Studies	1 7
	Fright) Literature	12
	Hypothesis	24 28
II.	PROCEDURES OF THE STUDY	
	Selection of Ss Selection of Treiners Treining Procedures Meesurement end Anelysis	30 32 32 36
III.	REPORTING OF RESULTS	
	PRCA Pre-Post Shift PRCA Pre-Delayed Post and Post- Delayed Post Shift SAI Post and Post-Delayed Post Shift "Cure" Success	38 10 12 15
IV.	SUMMARY, DISCUSSION OF RESULTS, AND IMPLICATIONS FOR FUTURE RESEARCH	
	Summery	46 49 22
REFER	RENCES	56
APPEN	NDIX A: Personal Report of Communicative Apprehension	57
APPEN	NDIX B: Student Schedule Sheet 5	59

APPENDIX D: Speech Anxiety Inventory 61

APPENDIX C: Communication Anxiety Hierarchy . .

TABLE OF CONTENTS

.

Chapter

I. INTRODUCTION

Page

General Statement of the Problem Review of Anxiety Studies Review of Relevant Interpersonal	•: •	•	•	•	1 7
Fright) Literature	•	•	•	•	12
Hypothesis	•	•	• .	•	24 28
II. PROCEDURES OF THE STUDY					
Selection of Ss	• • •	• • •	• • •	• • •	30 32 32 36
III. REPORTING OF RESULTS					
PRCA Pre-Post Shift	•	•	•	•	38
Delayed Post Shift SAI Post and Post-Delayed Post Sh "Cure" Success	ni!	ft	• • •	•	40 42 45
IV. SUMMARY, DISCUSSION OF RESULTS, AND IMPLICATIONS FOR FUTURE RESEARCH					
Summery Discussion of Results Implications for Future Research	• •	• •	• • •	• •	46 49 52
REFERENCES	•	•	•	•	56
APPENDIX A: Personal Report of Communica Apprehension	•ti	ive •	•	•	57
APPENDIX B: Student Schedule Sheet	•	•	•	•	59
APPENDIX C: Communication Anxiety Hierar	•cł	ny	•	•	60
APPENDIX D: Speech Anxiety Inventory .	•	•	•	•	61

LIST OF TABLES

Table		Page
1.	Experimental Design	33
2.	Summery of Two-Wey Analysis of Variance: PRCA Pre-Post Change Scores	39
3.	X PRCA Pre-Post Change Scores by Treatment and Level	39
4.	Summary of One-Way Analysis of Variance: PRCA Pre-Delayed Post Change Scores	41
5.	X PRCA Pre-Delayed Post Change Scores by Treatment	41
6.	Summary of One-Way Analysis of Variance: PRCA Post-Delayed Post Change Scores	μι
7.	Summary of Two-Way Analysis of Variance: SAI Posttest Scores	43
8.	X SAI Posttest Scores by Treatment and Level	43
9.	Summery of One-Way Analysis of Variance: SAI Post-Delayed Post Change Scores	44
10.	Chi-square Tests of "Cure" Success Between Experimental Conditions	44
11.	Chi-square Test of "Cure" Success Between Experimental and Control Conditions	44

CHAPTER I

INTRODUCTION

General Statement of the Problem

The problem stems from a phenomenon known as "fear" or "enxiety." Specifically that "fear" or "anxiety" which is in response to interpersonal communication situations. Aristotle in his discussion of the emotions suggests the following:

Fear may be defined as a pain or disturbance arising from a mental image of impending evil of a destructive or painful sort. ...the very indications (signs) of such things cause fear, since they suggest that the thing is at hand; "danger" means just this--the proximity of anything we dread. ...it follows, therefore, that fear is experienced by those who think themselves likely to suffer, and to suffer from particular persons particular things at particular times. (Cooper, 1960) pp. 107-110)

As noted above, "fear" (a feeling of anxiety) is a state of mind accompanied by psychological and physiological reactions of the body that are elicited by threatening situations. Murry (1964) in a discussion of emotions suggests a difference between "fear" and "anxiety." He suggests the following:

Innate physical stimuli and the cues associated with them account for only a part of the situations that arouse emotions in human beings. Emotions are also aroused by threats to our more personal and social motives. ...we can say that they revolve around our self-esteem and the social goals that are important to us in a personal sense. Psychoanalytic theorists point to this source of emotional arousal when they distinguish between <u>fear</u> and <u>anxiety</u>. Now, physiologically these two are identical--both involve a palpitating heart and feeling of dread. Fear, however, is usually thought to involve a specific, physical threat, whereas anxiety is a more general reaction to personal threats. (p. 54)

In general, anxiety is an emotional state of mind reacting to personal threats. Lundin (1961) considers anxiety "...as the group of responses an organism makes under certain stimulus operations." (p. 262) Lundin suggests that anxiety is a learned behavioral response that is caused by a "neutral stimulus" followed by a "primary aversive stimulus." Lundin states:

The paradigm reads S1----S2. The S1 would be the neutral stimulus that is followed at some point in time by the aversive one, S2. When this operation is repeated, the behavioral consequences are termed anxiety. ... the S can take on the function of a conditioned negative reinforcer and that some of the consequences of that pairing will involve respondent behavior. ... However, for the operation to be properly identified as anxiety, the temporal separation between the two stimuli must be of sufficient duration to allow the behavioral changes to occur. Secondly, there is the matter of the inevitability of the aversive stimulus that follows the neutral one. If the organism can do something to terminate it, the condition then becomes avoidance and not anxiety. (p. 264)

Brady and Hunt (1955) suggest that once anxiety is developed it becomes intensified through the passage of time. Often when the anxiety response is acquired by an individual it will generalize to other stimuli making the identification of the originating stimuli by the individual impossible. The above two characteristics of anxiety suggest that a person can become highly anxious when faced with a general situation as opposed to a specific stimuli and not be conscious of the cause of his anxiety. Thus a person may develop an habitual response of intense anxiety to a general situation as a reaction to personal threats, the origination of which he may not be able to define. "Stage fright," as experienced in the speaking situation, is an example of this type of anxiety phenomenon.

A state of anxiety (stage fright) develops as people perceive interpersonal communicative situations as a source of threat to their self-esteem or social goals. In time, the anxiety state becomes a learned habitual response that may be generalized to all speaking situations and may be stimulated by the image of the situation alone. Clevenger (1955) defines stage fright as the following:

> ...any emotional condition in which emotion overcomes intellect to the extent that communication is hampered, either in audience reception or in speaker self-expression, where the immediate object or stimulus of the emotion is the speech-audience situation. (p. 30)

A state of anxiety (stage fright) may become a debilitating response to any interpersonal communicative situation whether in a one-to-one relationship, in a small group, or in a one-to-many situation. Such anxiety, if strong enough, may act to inhibit or distort the interpersonal communication of the individual. Examples of this are all too frequent in the basic speech and group discussion courses that are

required for graduation in a large number of high schools and colleges. The student who visibly shakes while giving a speech, or who does not show up for class on the day he is to speak, or the student who avoids interaction during a group discussion are all examples of people who may suffer from a state of debilitating communicative anxiety. Outside the high school and college environment where the communicative situation is inevitable, a person with communicative anxiety usually seeks to avoid interpersonal interaction as much as possible thus reducing his level of anxiety. However, in a society that is increasingly dependent on interpersonal communication to sustain itself, an avoidance response by an individual striving to reduce his state of anxiety may be termed maladaptive behavior and a cause for concern.

Until recently the debilitating effect of speech anxiety remained as an unsolved problem. Many college speech texts have offered cures for speech anxiety. Clevenger and Phifer (1959), reviewing several speech texts, list the following as possible cures:

Many schemes for personality development are suggested: get out and meet people; make new friends; attempt consciously to become a more outgoing individual. One recent textbook tells the student to list all social situations in which he has reactions like stage fright, and then to role-play several such experiences daily. He will develop all-around social poise and this will be reflected in his speaking. ...In another textbook the speaker is told to acknowledge his stage fright and learn to live with it. ...Another outgrowth of the semantic movement is the suggestion that the speaker learn to expect less of himself.

... The cure is to re-orient oneself, to accept limited, "attainable" goals in place of vague or unrealistic ones. ... Perhaps the most common admonition on practice methods is to urge one to speak as often as possible. (pp. 4-5)

Clevenger and Phifer (1959) also add that most of the textbooks reviewed devote more space to the above techniques than to the nature and causes of the anxiety. They suggest that the speech profession "reflects a pragmatic orientation" toward the problem of anxiety. "...we may not know what stage fright is, but we have some cures that seem to work." (p. 4)

The above techniques, although posited as cures for stage fright, negate a basic assumption of reinforcementlearning theory. When a person who has developed an habitual pettern of debilitating communicative anxiety is forced to speak as often as possible, he is performing a behavior that is a reinforcement to the state of anxiety. Practice only reinforces or intensifies the level of anxiety and does not. as the textbooks suggest, cure anxiety. For years the speech profession has suggested that practice makes perfect. Reinforcement theory, however, suggests that practice makes permanent. and in the case of communicative anxiety, practice intensifies the problem. What is needed is a technique based on learning theory that will extinguish the state of anxiety prior to taking a speech course based on performance. Most colleges today administer tests to incoming Freshmen to determine their level of ability in subjects such as math and English. On the basis of these tests, students who show a

deficient comprehension of the subject are required to enroll in remedial courses designed to correct their individual problems. The same procedure needs to be followed with a person's interpersonal communicative ability. This would help a student with debilitating anxiety interact not only in a specific speech class but in all of his academic work.

Wolpe and Lazarus (1966) describe a behavior therapy technique for the extinction of anxiety termed "Systematic Desensitization" (S.D.). They suggest the following:

A habit (anxiety response) is a consistent way of responding to defined stimulus conditions. Behavior therapy is the application of experimentally established principles of learning to the overcoming of the persistent habit. In order to change a habit it is always necessary to modify the individual responses that constitute it. Change thus depends on eliciting behavior that can modify these individual responses. (p. 1)

Specifically, S.D. breaks down anxiety response habits by using a physiological state incompatible with a state of anxiety or tension in order to inhibit the anxiety response to a weaker stimulus, repeating the exposure until the stimulus: completely loses its anxiety-evoking ability. The same procedure is repeated with progressively stronger stimuli, extinguishing each separate stimuli through the completion of an anxiety hierarchy.

Barrick, McCroskey, and Ralph (1968) adapted the S.D. technique of Wolpe and Lazarus for the purpose of reducing student anxiety in test and speaking situations. They found that speech-anxious students treated by S.D. for speech anxiety showed a significantly greater reduction in speech anxiety than those speech-anxious students who did not receive the S.D. treatment, and that S.D. treatment could be administered successfully by speech educators trained in S.D. but with limited psychological backgrounds. The authors stated the following: "It would appear, therefore, that S.D. is a relatively 'safe' technique for assisting students to overcome test and speech anxiety." (p. 17) An earlier study by Paul (1966) also indicates support for the successful implementation of lay personnel as trainers in the S.D. method.

The original problem was to develop a method of reducing anxiety associated with speaking. The method of S.D. has been found successful in decreasing the anxiety level of students who originally suffered from a debilitating level of speech or test anxiety. The problem area of this study concerns 1) broadening the technique of S.D. to include other communicative situations beyond the usual one-to-many situation of the speech classroom, and 2) increasing the usefulness of the technique by determining what changes in procedure might be needed in order to increase the size of group that can receive treatment at one time.

Review of Anxiety Studies

Anxiety as we view it today is not unlike the viewpoint expressed by Freud (1936). Freud considered anxiety as a consciously painful experience which arose from excitations of the internal organs of the body. In a conscious state the person is able to distinguish anxiety from other experiences

of psin. The feeling of anxiety is never unconscious, although its origins could be. Freud distinguishes three types of anxiety: 1) "reality anxiety," anxiety felt from the outside world; 2) "neurotic anxiety," anxiety coming from the "id;" and 3) "moral anxiety," shame or guilt experienced by the "ego." All three are unpleasant to the individual and differ only in their sources. Freud suggests that all three types of anxiety share the main function of acting as a "warning signal" to a person. He posits that the signal is to the ego to do something about the problem by evading, escaping, overcoming, or building up defenses. If the ego can do nothing about the anxiety, the result is the "overwhelming" of the personality and eventual nervous breakdownn or psychosis.

Sernoff and Zimbardo (1961) using Freud's (1936) conceptual distinctions between fear and anxiety conducted an empirical study in which they observed a tendency for an anxious person to seek out isolation while the fearful person seeks out affiliation. They suggest, as does Freud, that when fear is demonstrated in a person, it is a result of stimuli from an external object that is inherently dangerous, and the person responds directly to the external stimuli by "flight" from the object at one extreme or "conquest" at the other. Freud's "neurotic anxiety" elicits the same response as does fear. When people's anxieties are aroused, they become more preoccupied with the reassertion of inner selfcontrol than with ways of dealing with the external anxiety evoking stimuli. "Because the anxious person tends to be

aware of the element of <u>inappropriateness</u> in his feelings, he is loathe to communicate his anxieties to others." (p. 58) Sarnoff and Zimbardo hypothesized that Ss in a high fear condition would choose to be together, while Ss in a high anxiety condition would choose isolation. Their hypotheses were confirmed. The importance of this study is that people in an intense state of anxiety seek isolation rather than interaction as a means of reducing their anxiety. Accordingly, when an anxious person is forced to interact, his level of anxiety may well become intensified.

In recent years a number of experimental studies have been conducted which view anxiety from the standpoint of learning theories. Estes and Skinner (1941) demonstrated intense anxiety states in laboratory animals. They conditioned rats to press a bar for food in the normal mode of Skinnerian instruments; learning on a reinforcement schedule of four minutes. After this response was established, they designed a stimulus response situation to create a state of anxiety in the rats. They sounded a tone continously for five minutes followed by an electric shock. The same sequence was repeated over and over while the rats were engaged in barpressing for food. The result was a general decrease in the rate of bar pressing. As the sequence of tone and shock were repeated, the rate of bar pressing decreased more and more. In order to control for the possibility of the shock's acting as a direct punishment causing extinction, the bar pressing response was never immediately followed by a shock. The animals learned to associate a neutral stimulus (the tone) with

impending danger (the shock) and, as a result, increasingly avoided the external object (food) following the start of the tone. They also found that the decrease in response rate following the tone happened significantly more often with the experimental animals than with a control group of animals who received "unanticipated shocks" without any warning. Although anxiety could not be directly measured, as with selfreport measurements in human experimentation, Estes and Skinner suggest that the behavioral response of the rats was similar in nature to the type of behavioral response people demonstrate in a state of anxiety.

An early study demonstrating anxiety and anxiety generalization in humans was reported by Diven (1937). In this study Ss were told to read out loud a list of words in association to a neutral stimulus word presented by the experimenter. The Ss were asked to respond from the list for a period of twelve seconds. The experimenter then presented another word stimulus and the S responded for twelve seconds. This sequence was repeated over and over again. Whenever the Ss' list of words had the word "red" followed by the word "barn" the experimenter would present an electric shock to the S at the end of the twelve-second interval. The shock sequence appeared intermittently six times for each S. Using the SAs GSR rate as a measurement of anxiety, Diven found that the strongest anxiety reaction occurred when the word "barn" was presented. He also noted significant reactions to the word "red" and to a lesser extent the Ss reacted to other words such as "sheep," "plow," and "pasture." The anxiety

10

reaction had generalized from the original word that was always shocked to words that were close to it in time or meaning. Another interesting finding was that half of the Ss were not able to remember what word had been followed by the shock. This study is significant in that it helps explain why some people live in a chronic state of anxiety as a result of generalizing from a specific stimuli to a large number of stimuli to the extent that the person is unable to discriminate between stimuli. Accordingly a person who received an aversive stimulus in a one-to-one communicative relationship may generalize the state of anxiety to all communication situations and live in a chronic state of anxiety due to any form of interpersonal communicative interaction.

Lundin (1961) in discussing the physiological responses of anxiety in humans states the following:

... the behavior has many manifestations, including both respondent and perant reactions. Included among these are changes in physiological functioning as well as overtactions ... when the internal changes occur, they can operate as stimuli for verbal responses that add to the description of anxiety. The responses may be implicit or become verbalized as "feelings"...many changes in activity are a function of the autonomic nervous system: increases in blood pressure and pulse rate, cessation of digestion, frequency of urination and defecation. Breathing often becomes shallow and rapid, pupils dilate, excessive perspiration appears, with cessation of normal salivary secretion. More overtly anxiety is expressed in an increase in motor activity, sometimes described as restlessness or heightened muscular rigidity. ... Readtion time is reduced, "jumpiness is evident at even the presentation of mild stimuli. Increased muscular rigidity operates to interfere with sleep, and if intense enough, disturbs co-ordinated movements. (pp. 271-272)

Lundin's description of the physiological responses of anxiety suggest two additional forms of anxiety measurement beyond the S's self-report: 1) a direct behavioral measurement such as blood pressure, pulse rate or perspiration rate, and 2) measurement by trained observers of the more overt responses such as restlessness, reaction time or jumpiness. Barrick, McCroskey, and Ralph (1968) found a significant relationship between GSR and self-report data. Many of the studies of stage fright have used a form of physiological measurement coupled with self-report.

<u>Review of Relevant Interpersonal</u> Communicative Anxiety (Stage Fright) Literature

The literature in this area divides as follows: a) studies dealing with the definition and measurement of communicative anxiety, and b) studies that deal with the extinction of communicative anxiety.

Clevenger (1955) in a review article seeking to define "stage fright" suggests that all of the writers are "talking about the same emotional continuum." He defines a continuum of stage fright as a class of unpleasant emotions ranging from a mild level, "which may be useful to the speaker" to an intense or severe level, "which disrupts the communicative process altogether." Clevenger in his review states:

Baird and Knower say that stage fright is a conditioned form of fear involving complex predisposing and precipitating factors. Hollingworth's opinion is that it is a fairly simple conditioned response. ...Thonssen and Gilkinson further modify the fear hypothesis by calling our

particular problem one of 'social fear' accompanied by bodily tensions. ...Authors have called it (stage fright) fear, anxiety, self-consciousness, nervousness, excitement, incipient neurosis, and lack of poise, among other names; but in virtually every case the assumption has been implicit that stage fright presents a single, more or less easily definable, emotional state. (pp. 27-28)

Clevenger further suggests that studying people who display a mild level of stage fright adds insight to the cause of the problem, but they are not the principal concern; instead "since stage fright is a behavior problem we are primarily concerned with the speaker whose communication is disrupted in some fashion." Clevenger's article points out that the writers in the speech field are in close agreement with the writers in psychology that were reviewed in the preceding section. Therefore, stage fright presumably may be viewed as a form of anxiety that may be extinguished according to procedures based on learning theories in the same manner as other forms of anxiety.

Clevenger (1959) in a subsequent article reviewing experimental research in stage fright focuses on the problems associated with the measurement of stage fright. Clevenger, like Lundin (1961), found three categories of measurement: "observer rating scales, introspective measures, and devices for measuring physiological changes during speaking." In reviewing experiments employing observer rating scales, Clevenger reports that the data suggests that judges are "less reliable" in judging "fearful" speakers than in judging confident ones. Clevenger states that "Teachers of speech are evidently in stronger agreement concerning what constitutes the absence of stage fright than what constitutes its presence." Clevenger found that introspective measures of stage fright measure a different variable than is measured by judges' ratings. He suggests that "a group of observers tends to notice less disruption in the speaker than the speaker reports having experience." As a result of his synthesis Clevenger formulated several hypotheses. The hypotheses relevant to this study were:

Between over-all measures of experienced stage fright and observational indices of certain specific behaviors, a positive but very weak relationship prevails. Observed stage fright bears a strong negative relationship to judgments of speaking ability, while experienced stage fright (introspective measures) bears a weak negative relationship to judgments of speaking ability. (p. 145)

Clevenger also noted that inventory accounts of social adjustment (Social Adjustment scores on the Minnesota Personality Test) tended to correlate with introspective accounts of an S's experienced stage fright but did not tend to correlate with observers' judgments of stage fright. Concerning physiological measures, Clevenger states the following:

> Obviously, the reliability of instruments for measuring physiological reactions to the speech situation is the most highly reliable of the three classes of stage fright measures (observer, self report, physiological). Though test, retest, and split-half coefficients cannot be performed on pulse rate, psychogalvanometer, and sphygmomanometer readings, one may assume high reliabilities for such measurements. (pp. 136-137)

The important point of Clevenger's synthesis is that, of the three known forms of measuring communicative anxiety, the direct physiological measure and the individual's self-report of experienced anxiety tend to be related measures, but these measures do not seem to be highly related to observer ratings. The above point is consistent with anxiety theory in that anxiety is a state of mind within an individual's cognitive structure accompanied by physiological changes, both of which are internal elements within the individual. Observer ratings, on the other hand, are external elements to an individual and are subject to the misperception and biases of the observer.

Low and Sheets (1951) in a study of the performance of students in beginning speech classes on a group of psychometric tests noted many significant differences between the groups termed "most stage fright" and the groups termed "least stage fright." The tests' results indicated that the "most stage fright" group in comparison to the "least stage fright" group had not engaged in as much platform speaking, had not been as active in extra-curricular and social activities, showed difficulty in making adequate social adjustment, and had less interest in activities which involve selfexpression in verbal activities. The researchers did not find a significant difference between the groups in general intelligence, quantitative reasoning ability, the "more important" phases of personality, or their interest in fields of science, mechanics, nature and business. Low and Sheets

state that the finding of greatest significance was the difference in the amount of speaking experience reflected in the backgrounds of the two groups. The researchers state the fol-

lowing:

In making practical application of this apparent difference (speaking experience) between the two groups of students, the obvious solution in reducing stage fright would seem to be placing fearful students in situations where they would get the requisite speaking experience. Although this approach would undoubtedly have merit in many instances, the results of this present study seem to point to the need for a broader interpretation of the findings. There were many indications. for example, that students with unusual stage fright did not lack for opportunities to obtain speaking experience. They came from essentially the same environment as did students with "least stage fright;" however, they had consistently avoided speaking situations. The fact might be interpreted to mean that the lack of speaking experience was only symptomatic of a more deep-seated personality problem suggesting the need for a clinical approach to the more severe cases, either to preceed or parallel the public speaking class. (p. 271)

The importance of the Low and Sheets experiment is the suggestion that severe or intense cases of communicative anxiety be treated outside of the speech classroom employing a controlled therapy training approach to the extinction of the anxiety. There have been several successful experiments that have complied with this suggestion.

Kondas (1967) experimented with three types of therapy treatment in an effort to extinguish communicative anxiety (stage fright) in a group of high school students and a group of college students. With both the high school and college

subjects Kondes established a control group plus three experimental conditions: 1) relaxation alone, 2) imagination of hierarchy items, and 3) S.D. adopted from Wolpe (1966) which incorporates both relaxation and imagination of hierarchy items.

The S.D. training method is essentially composed of two parts. The first is training in deep muscular relaxation which acts as an inhibitive agent on anxiety. Tension theoretically is not compatible with a state of deep relaxation. The second part of the S.D. training involves the subject's ability to imagine anxiety-provoking situations. The situations are presented in a hierarchal order based on the amount of anxiety potential each one has.

Kondas was interested in the specific effect of each of the above components of A.D. separately and the effect of combining them, as is done in S.D. training. In the experimental conditions, treatment groups of five Ss or less were employed.

Kondas used three means to measure the results of the experimentation: 1) personal interviews, 2) a speech Fear Survey Schedule, and 3) the Ss' GSR reading. There was a pretest, posttest and a five-month delayed posttest taken on the Fear Survey Schedule of speaking anxiety (F.S.S.).

The results of the experimentation showed that the S.D. method reduced anxiety in both groups significantly more than did relaxation alone and that relaxation alone was significantly better in reducing the anxiety level than imagination of hierarchy items alone when measured on the pre- and

posttest. When the Ss were measured on the five-month delayed posttest the results showed that S.D. was the only method that demonstrated a significant decrease in the Ss anxiety level over time.

Kondas noted that during the interview <u>all</u> students reported a reduction or elimination of stage fright after S.D. Although not specifically stated by Kondas, the implication is that he did not obtain 100% success with the other two methods. In the conclusion of the article Kondas states:

The results show that the method of S.D. is efficient in reducing stage fright. The present outcome is similar to Lazarus! work on the method of group S.D. in adults; group desensitization it appears is also snake phobias (Lang and Lazovik, 1963) or spider phobias (Rachman, 1965), socialevaluative anxiety, examination anxiety or stage fright are suitable problems for experiments in desensitization (also from the standpoint of the ethics of therapeutic research). ... It may be mentioned that according to the data collected from students as well as common observation that stage fright seems to be considerably resistant to extinction by natural events. Despite the fact that students, for example, have a large number of opportunities for public speaking, the stage fright reaction had not been eliminated in many cases--even though some of them had tried deep breathing or to think about pleasant things when stage fright had arisen. Contrary to the inefficient extinction occurring in natural circumstances immediate reduction of fear occurs by S.D., and 'the desensitization of imaginal stimuli does ideed generalize to real-life situations.' (Rachman, 1966). (pp. 279-280)

Of particular importance in the Kondas experiment are the findings that: 1) S.D. is successful with high school students as well as college students, 2) The method of S.D. is

effective over at least a five-month extended period of time, and 3) In the cases of serious anxiety, increasing the Ss' speaking opportunities is ineffective in reducing the Ss' anxiety whereas the method of S.D. causes an "immediate reduction of fear."

Another experiment employing behavioral therapy methods for the purpose of reducing communicative anxiety was conducted by Paul (1966). The design of the experiment employed four experimental conditions and a control group. The experimental groups were: 1) S.D. treatment--N = 15, 2) Insight Psychotherapy--N = 15, 3) Attention Placebo--N = 15, and 4) Classroom Only--N = 29. A control group of 22 was also established. A battery of tests were administered to 710 college speech students. The battery of tests included the Anxiety Differential (Husek and Alexander, 1963); the I.P.A.T. Anxiety Scale Questionnaire (Cattell, 1957); the Pittsburgh Social Extroversion-Introversion and Emotionality Scales, including the MMPI L-scale (Bendig, 1962); the Interpersonal Anxiety Scales from the S-R Inventory of Anxiousness (Endler, Hunt, and Rosenstein, 1962); and a short form of the Personal Report of Confidence as a Speaker (PRCS) based on Gilkenson's (1942) early work. Those students who indicated a debilitating level of communicative anxiety (N = 96) were chosen and assigned to the experimental and control groups. Cognitive (Anxiety Differential), physiological (pulse rate), and observer ratings (Timed Behavioral Checklist for Performance Anxiety) were administered as the pre- and posttest

measures. Paul obtained the services of five experienced psychotherapists who worked individually with three Ss in each of the three treatment groups: S.D., insight-oriented psychotherapy, and attention-placebo. Each therapist worked with each individual for five hours over a six-week period of time. Six weeks after the experiment the screening battery of tests was administered as a delayed posttest. Using analysis of variance and a comparison of individual improvement rates, Paul found the following:

S.D. was consistently superior (100 per cent success); no differences were found between the effects of the insight-oriented psychotherapy and the nonspecific effects of the attention-placebo treatment (47 per cent success), although both groups showed greater anxiety reduction than the no-treatment controls (17 per cent). Improvement was maintained at follow-up with no evidence of 'symptom substitution.' No differences were found between effects produced by different therapists nor was improvement predictable from major personality variables. (p. 98)

Paul indicates that treatment based on a "learning" model (S.D.) was "clearly superior" to treatment based on the traditional "disease" model (insight-oriented psychotherapy) in extinguishing communicative anxiety. Paul states the following:

Desensitization therapy produced a consistently greater measurable reduction in the cognitive, physiological, and motoric aspects of stress-engendered anxiety, a reduction that was found to be maintained at the six-week follow-up period. Perhaps even more impressive is the fact that experienced psychotherapists, whose experience and biases were in the direction of the insight approach, rated subjects treated by S.D. not only as improving more, but also as having a significantly better prognosis. (p. 71)

ŝ

. .

•

Paul's study points out three relevant findings: 1) There is no significant difference of anxiety reduction caused as a result of employing different therapists, 2) The method of S.D. is superior to insight therapy, and 3) The behavioral therapy approach to the extinction of communicative anxiety is superior to classroom participation in speaking.

Paul and Shannon (1968) conducted a follow-up study in which they compared individual treatment and group treatment. This study was essentially a replication of the prior study with the exception of the addition of S.D. in a small group format. In this study the four experimental conditions were S.D., insight-oriented psychotherapy, attention-placebo treatment, and group desensitization employing the method of S.D. The results indicated that the method of S.D. found effective in individual treatment in the prior study can be "efficiently combined with group discussion and administered in small groups without loss of effectiveness in the treatment of interpersonal performance anxiety." The researchers report the following:

When these results are compared with changes obtained for comparable subjects treated by individual programs of S.D., insight-oriented psychotherapy, and nonspecific attentionplacebo techniques, the combined group desensitization treatment was superior to both the individual insight-oriented and attentionplacebo programs. There were no significant differences in the effects of individual desensitization and the group desensitization on individual scales, even though such group absence of concurrent enrollment in a speech course. (p. 13)

The important findings of this study are as follows: 1) The

S.D. method is as effective in a group setting as it is on an individual basis, and 2) The method of group S.D. for the extinction of communicative anxiety may be employed any time during the Ss' college experience and does not necessitate enrollment in a speech course.

Barrick, McCroskey and Ralph (1968), adopting the S.D. method of Wolpe (1966), investigated the use of "lay personnel" as trainers. The researchers in their review found that the prior experimentation with S.D. in communicative anxiety reduction had employed professional psychologists as trainers. Application of the S.D. method on a large scale employing several professional psychologists would tend to be economically prohibitive. If, however, trained "lay personnel" could be used as trainers, the cost would not be prohibitive. This led the researchers to test the following null hypothesis: "There will be no significant differences in improvement scores for treatment groups between professional and sub-professional trainers." The researchers also hypothesized the main effect of the method of S.D.: "Speech-anxious students receiving S.D. for speech anxiety will indicate a greater reduction in speech anxiety than will speech-anxious students not receiving S.D."

Of importance here is the idea that, in order to apply the S.D. method to a large population such as all debilitated students in a given high school or college, the cost of employing the services of professional psychologists as trainers would be economically prohibitive, but if existing personnel (seniors, graduate students, etc.) could be

implemented as trainers, the cost would not be prohibitive. The four trainers selected for the experiment were a graduate student from the Counseling Department of the College of Education at Michigan State University who was professionally trained and experienced in the S.D. method and three lay trainers from the Department of Speech (a professor and two graduate students). All groups were assigned to trainers on the contingency that no speech trainer would train a S that he had concurrently enrolled in his classroom.

In discussing their results, the researchers state the following:

The first analysis of the data obtained from all measures was a comparison between Ss treated by the counseling psychologist and those treated by the lay trainers. In only one case on the TAI (Test Anxiety Inventory) was a significant difference observed. The observed difference favored the <u>lay</u> trainers. (Underlining by this author for emphasis.) Because of the number of independent tests (9) computed and the fact that if a true superiority for lay trainers existed, it should have appeared on other related variables and in other conditions, it was concluded that this single significant difference was insufficient to conclude that lay trainers were superior to the counseling psychologist. Therefore, the hypothesis of no difference between trainers was not rejected. (p. 14)

Further analysis of the data showed that the S.D. method was effective in reducing speech anxiety. The finding that lay trainers can be effectively employed as trainers has established a major breakthrough in the practical application of the S.D. method as a means of extinguishing communicative anxiety on a large scale.

The review of the literature has pointed out that anxiety in general is an emotional state that is caused by a reaction to personal threats accompanied by changes in the individual's psychological responses; that through the passage of time the level of anxiety becomes intensified; that communicative apprehension is an example of the anxiety phenomenon; that people in an intense state of communicative anxiety seek isolation rather than interaction as a means of reducing their anxiety; that when an anxious person is compelled to interact, as is the case when a student is required to enroll in speech classes, his level of anxiety will become intensified; that an individual's level of anxiety may be significently reduced through the method of S.D. which is theoretically based on a reinforcement learning model; and finally, that the method of S.D. does not require the employment of professionally trained psychologists as trainers but instead existing "lay personnel" may be trained and effectively implemented as S.D. trainers.

Generation of the Experimental Hypothesis

The existing research that experimented with the method of S.D. has followed the procedure of individual training or training in small groups of five members or less. A pilot study by this author and McCroskey has shown that of the over 2,000 students measured at Michigan State University more than 10% report extreme communicative anxiety. Accordingly, of the 2,000 students measured more than 200 indicated
a critical need for anxiety reduction treatment. An additional 30% of the students indicated moderately severe anxiety. With an increasing enrollment of students in speech courses reflecting the demand for all students to have an improved ability to cope with interpersonal communicative situations, a successful method of reducing debilitating communicative anxiety on a large scale must be developed. At present the S.D. method, in light of its past success, offers the most promising solution to the problem.

However, using groups of five students per training group requires a large number of trainers. The fact that trainers do not need to be professionally trained psychologists, although relevant, does not negate the problem of numbers of trainers. The larger the Freshman class enrollment of either a high school or college, the larger the problem of sheer numbers becomes. It is general knowledge that Freshman enrollment has been and will be increasing for some time to come. Not only are the number of students on an increase, but society's demands on the students' ability to communicate have increased as well. It becomes readily apparent that with an increasing population the use of five students per group in S.D. treatment creates a demand for trainers that becomes inhibitive for practical application. The problem then is finding out how large a group one trainer can successfully treat. Does the method of S.D. require that it be administered in small groups of five or can the size of the group be increased to twenty or more Ss at one time?

There are essentially two problems that are created

when the size of the group is enlarged. The first problem stems from the procedural method of S.D. itself. During the training sessions all communication by any S regarding perceiving enxiety erising from the induction of a given hierarchal stimuli is done visually, maintaining verbal silence so that mental imagery on the part of the Ss will not be dis-In prior experimentation, using groups of five or rupted. less, indication of anxiety by a S has been accomplished by the means of raising the right index finger. If the group size were to be increased to twenty or more, some electronic signalling system would have to be adopted. This may be accomplished in a simple fashion by using an electrical circuit of lights (one light for each person in the group) that could be activated by the S indicating that he perceives tension and/or a feeling of anxiety. On a more sophisticated level a polygraph with stainless steel fingertip electrodes could be used for each S. The polygraph would register a physiological response that would not be mediated by the quickness of the individual's reflexes in causing his index finger to move. A direct measurement of the intensity of the anxiety could be obtained. In either event the employment of an electrical signalling system would eliminate the problem of visual scrutiny of a large number of people.

The second problem associated with an increase in the size of the training group stems from a theoretical assumption inherent in the S.D. method. The method of S.D. requires that each training group proceed through the hierarchal stimulus situations at the rate of the slowest (i.e.

most anxious) group member. Accordingly, if the Ss are assigned to treatment groups at random, as they have been in the prior experimentation, then the group as a whole is required to maintain the rate of extinction of the group's most anxious member regardless of differences in anxiety level. If, however, the Ss were assigned to treatment groups in a homogeneous fashion, that is, grouped by their scores on a communicative anxiety test, then the members of the group would tend to complete each step in the hierarchy at about the same rate. Does heterogeneous grouping cause the less anxious people to become bored or frustrated during the extinction process because they proceed through the hierarchy at the very slow pace of the most highly anxious person? Does heterogeneous grouping produce a detrimental effect on the extinction rate of the less anxous members? If there is a detrimental effect caused by heterogeneous grouping, then as the group's size is increased the problem is compounded because there are a greater number of highly anxious members who can affect the extinction rate of the group as a whole.

Before the S.D. method can be applied to large groups it is necessary to determine if there is a significant difference in the amount of anxiety reduction between heterogeneous and homogeneous grouping. May we assign members to treatment at random or would S.D. training be more effective in producing anxiety reduction if Ss were assigned to treatment in homogeneous groups? If there is a difference between heterogeneous or homogeneous grouping, the difference should be in the direction favoring homogeneous grouping because the

members of a given group would proceed at approximately the same extinction rate.

The present study also broadened the target of the S.D. method to include different types of interpersonal communicative situations. The speech anxiety tests and image hierarchy developed for training in prior research were limited to the one-to-many or the "public speaking" situation. In a pilot study conducted by this author and McCroskey the anxiety test (PRCS) was expanded to include a broader range of communicative situations and was renamed the Personal Report of Communicative Apprehension (PRCA, see Appendix A). The PRCS form was limited to a "true-false" response. The revised PRCA form was expanded to a Likert-type, five-point response scale. The instrument was then administered to students enrolled in Communication 116 (group discussion class) and Communication 101 (public speaking class) (N = 750). An analysis of the instrument revealed an internal splithelves reliebility of .92 and a test retest reliebility of .83 over a ten-day period of time.

Experimental Hypothesis

The present study is designed to test the following hypothesis:

Those groups of Ss that are homogeneously assigned to S.D. training on the basis of grouping by ranks of six score units (1/2 standard deviation from mean of population) on the anxiety scale (PRCA) will report a significantly greater reduction in anxiety than will those groups of Ss that are

assigned to S.D. training on the basis of heterogeneous grouping who will, in turn, show a significantly greater reduction in anxiety than will a comparable group of Ss receiving no treatment (all Ss being concurrently enrolled in a public speaking course).

CHAPTER II

PROCEDURES OF THE STUDY

Selection of Ss

During the first class period of Winter Quarter, 1968, all students (N = 507) in Communication 101 (Public Speaking) at Michigan State University were instructed to complete the PRCA (see Appendix A) measure of communicative anxiety. The pretest screening measure was then machine scored and a population distribution formed. The X of the test was 60.33 with a standard deviation of 12.22 and a range of 24-99 in a possible range of 20-100. In the pilot study conducted by this author and McCroskey (see page 27) the X of the PRCA test was 58.92 with a standard deviation of 11.68.

Those students with a test score of 61 (N = 238) and above were personally contacted. A brief explanation of S.D. training was presented, and the students were invited to attend a general session for the purpose of further theoretical explanation and a demonstration of the actual procedure. In an effort to insure that all students who were interested in receiving training would participate in the general session, two meeting times were set up so that a student with a conflict during one meeting hour could attend the other. At the conclusion of the general session the students were instructed to fill out a weekly time schedule (see Appendix B)

of available hours for training if they wished to volunteer for the S.D. training. Of the original 238 students, 72 students completed time schedules indicating their desire to participate in S.D. training. A survey of the Communication 101 instructors showed the 68 students of the original 238 had dropped the course during drop and add period. Twentyfive of the students who dropped the course had PRCA scores beyond two standard deviations from the mean, indicating extreme anxiety.

On the basis of the availability of hours and test scores 32 students were chosen for training and assigned to 8 training groups of 4 students per group, and 16 students were assigned to a control group. All students receiving a PRCA score of 61 and above were considered for training. This decision was arbitrarily made on the basis of the mean of the test scores (X = 60.22). It was further decided that the stenderd deviation of the test (S.D. = 12.22) be used for the purpose of grouping. Accordingly, four groups were established in intervals of six score units representing 1/2 standard deviation from the mean. The intervals were scores of 61-66, 67-72, 73-78, and 79 and over. The remaining students were contacted and told that due to a conflict in hours that they would not be able to receive S.D. training this quarter but that if they were still interested, they could receive S.D. training during the Spring Quarter. Each of the students in the S.D. training groups were individually contacted by phone and informed of the time and place for their specific training. The basic plan of the study is presented in

Table 1 showing the specific test score of each S and \overline{X} of . each training group.

Selection of Trainers

The trainers were two graduate students from the Department of Communication of Michigan State University. Both trainers were lay personnel in that neither trainer was a professional psychologist. However, both trainers had received experience in the administration of S.D. for communicative anxiety. Both trainers had participated as S.D. trainers in the Barrick, McCroskey, and Ralph (1968) experiment. For the Barrick, McCroskey, and Ralph study each trainer underwent an intensive training period before assignment to an S.D. training group. The training consisted of selected readings on the method of S.D., a video-taped demonstration of an actual S.D. training session, practice in deep muscular relaxation exercises, a discussion period with the researchers on the rationale for S.D. training and procedures to be followed during S.D. session, and practice as a S.D. trainer in a simulated session with the researchers.

In the present study each S.D. training group received training from both trainers on a rotating schedule in an effort to control for any possible variance that might result from trainer bias or personality differences.

Training Procedures

Each training group received five hours of S.D. training--one hour per week for five weeks. Because the Ss

Т	8	b	le	1

Experimental Design

Type of Experimental or Control Group	PRCA	PRCA Test Score Grouping				
	61-66 Interv a l	67-72 Interval	7 3- 78 Interval	79-100 Interval		
Homogeneous Group By Intervals	64 63 62 61	71 71 69 68	78 77 74 73	94 90 81 80		
	₹=62. 50	₹=69. 75	X =75.50	▼ =86.25	X= 73.50	
Heterogeneous Group Across Interv e ls	81 77 68 63	82 76 71 64	81 76 70 63	82 78 68 61		
	₹ 72.2 5	₹ =73.25	⊼ =72.50	₹=72 . 25	⊼ =72.56	
	61-66 Interv a l	67-72 Interval	73-78 Interval	79 - 100 Interv al		
Control Group By Interv a ls	66 65 61 61	71 69 69 68	76 74 73 73	94 85 81 80		
	X =63.25	X=69.2 5	X =74.00	X =85.00	⊼ =72.88°	

had already been informed as to the S.D. procedure in the general session. the first training session started with a very short refresher discussion concerning procedures (a maximum) of five minutes). The training room contained reclining chairs for each S and was lighted with two floor lamps of 40 watts to give the room a subdued light intensity. Each reclining chair was positioned so that the trainer had clear visual contact with each S's right index finger. Each S was seated and told that all of his communication concerning the state of relaxation or anxiety and tension would be accomplished by means of raising the right index finger. Each S was instructed to indicate when he felt completely relaxed during the relaxation exercises by raising his index finger and to indicate any feeling of anxiety or tension during the period of hierarchy stimuli presentations by raising his index finger. Each S was then told to lean back in his chair, close his eyes and follow the relaxation instructions. The relaxation exercises were presented on an aural tape recording until all members of the group indicated that they were completely relaxed. 1 The trainer then turned off the tape

¹The relaxation exercises used in this study were adapted from those used by Wolpe (1966). The exercises involve the tensing and then relaxing of a given muscle group. They follow a pattern of progression from the hands to the forearms, upper arms, head, neck, shoulders, chest, stomach, legs, and feet. There is approximately a three-minute time span devoted to each muscle group. Emphasis is placed not only on physical relaxation but also on the increased awareness by the S of the difference between a state of tension and a state of relaxation. The use of relaxation in the S.D. training is based on Wolpe's notion of reciprocal inhibition--a state of tension cannot exist within a state of complete relaxation.

recorder and proceeded with the presentation of the items of the anxiety hierarchy (see Appendix C). If after the presentation of an item any S communicated perceived anxiety by raising his right index finger, the trainer issue instructions to all Ss to erase completely the image of the hierarchy item from their minds and to concentrate instead on a state of deep muscular relaxation. If the trainer observed any abnormal physiological behavior such as deep breathing or nervous hand or leg movement on the part of any S, he instructed all Ss to concentrate on relaxing that particular muscle group as well as concentrating on an overall state of relaxation. After a brief pause, the trainer again presented the same hierarchy item.

The criterion for the successful extinction of a given hierarchy item was a fifteen-second presentation interval followed consecutively by a thirty-second presentation interval without an anxiety response from any S during either interval. After successful extinction of a given item, the trainer then presented the next item on the hierarchy. Each period of stimulus presentation was terminated either after a successful completion of an item or if time ran out, the prior item that had been successfully extinguished was presented again to insure that all Ss were at a low level of anxiety at the end of the hour training session. At the start of the last five minutes of each session the trainer instructed the Ss to open their eyes to give them time to re-adjust before leaving the treatment room. Each group had completed the fifteen-item hierarchy by the end of the last (fifth)

training session. The above procedure was followed for each group in all five training sessions.

Messurement and Analysis

The PRCA test was administered to all students enrolled in Communication 101 during the first class period as a pretest and again during the final week of the course as a posttest. The Speech Anxiety Inventory (SAI, which is a revision of one used by Emery and Krumboltz, 1967, see Appendix D) was administered to all students enrolled in Communication 101 as an additional posttest measure. Those Ss assigned to either of the experimental groups or the control group who could be contacted completed a three-month delayed posttest of both the PRCA and the SAI.

The pre-post shift of change score obtained for the experimental and control Ss on the PRCA and the posttest SAI scores were analyzed by means of Two-Way Analyses of Variance test with subsequent <u>t</u>-tests when justified. One-Way Analyses of Variance were used to analyze the PRCA pre-delayed post and post-delayed post change scores, and the SAI post and delayed-post scores for those experimental and control Ss that returned the three-month delayed posttest. Subsequent <u>t</u>-tests were computed on the above data when justified by the analysis of variance results. The .05 level of probability was set for significance for all tests. Chi-square tests were used to analyze the rate of "cure" between the homogeneous-heterogeneous groups and the experimental-control groups. The criterion for "cure" was a posttest score on the PRCA test of 60 or less. This decision was arbitrarily made on the basis of the mean ($\overline{\mathbf{X}} = 60.22$) of the PRCA screening test distribution. The pilot study conducted by this researcher and McCroskey showed a similar result. The question of what should constitute a "normal level" of communicative anxiety, is yet an unanswered theoretical decision. However, with the mean denoting the average level of anxiety as measured by the PRCA test it seems reasonable to term S.D. training successful when those students who indicate a level of anxiety greater than the average before S.D. training indicate a level of anxiety equal to or less than the average after training.

The entire population was also rated by the course instructors on two of four required classroom speeches, but the ratings proved of little value to the present study because 1) A number of the instructors "discovered" the identity of participating Ss from their sections, invalidating the requirement of unbiased or blind ratings and 2) Some of the instructors were unable to discriminate clearly between levels of anxiety either because of a lack of experience, a halo effect caused by preceding speakers, or they had other rating difficulties due to individual bias.

CHAPTER III

REPORTING OF RESULTS

In Chapter I it was hypothesized that those groups of Ss that are homogeneously assigned to S.D. training on the basis of grouping by ranks of six score units of the anxiety scale (PRCA) will report a significantly greater reduction in anxiety than will those groups of Ss that are assigned to S.D. training on the basis of heterogeneous grouping, who will, in turn, show a significantly greater reduction in anxiety than will a comparable group of Ss receiving no treatment. The present chapter reports the results of the tests of this hypothesis under four headings: 1) PRCA pre-post shift, 2) PRCA pre-delayed post, post-delayed post shifts, 3) SAI post and post-delayed post shift, and 4) "Cure" success.

PRCA Pre-Post Shift

Analysis of the data shows that the hypothesis was not confirmed. A significant F-ratio was obtained for differences among treatments (F = 5.23, P <.05, see Table 2), and subsequent <u>t</u>-tests indicated that those results reflected significant differences between the heterogeneous treatment and the control condition ($\underline{t} = 6.20$, P <.05, see Table 3), between the homogeneous treatment and the control condition

Table 2

Summary of Two-Way Analysis of Variance: PRCA Pre-Posttest Change Scores

Source of	Sums of	Degrees of	Mean	F
Variance	Squ a res	Freedom	Squares	
Trestments Levels(Groups) Intersction Error Totsl	344.00 138.85 185.79 1184.76 1853.40	2 36 36 47	172.00 46.28 30.97 32.91	5.23* 1.41 .94

*Significent at the .05 level

Table 3

X PRCA Pre-Post Change Scores by Treatment and Level

	Experimental and Control Groups			
Levels	Homo- geneous	Hetero- geneous	Control	X for Levels
79-above 78-73 72-67 66-61	11.50 26.00 5.75 9.50	23.75 21.50 13.25 14.25	6.50 3.00 5.50 5.75	13.92 16.83 8.17 9.83
X Across Levels*	13 ، 19 _{8,2}	18.19 _{b,c}	5.19 a, b	

*Column means with same subscript are significantly different from each other at the .05 level $(\underline{t} = 4.16, P < .05)$, and between the two treatment groups $(\underline{t} = 2.05, P < .05)$. However, the difference between the treatment groups was in the direction opposite to that predicted: the heterogeneous treatment was significantly superior to the homogeneous treatment. It should be noted that since the hypothesis was directional, the test of the observed difference was not strictly legitimate.

PRCA Pre-Delayed Post, Post-Delayed Post Shift

Out of 48 experimental and control Ss 30 Ss returned the delayed posttest when administered three months after termination of S.D. training and completion of the immediate posttest. Analysis of the PRCA pre-delayed post data shows that the hypothesis was not confirmed over time. Although a significant F-ratio was obtained among treatments (F = 6.27, P < .05, see Table 4), subsequent t-tests indicated that the results reflect significant differences between the heterogeneous treatment and control condition (t = 3.11, P < .05, see Table 5), and between the homogeneous treatment and the control condition (t = 2.72, P < .05, see Table 5). The difference between the heterogeneous and the homogeneous experimental treatments was not significant (t = 0.02, see Table 5). Analysis of the PRCA post-delayed post data resulted in a nonsignificant F-ratio (F = 1.40, P >.05, see Table 6) indicating that over a three-month period of time between the posttest and the delayed posttest the experimental treatment groups and the control group did not differ significantly in

Table 4

Summary of One-Way Analysis of Variance: PRCA Pre-Delayed Post Change Scores

Source of	Sums of	Degrees of	Mean	म
Variance	Squares	Freedom	Squares	
Between Within Tot al	1574.67 3391.19 4965.86	2 27 29	787.34 125.60	6.27*

*Significent at the .05 level

Table 5

X PRCA Pre-Delayed Post Change Scores by Treatments

Experimental Condition				
	Homogeneous	Heterogeneous	Control	
X Change*	18.75 a	18.85 _b	3.00 _{a,b}	

*Means with same subscript are significantly different from each other at the .05 level

Table 6

Summary of One-Way Analysis of Variance: PRCA Post-Delayed Post Change Scores

Source of	Sums of	Degrees of	Me a n	F
V aria nce	Squares	Freedom	Squ a res	
Between Within Tot al	70.83 680.53 751.37	2 27 29	35.42 25.20	1.40

the amount of change in their level of anxiety.

SAI Post and Post-Delayed Post Shift

Analysis of the SAI posttest data shows that the hypothesis was not confirmed. Although a significant F-ratio was obtained for differences among treatments (F = 3.26, P < .05), see Table 7), subsequent <u>t</u>-tests indicated that those results reflected significant differences between the heterogeneous treatment and control condition (<u>t</u> = 4.39, P < .05, see Table 8) and between the homogeneous treatment and the control conditions (<u>t</u> = 4.16, P < .05). The difference between the heterogeneous and the homogeneous treatments was not significant (t = 0.22, P > .40).

A significant F-ratio (F = 3.03, P < .05, see Table 7) was also obtained for differences among anxiety score interval levels. Subsequent <u>t</u>-tests indicated a significant difference between the score interval 79 and over and 73-78 (<u>t</u> = 4.33, P < .05, see Table 8), between the score interval 79 and over and 67-72 (<u>t</u> = 1.75, P < .05), between the score interval 79 and over and 61-66 (<u>t</u> = 5.12, P < .05), between the score intervals 73-78 and 67-72 (<u>t</u> = 2.58, P < .05), and between score intervals 67-72 and 61-66 (<u>t</u> = 3.37, P < .05).

Analysis of the SAI post-delayed post shift-scores resulted in a non-significant F-ratio (F = 2.19, P>.05, see Table 9). As with the PRCA post-delayed post shift-scores, the SAI post-delayed post data indicated that the level of anxiety change over time was not significantly different among the experimental groups and the control group.

Table 7

Summary of Two-Way Analysis of Variance: SAI Posttest Scores

Source of	Sums of	Degrees of	Me a n	F
Variance	Squ a res	Freedom	Squ a res	
Trestments Levels(Groups) Interaction Error Total	878.04 1223.43 477.58 4842.72 7421.77	2 36 36 47	439.02 407.81 79.60 134.52	3.26* 3.03* .59

.

*Significant at the .05 level

Table 8

 \overline{X} SAI Posttest Scores by Treatment and Level

	*			han	
	Experiment	Experimental and Control Groups			
Levels	Homo- geneous	Hetero- geneous	Control	X for Levels*	
79-100 78-73 72-67 66-61	100.75 92.75 112.25 84.00	114.50 84.00 104.25 83.00	135.25 109.50 108.00 107.50	116.83a,b,c 95.42a,d 108.17b,d,e 91.50c,e	
X Across Levels*	97.44£	96.44g	115.06 _{f,g}		

*Means with same subscript are significantly different from each other at the .05 level

T**a**ble 9

Summary of One-Way Analysis of Variance: SAI Post-Delayed Post Change Scores

Source of	Sums of	Degrees of	Me a n	म
Verience	Squ e res	Freedom	Squares	
Between Within Tot al	225.43 2965.65 3081.24	2 27 29	112.72 109.84	1.03

Table 10

Chi-square Test of "Cure" Success Between Experimental Conditions

	<u>.</u>	
Treatment	Frequency "Cured"	Frequency Not "Cured"
Homogeneous	8	8
Heterogeneous	12	4
ﺎﺩ - ﺧﺪﻩﻧﺪﻩ ﺩﻩ ﺍ [,] ﺩﻩ - ﺩﻩ	$x^2 = 2.13, P > .05$	* for a deserved on the deserve

Table 11

Chi-square Test of "Cure" Success Between Experimental and Control Conditions

Trestment	Frequency "Cured"	Frequency Not "Cured"
Experiment e l Control	20 4	12 12
	$x^2 = 5.99, P < .05$	↓

"Cure" Success

A Chi-square analysis of the frequencies of the "cured"not "cured" Ss in the homogeneous groups and the "cured"not "cured" Ss in the heterogeneous groups did not show a significant difference ($X^2 = 2.13$, see Table 10). However a Chi-square analysis between the frequencies of the "cured"not "cured" experimental Ss and the "cured"-not "cured" control Ss did show a significant difference ($X^2 = 5.99$, see Table 11). The experimental treatments resulted in significantly more "cured" Ss than the control condition.

CHAPTER IV

SUMMARY, DISCUSSION OF RESULTS, AND IMPLICATIONS FOR FUTURE RESEARCH

A review of the relevant literature disclosed that stage fright is a form of a more general level of communicative apprehension which, in turn, is a type of anxiety. Anxiety is a perceived state of mind that is usually accompanied with overt behavioral changes such as an increase in heartbeat, nervous tension of various muscle groups, or withdrawal. Prior research has demonstrated that communicative anxiety is a learned response to a negative stimulus that is usually associated with personal threat to one's self-esteem.

In an effort to reduce the level of anxiety the individual will seek to avoid those situations that act as a stimulus to the formation of the anxiety state. If the stimulus situation cannot be avoided or is perceived as inevitable, the individual's level of anxiety intensifies. Over time the intensified level of anxiety tends to generalize to all like situations, and the individual develops a level of debilitating anxiety that interferes with his interpersonal communication to the extent that he is no longer effective in communicative interaction. Research also suggests that enrollment in a performance-oriented public speaking course only serves

to intensify the level of anxiety for those students who have a prior history of debilitating communicative anxiety. The problem then is the development of a method to reduce communicative anxiety to a level that is perceived by the individual as no longer debilitating which, in turn, will help the individual develop his ability as an effective communicator.

The S.D. method of training has been successfully demonstrated as effective in curing chronic anxiety of phobies such as claustrobphobie or acrophobie. Adopting the S.D. method, as used by clinical psychologists, Kondas (1967), Paul (1966, 1968), and Barrick, McCroskey, and Ralph (1968) have all empirically demonstrated the successful use of the S.D. training method with test anxiety and stage fright applied on an individual or small group basis. The present study was conducted in an attempt to deal with those problems associated with applying S.D. training in large groups and broadening the training to include other communication situations beyond the public speaking situation described in the literature as "stage fright."

Specifically the present study was designed to test two forms of grouping individuals for training. If large training groups are to be employed, then it is important to determine the effect of the highly anxious Ss on the extinction rate of the less anxious Ss. Are there any detrimental effects caused by heterogeneous grouping?

The S.D. method requires that all the members of a training group proceed at the extinction rate of the most anxious member of the group, regardless of individual anxiety

levels. Will the slow rate of extinction of a highly anxious member cause a detrimental effect on the less anxious members? If there is a detrimental effect, then the method of homogeneous grouping must be employed when S.D. training is applied. As the training groups size increases, the importance of insuring homogeneous grouping increases. On the other hand, if there are no detrimental effects caused by heterogeneous grouping, then assignment to large groups may be at random or at the convenience of the Ss' time schedules.

The above questions led to the experimental hypothesis that those groups of Ss that are homogeneously assigned to S.D. training on the basis of grouping by ranks of six score units (1/2 standard deviation from mean of population) on the anxiety scale (PRCA) will report a significantly greater reduction in anxiety than will those groups of Ss that are assigned to S.D. training on the basis of heterogeneous grouping who will, in turn, show a significantly greater reduction in anxiety than will a comparable group of Ss receiving no treatment.

Forty-eight students that had indicated an above average level of anxiety (PRCA score 61-100) were assigned either to one of the experimental conditions or to a control group: 16 students for the heterogeneous groups, 16 students for the homogeneous groups, and 16 students for a control group. A PRCA pretest, immediate posttest and delayed posttest and a SAI immediate posttest and delayed posttest were administered. The data were analyzed by analysis of variance with subsequent t-tests when justified and the cure rate was analyzed

by Chi-square analysis.

Discussion of Results

The analysis of the PRCA pre-posttest change scores and the SAI post scores resulted in the rejection of the experimental hypothesis which stated that homogeneous grouping would be significently better then heterogeneous grouping in reducing communicative anxiety. Not only was the experimental hypothesis rejected, but the observed difference was in the opposite direction on the PRCA pre-post change scores. This finding suggests that there are no detrimental effects in heterogeneous grouping; heterogeneous grouping may even result in a greater reduction of communicative anxiety than does homogeneous grouping. A possible explanation of the observed difference may be that an increase in the number of presentations of a given hierarchy stimulus situation during a state of relaxation serves as a positive reinforcement to an individual and results in a greater reduction of the anxiety caused by the stimulus. Further research would have to be conducted to confirm the correctness of the above assumption, but at least at this point there are no data to suggest that homogeneous grouping produces better results than heterogeneous grouping.

It would appear that individuals who indicate debilitating communicative anxiety may be assigned randomly to large groups for S.D. training without the need for creating special groups according to anxiety levels. Accordingly, one large S.D. training group might be formed instead of four

small groups, a procedure which would cut trainers! hours from four to one and would increase the efficiency and reduce the cost of training. Instead of running four S.D. training groups of five members each, as was the case with past S.D. programs, a program may be established employing one group of 20 members. In the case of the present study 72 students volunteered for training. Forming groups of five members each would require a total of 15 groups. Each group would receive one hour of training per week for five weeks thus making a total of 75 training hours needed to desensitize those who indicated a desire for training. With no difference between heterogeneous grouping and homogeneous grouping, three large groups of 25 members each could be employed. This would cut the total training hours from 75 to 15 for the trainer. The efficiency of large heterogeneous groups becomes rapidly apparent. One part-time trainer working three hours per day for five weeks could offer S.D. treining to 375 students instead of 75.

The analysis of the PRCA pre-posttest change scores and the SAI post scores also showed that both the heterogeneous and homogeneous experimental groups reduced communicative anxiety significantly more than the control group. This finding was to be expected and serves to re-affirm the effectiveness of S.D. training established in prior research. Of more importance is the fact that both the experimental Ss and the control Ss were concurrently enrolled in the basic speech course. This suggests that S.D. training tends to be significantly more successful in reducing communicative anxiety

than does a course in public speaking.

Analysis of the PRCA post-delayed posttest change scores and the SAI post-delayed posttest change scores indicates that the effects of S.D. training in reducing communicative anxiety remain stable over at least a three-month period of time. Although this finding is not a definitive answer to the question of stability, it does suggest a trend in a positive direction.

The Chi-square analysis of the frequency of "cured" and not "cured" Ss is extremely important not only because it shows the effectiveness of S.D. training, but also because it clearly demonstrated the degree of S.D. effectiveness. 0fthe students who received S.D. training while in the basic speech course, 63% were "cured" of their communicative anxiety, while of those students in the control group who went through the basic speech course without receiving S.D. training, only 25% were "cured" of their communicative anxiety. A comparison of the severe cases (scores of 73-100) of communicative anxiety showed that 56% of the experimental Ss were "cured" while none of the control Ss were "cured." Although the number of people who were available for comparison was small in relationship to the number of people who indicated a need for S.D. training, the fact remains that S.D. training "cures" a significant number of the people who receive train-Implied in the above statement is the assumption that ing. all students who by their own self-report indicate a need for the extinction of communicative anxiety should be given S.D. training.

Implications for Future Research

The present study has offered some insight into possibly fruitful areas of investigation in future research. The finding that homogeneous grouping was not significantly more effective than heterogeneous but instead showed a trend in the opposite direction suggests that a study should be conducted in an attempt to answer the question concerning possible positive reinforcing effects caused by an increase in the number of presentations of a hierarchy stimulus during a state of deep muscular relaxation.

Paul's (1966) study used simple reduction of score between pretest and posttest as the basis for determining the success of S.D. training. Any S who had a reduction of one or more points between his pretest and posttest was termed e success. In the present study only 2 of the 32 experimental Ss failed to show a reduction. Using Paul's (1966) criterion the present study would have a "cure" rate of 94% instead of 63% as was reported in Chapter III. Reduction although a necessary criterion does not seem to be a sufficient criterion by itself for the designation of "cured." The end level of reduction seems to be more relevant than the amount of reduction. It was for this reason that the "cure" criterion was arbitrarily established at the score of 61 (one point above the population \overline{X}). In the present study several of the highly anxious Ss (scores 73 and above) showed a great deal of reduction even though they may not have reached the 61 score criterion. The present study consisted of five S.D. training hours. Possibly if the Ss who did not reach the

"cured" criterion were given one or two more S.D. training hours, they might obtain scores lower than 61. Future research is needed to establish the optimum number of S.D. training hours necessary to insure a high "cure" rate.

Another area of investigation should determine more specifically the stability over time of S.D. training. If S.D. training could be given during the Freshman year, a succession of delayed posttests could be administered at six-month intervals over the remaining three years of education. Inherent in a program of this nature is the assessment of the possible need for a retraining session later for the purpose of reinstating the original effect. Two questions need to be answered: 1) Is S.D. training stable over a long period of time, and 2) If S.D. training is not stable over a long period of time, how much retraining will be needed to reinstate the original effect of S.D. training?

Prior research and the present study have dealt only with those students who have volunteered for S.D. training. What happens when S.D. training is required? Future research must investigate the difference in the amount of communicative anxiety reduction between volunteer Ss and Ss who are required to take S.D. training. It is hoped that very little difference, if any, will exist, but empirical support for no difference must be obtained before S.D. training should be forced on any student that indicates a debilitating amount of communicative anxiety.

The present study as well as those in the past have not attempted to ascertain the effectiveness of S.D. training

for communicative anxiety beyond the so-called "middle class" college student. Many of the critics of behavioral science research have, and rightly so, criticized the researcher for not expanding his findings beyond the middle class cultural environment of the predominantly white college student. Will S.D. training be as effective with the increasing number of ghetto students who are enrolling in college? Not as a result of research design but rather by chance, three black students received S.D. training in the present study. A post hoc investigation of the individual response rate of perceived anxiety and tension (indication of anxiety and/or tension by raising the index finger) indicated that all three of the black students demonstrated an extremely high rate of anxiety indication in relationship to the white students who received training. However, all three black students showed a major reduction of communicative anxiety between their preand posttest measurement on the PRCA. Further research in this area may show a need to establish a revised hierarchy for students who come from the ghetto. An extreme difference in environmental conditions may cause a considerable difference in the ability to imagine a given hierarchy stimulus situation.

Although there is certainly a need for continuing research on the procedures and effects of S.D. for communicative anxiety, such research should not be considered necesserily antecedent to widespread adoption of this technique in the secondary schools and colleges. Hundreds of thousands of young people suffer from debilitating communicative anxiety,

not to mention the untold thousands of adults facing the same problem. The speech profession has recognized the problem for decades, but has not been able to provide a solution. The technique of systematic desensitization is not a panacea, but it does enable the majority of even the most anxious individuals to control their communicative anxiety. A profession dedicated to improvement of human communication has an obligation to implement methods which have been proven successful in attaining this goal. The speech profession is such a profession. Systematic desensitization is such a method. REFERENCES

REFERENCES

- Barrick, J., McCroskey, J. D., & Ralph, D. The effects of systematic desensitization on speech and test anxiety. Unpublished paper presented at Speech Association of American Convention, Chicago, 1968.
- Bendig, A. W. Pittsburgh scale of social extroversionintroversion and emotionality. <u>Journal</u> of <u>Psychology</u>, 53, 199-210.
- Brady, J. V., & Hunt, H. F. An experimental approach to the enalysis of emotional behavior. Journal of Psychology, 1955, 40, 313-324.
- Cattell, R. B. The IPAT Anxiety Scale. Champaign, Ill. Institute for Personality and Ability Testing, 1957.
- Clevenger, T., Jr. A definition of stage fright. <u>Central</u> <u>States Speech Journal</u>, 1955, 7, 26-30.
- Clevenger, T., Jr. A synthesis of experimental research in stage fright. <u>Quarterly Journal of Speech</u>, 1959, 45, 134-145.
- Clevenger, T., Jr., & Phifer, G. What do beginning college speech texts say about stage fright? Speech Teacher, 1959, 8, 1-7.
- Cooper, L. The Rhetoric of Aristotle. New York: Appleton-Century-Crofts, Inc., 1960.
- Diven, K. Certain determinants in the conditioning of anxiety reactions. Journal of Psychology, 1937, 3, 291-308.
- Emery, J. F., & Krumboltz, J. D. Stendard versus individualized hierarchies in desensitization to reduce test anxiety. Journal of Counseling Psychology, 1967, 14, 204-209.
- Endler, N. S., Hunt, J. McV., & Rosenstein, A. J. An S-R inventory of anxiousness. <u>Psychology</u> <u>Monograph</u>, 1962, 76, 536.
- Estes, W. K., & Skinner, B. F. Some quantitative properties of anxiety. Journal of Experimental Psychology, 1941, 29, 390-400.

- Freud. S. Inhibitions, Symptoms and Anxiety. London: Hogarth Press, 1936.
- Gilkenson, H. Social fears as reported by students in college speech classes. Speech Monographs, 1942, 9, 141-160.
- Husek, P. R., & Alexander, F. The effectiveness of the anxiety differential in examination stress situations. Education Psychological Measurement, 1963, 23, 309-318.
- Kondas, O. Reduction of examination anxiety and stage fright. Behavior Research and Therapy, 1967, 5, 279-280.
- Low, G. N., & Sheets, B. V. The relation of psychometric factors to stage fright. Speech Monographs, 1951, 18, 266-271.
- Lundin, R. W. <u>Personality</u>: <u>An Experimental Approach</u>. New York: The Macmillan Company, 1961.
- Murry, E. J. Motivation and Emotion. New Jersey: Prentice Hall, Inc., 1964.
- Paul, G. L. Insight vs. Desensitization in Psychotherapy. California: Stanford University Press, 1966.
- Paul, G. L., & Shannon, D. T. Treatment of anxiety through systematic desensitization in therapy groups. <u>Journal</u> of Abnormal Psychology, 1966, 71, 124-135.
- Rachman, S. Studies in desensitization. <u>Behavioral Research</u> and Therapy, 1966, 4, 1-15.
- Sernoff, I., & Zimberdo, P. G. Anxiety, feer, and social affiliation. Journal of Abnormal and Social Psychology, 1961, 62, 356-363.
- Wolpe, J., & Lazarus, A. A. <u>Behavior</u> <u>Therapy</u> <u>Techniques</u>. New York: Pergamon Press, 1966.

APPENDICES

.

Ĩ

APPENDIX A
PERSONAL REPORT OF COMMUNICATIVE APPREHENSION

This instrument is composed of 20 statements regarding feelings about communicating with other people.

Indicate the degree to which the statements apply to you by marking whether you (1) strongly agree, (2) agree, (3) are undecided, (4) disagree, or (5) strongly disagree with each statement. Work quickly, just record your first impression.

Do not mark on this page. Please use the answer sheet provided.

		1	2	3	4	5
1.	I look forward to an opporunity to speak in public.	SA	A	U	D	SD
2.	My hands tremble when I try to handle objects on the platform.	SA	A	U	D	SD
3.	I dislike to use my body and voice expressively.	SA	A	U	D	SD
4.	My thoughts become confused and jumbled when I speak before an audience.	SA	A	U	D	SD
5.	I have no fear of facing an audience.	SA	A	U	D	SD
6.	Although I am nervous just before getting up, I soon forget my fears and enjoy the experience.	g SA	A	U	D	SD
7.	I face the prospect of making a speech with complete confidence.	SA	A	U	D	SD
8.	Although I talk fluently with friends I am at a loss for words on the platform.	SA	A	U	D	SD
9.	I feel relaxed and comfortable while speaking.	SA	A	U	D	SD
10.	I always avoid spe a king in public if possible.	SA	A	U	D	SD
11.	I enjoy preparing a talk.	SA	A	U	D	SD
12.	My posture feels str e ined e nd unn e turel.	SA	A	U	Ð	SD

		٦	2	2	1.	ц
13.	I am fearful and tense all the while I am speaking before a group of people.	ŜA	Ā	U	D	SD
14.	I find the prospect of speaking mildly pleasent.	SA	A	U	D	SD
15.	I look forward to expressing my opinion at meetings.	SA	A	U	D	SD
16.	While perticipeting in a conversation with a new acquaintance I feel very nervous.	SA	A	ប	D	SD
17.	Conversing with people who hold posi- tions of authority causes me to be fearful and tense.	SA	A	U	D	SD
18.	I would enjoy presenting a speech on a local television show.	SA	A	U	D	SD
19.	I feel that I am more fluent when talk- in to people than most other people are.	SA	A	U	D	SD
20.	I am tense and nervous while partici- pating in group discussions.	SA	A	U	D	SD

APPENDIX B

STUDENT SCHEDULE SHEET

.

Thank you for your cooperation and assistance in establishing this program.

Please provide the following information whether you wish training or not.

Name				
Student Num	ber			
Freshm e n	Sophomore	Junior	Senior	
Sex: M	F			
Campus Addro	933			
Phone Numbe:	r			
Section Num	per of Communics	ation 101		
I wish to re	eceive training			
I do not wi	sh to recèive ti	raining		
If you wish the hours th	to p ar ticipate nat you can <u>NOT</u> c	in the tr e ir come with a n	ing sessions "X."	s, indicate
	М	T	W Th	F
<u>5:00 - 6:00</u>	P.M.			
<u>6:00 - 7:00</u>	P.M.			
7:00 - 8:00	P.M.			
8:00 - 9:00	P.M.			

APPENDIX C

COMMUNICATION ANXIETY HIERARCHY

- I WANT YOU TO IMAGINE THAT:
- 1. You are talking with a friend.
- 2. You are trying to make a point at a bull session and you notice that everyone is looking at you.
- 3. You have been assigned to give a presentation in a panel discussion.
- 4. Your instructor tells you to report on an assigned article before the class.
- 5. You are next to speak, the person speaking now is making a fool of himself.
- 6. A potential employer calls you in for an interview.
- 7. Each member of a panel discussion has given his opinion and it is your turn.
- 8. You have returned to your high school for a brief visit, and the principal asks you to talk about MSU to a class of students.
- 9. It is the night before an important speech and you are practicing your presentation.
- 10. Your instructor has asked you to speak to 15 staff members at a meeting.
- 11. You are about to give your next speech, and a substitute instructor walks in the door.
- 12. You are about to speak before an unfamiliar audience.
- 13. Your instructor has just called on you to give an impromptu speech.
- 14. You are getting up to give a speech on a topic that the previous speaker just covered thoroughly.
- 15. You are about to give your speech and the instructor tells you that you cannot use your notes.

APPENDIX D

SPEECH ANXIETY INVENTORY

This instrument is composed of 34 statements regarding feelings about communicating with other people.

Indicate the degree to which the statements apply to you by marking whether you (1) strongly agree, (2) agree, (3) are undecided, (4) disagree, or (5) strongly disagree with each statement. Work quickly, just record your first impression.

٦	While preparing for giving a greach T	-	-	2	4)
±•	tense and nervous.	SA	А	U	D	SD
2.	I feel tense when I see the words "speech and "public speech" on a course out- line when studying.	'. SA	A	U	D	SD
3.	My thoughts become confused and jumbled when I am giving a speech.	SA	A	U	D	SD
4.	Right after giving a speech I feel that I have had a pleasant experience.	SA	A	U	D	SD
5.	I get anxious when I think about a speech coming up.	SA	A	U	D	SD
6.	I have no fear of giving a speech.	SA	A	U	D	SD
7.	Although I am nervous just before starting a speech, I soon settle down after starting and feel calm and comfortable.	SA	A	U	D	SD
8.	I look forward to giving a speech.	SA	A	U	D	SD
9.	When the instructor announces a speaking assignment in class I can feel myself getting tense.	SA	A	U	D	SD
10.	My hands tremble when I am giving a speech.	SA	A	U	D	SD
11.	I feel relaxed while giving a speech.	SA	A	U	D	SD
12.	I enjoy preparing for a speech.	SA	A	U	D	SD
13.	I am in constant fear of forgetting what I prepared to say.	SA	A	U	D	SD
14.	I get anxious if someone asks me some- thing about my topic that I do not know.	SA	A	U	D	SD

		1	2	3	4	5
15.	I face the prospect of giving a speech with confidence.	SA	A	U	D	SD
16.	I feel that I am in complete possession of myself while giving a speech.	SA	A	U	D	SD
17.	My mind is clear when giving a speech.	SA	A	U	D	SD
18.	I do not dread giving a speech.	SA	A	U	D	SD
19.	I perspire just before starting a speech.	SA	A	U	D	SD
20.	My heart beats very fast just as I start a speech.	SA	A	U	D	SD
21.	I experience considerable anxiety while sitting in the room just before my speech starts.	SA	A	U	D	SD
22.	Certain parts of my body feel very tense and rigid while giving a speech.	SA	A	U	D	SD
23.	Realizing that only a little time re- mains in a speech makes me very tense and anxious.	SA	A	U	D	SD
24.	While giving a speech I know I can con- trol my feelings of tension and stress.	SA	A	U	D	SD
25.	I breathe faster just before starting a speech.	SA	A	U	D	SD
26.	I feel comfortable and relaxed in the hour or so just before giving s speech.	SA	A	U	D	SD
27.	I do poorer on speeches because I am anxious.	SA	A	U	D	SD
28.	I feel anxious when the teacher announces the date of a speaking assignment.	SA	A	U	D	SD
29.	When I make a mistake while giving a speech, I feind it hard to concentrate on the parts that follow.	SA	A	U	D	SD
30.	During an important speech I experience a feeling of helplessness building up inside me.	SA	A	U	D	SD
31.	I have trouble falling asleep the night before a speech.	SA	A	U	D	SD
32.	My heart beats very fast while I pre- sent a speech.	SA	A	U	D	SD

33.	I feel anxious while waiting to give my speech.	1	2	3	4	5
		SA	A	U	D	SD
34.	While giving a speech I get so nervous I forget facts I really know.	SA	A	U	D	SD

•

