

THE RELATIONSHIP BETWEEN PERSONALITY TRAITS AND
PREFERENCES FOR INSTRUCTIONAL METHODS

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THE RELATIONSHIP BETWEEN PERSONALITY TRAITS AND
PREFERENCES FOR INSTRUCTIONAL METHODS

DISSERTATION

Presented to the Graduate Council of the
North Texas State College in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF EDUCATION

By

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Denton, Texas

August, 1959

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CHAPTER I

INTRODUCTION

The relationship between individual and group participation is of primary concern in present-day society. In education today much research is being directed toward a better understanding of group dynamics. Allport (1), Miller and Dollard (9), and Woodworth (18) contend that society functions primarily to provide the individual with direct intellectual and emotional expression.

One of the significant aspects of the behavior of any individual is the extent of his social participation. In evaluating the adequacy of an individual's adjustment in school and in life in general, one of the more crucial lines of evidence is the degree of social participation and the manner by which one interacts with and adapts himself to others.

Evidence suggests the likelihood of a relation between personality factors and group participation. The limitations of such relationships should be kept in mind. Such relations would differ from group to group so that at best, if found to exist, they would hold good for a specific culture. For a different culture their degree of relationship would probably differ. Personality factors such as

rigidity, introversion, sociability, masculinity, femininity, and aggressiveness may be expressions of behavior that have become influenced by attitudes. This assumption is supported in research by such investigators as Sherif and Cantril (12).

Sherif and Cantril made an intensive survey of the literature from which they have written extensively on the nature of attitudes as influencing factors on the individual's pattern of behavior. In their discussion on the relationship between attitudes and behavior the implication developed was as follows:

Attitudes are among those components of the psychological make-up of the individual which determine that he shall react, not in a passive or neutral way, but in a selective and characteristic way, especially in relation to certain specific stimulus situations. . . . Attitudes then, are among the various psychological factors which determine the individual's selective reaction to his environment (12, p. 17).

Smith supports this concept that attitudes are a factor in determining the extent of the individual's social participation in the following statement:

. . . an individual who perceives himself as the center of his world is self-centered. . . . He considers his interests as more important than those of other people, and he is emotionally involved in evaluations of himself. Similarly an individual who perceives himself as part of a group consisting of himself and another individual or a plural number of other individuals is group-centered. . . (13, p. 237).

Every individual strives to place or to associate himself as an acceptable member of his social milieu or in

some social setting, whatever the particular criteria for acceptance by his group or his aspired group may be. Sherif and Cantril support this line of thought with the following statement: ". . . there is an unmistakable striving on the part of the individual to belong to his group or to some group. Lack of social belongingness and conflicts in belongingness (marginality) are painful" (12, p. 5).

Behavioral differences and social-interrelationship may be the resultant of learning. It is in line with this thinking that Snygg and Combs (14) use the term "phenomenal self" to imply the individual's own definition of his relations to the world. There is an increasing evidence that outcomes of his group behavior are not solely determined by the intellectual aspects of group interaction. Lewin, Lippit, and White (8) have demonstrated the importance of climates of opinion on the functioning of groups. Fouriezos, Rutt, and Guetzkon (4) recognize that the behavior of individuals in a group situation may be regarded as generated from one of two sources:

". . . . First, the behavior may be induced mainly by the requirements of the group situation, Second, the behavior may be generated mainly from within the individual, This motivation from within may be conscious or unconscious. . . ." (14, p. 682). The assertion

by an individual of his attitudes may actually be a compensatory reaction to cover up behavioral defects rather than a true representation of his actual behavior potential. Frenkel-Brunswik (5) confirms the significance of this concept with the implication that attitudes are a determining factor in the development of personality patterns and do influence the degree of group participation.

It appears, then, that one of the significant functions of attitudes will be to determine, in part, an individual's behavior in relation to group participation. If one accepts this statement, then one would expect the individual's preference for instructional method to be influenced by such attitudes as restraint, ascendance, and objectivity. It is in this frame of reference that one might expect to find significant differences on the Guilford-Zimmerman Temperament Survey (7) for individuals who indicate strong preference for lecture-oriented instruction as in contrast to individuals that prefer the group-oriented method of instruction.

It becomes apparent that if scientific inquiry is to continue to increase the understanding of inter-human relations then the problem confronting scientific investigation is to seek the use of instruments that will reveal better understanding of attitudes as an influencing variable in group behavior. Educators are concerned with

the development of methods of study that will provide solutions to these problems. Through expansion and intensification of research it may be possible to study more effectively the role of attitudes as a factor in individual and group behavior. New and more meaningful data should aid immeasurably in understanding the influence of attitudes upon behavior.

Representative studies cited indicate that group participation has an intrinsic aspect of attitude relatedness which is basic to this study. Thus in an attempt to investigate attitude influence on student preference of teaching method was this problem conceived.

Chance conversation, both as student and instructor, has shown that college students manifest mixed feelings with respect to their preference of instructional methods. The present research was prompted by attempts to understand this diversity of opinion, perfunctorily at first, resulting in questions and answers that could neither be expected nor rejected without being subjected to scientific inquiry.

Questions kept recurring for which no satisfactory answers could be given. The following questions were recurrent and did much to stimulate the basic hypotheses of this study: Why would students differ in their preference toward teaching techniques? What personality factors are operating within the individual that may tend to cause

expressed differences toward instructional methods? What role might one expect attitude to play in teaching method preference? Are there factors within the group that tend to cause teaching method preference differences, and, if so, how would they relate to differences in personality factors? Can a technique be devised that will identify the individual's preference for a particular teaching method? Is there an instrument available that will measure student attitude toward teaching techniques, and, if so, what will the instrument's predictive value be in ascertaining attitude as a factor in determining preference of instructional method?

It is recognized and inherent to this study that behavior may well be a complex function of many variables. However, this study will investigate the relationship between the individual's expressed preference for instructional methodology and certain personality variables.

Statement of the Problem

The purpose of this study is to develop an instrument that will measure student preference toward different classroom teaching methods; and to test whether significant differences exist between each of the Guilford-Zimmerman Temperament Survey scales for individuals preferring group-oriented and lecture-oriented instruction.

Hypotheses

More specifically, this investigation will test the following hypotheses:

1. That it is possible to develop an experimental instrument that will reliably indicate instructional preference.
2. That significant differences on the Guilford-Zimmerman Temperament Survey scores exist between subjects indicating group-oriented preference and subjects preferring the lecture-oriented method.

The hypothesis to be tested statistically is the null hypothesis: There is no difference between means of the Guilford-Zimmerman Temperament Survey* factors of lecture-oriented and group-oriented subjects.

Definition of Terms

Attitude: ". . . the specific mental disposition toward an incoming (or arising) experience, whereby that experience is modified, or, a condition of readiness for a certain type of activity; . . ." (17, p. 24).

Trait: A distinctive pattern of behavior which is more or less permanent; hence a group of habits, such as objectivity, introversion, masculinity, sociability, and the like.

*Hereafter the Guilford-Zimmerman Temperament Survey will be referred to as the Survey.

Lecture-oriented teaching method: In the lecture method there is mainly instructor participation; the instructor determines the activities; discussion is kept on course materials; there is regular use of tests and grades; student contribution is evaluated by the instructor; goals are determined by the instructor; and student participation is encouraged only for the purpose of seeking information from the instructor.

Group-oriented teaching method: Group-oriented teaching may include one or more of the following: panel discussion, committee and individual reports, student-centered methods, and the question and answer technique. Group-oriented teaching methods allow for student participation; the class decides upon its own activities; students are encouraged to contribute personal experiences; the instructor accepts student contributions; goals are determined by the class; students evaluate each other with emphasis upon effective and attitudinal change; and there is a de-emphasis of tests and grades as goals in themselves.

Sources of Data

The primary sources of data to determine the significance of this study were scores from the administration of the Student Instructional Preference Scale (2) to 300 students. This group was composed of 150 students from

North Texas State College, Denton, Texas, and 150 students from Tennessee Polytechnic Institute, Cookeville, Tennessee. This sample group was approximately equal with respect to male and female subjects. From this population the total sample was drawn and administered the Survey. The total sample represented those students who made the fifty highest scores and those students who made the fifty lowest scores on the Student Instructional Preference Scale.*

Secondary data were obtained from books, dissertations, theses, periodicals, and test manuals. These data were used for reviewing related studies as well as for comparison and evaluation of the findings of this study.

Subjects

For purposes of this study the total sample was composed of thirty-five female subjects and sixty-five male subjects. In group "L" there were thirty-seven males and thirteen females; and in group "G" there were twenty-eight males and twenty-two females. With respect to academic classification, thirty-four of the subjects were of junior standing, forty-six were seniors, and twenty were graduate students. Subjects were selected and approximately matched on the basis of their college experience with the

*Hereafter the Student Instructional Preference Scale will be referred to as the SIPS.

lecture-oriented and the group-oriented methods of instruction. All subjects of this study have had experience at the college level with both the lecture-oriented and the group-oriented method of instruction. This concept was substantiated by the fact that all fifty subjects of group "L" and all fifty subjects of group "G" indicated that they had experienced the lecture-oriented method of instruction in five or more of their college classes. This contrasts with student experience with group-oriented method of instruction. Thirty-six subjects of group "L" felt that they had experienced the group-oriented method of instruction in five or more of their college classes; for group "G" forty-eight subjects indicated that they had experienced the group-oriented method of instruction in five or more of their college classes.

Procedures and Treatment of Data

An intensive review of the literature pertinent to the role of attitude as a factor in determining instructional method preference was made in order to provide a basis for the analysis and interpretation of data gathered in this study.

The SIPS is a fifty-five-item scale designed as an experimental research instrument to measure student attitude toward methods of classroom instruction. The statements are in first person (implied) and are stated

affirmatively rather than in question form. The SIPS utilizes students' expressed attitudes toward instructional procedures. The statements were obtained primarily from 119 college students at Eastern New Mexico University and 24 students at North Texas State College; the concepts that were incorporated into the final body of the SIPS were developed during the course of this investigation. Students were asked to state their attitudes toward the lecture-oriented and group-oriented methods of instruction in terms of their "likes" and "dislikes." From these statements the scale as used in this study was developed (3).

Reliability for this instrument was established by the test-retest method. Internal consistency was established by reversing several of the statements within the scale and by comparing responses on the two forms.

A regular fifty-five-item answer sheet, with five possible choices per statement marked Strongly Agree, Agree, Uncertain, Disagree, and Strongly Disagree, was provided with each SIPS booklet. Total test time was one half hour.

To score the scale, only two stencils are necessary for hand scoring. One stencil for group-oriented statements was designated the "G" Scoring Card, and the "L" Scoring Card was for lecture-oriented answers. Statements were scored according to the degree of agreement or disagreement with the statement in question, and were assigned

a score weight from +1 to +5. An answer that strongly agreed with lecture-oriented statements was scored +1, whereas the numerical value of +5 was given answers that strongly agreed with group-oriented statements. The lower the total numerical value, the more strongly the individual agreed with statements favoring lecture-oriented methods, whereas a high total score reflected attitudes favoring group-oriented statements. Individuals most strongly agreeing with the lecture-oriented statements could obtain a score with a possible low of 55. Individuals expressing strongest agreement for the group-oriented statements would receive a maximum score of 275.

One hundred and fifty students at North Texas State College and 150 students at Tennessee Polytechnic Institute were administered the SIPS during the 1957-58 and 1958-59 school years. The combined 300 students constitute the sample population of this study. From the sample population, 100 students were selected and administered the Survey. The criterion for selecting the total sample was the score: the fifty students with the highest SIPS scores and the fifty students with the lowest SIPS scores were selected. Subjects with the high scores were designated for purposes of this study as the "G" group and subjects with the low scores as the "L" group. Forty-two subjects in the total sample were from North Texas State College;

of these, fifteen were females and twenty-seven were males. The remaining fifty-eight subjects were from Tennessee Polytechnic Institute, twenty females and thirty-eight males. Statistical interpretation of these data constitutes the experimental variables in this research.

A critical analysis was made and interpretations were drawn for the ten Survey factors between the "L" and "G" groups. The mean, standard deviation, standard error of the mean, standard error of the difference, and Fisher's t were obtained for each of the ten Survey scores.

Implications of This Study

The results of this study may be of value as supplementary information for instructors at the college level to the extent that classroom behavior, study habits, interest, and rate of learning may be materially influenced by instructional method preference. The findings may also be of particular interest to guidance personnel as additional objective information with which to assist students in planning their educational program. Such information should aid in the evaluation of scholastic difficulties and personality conflicts as they reflect the student's attitudes of himself in relation to group participation.

Development and Scope of the Survey

Despite its recent date (1949), the Guilford-Zimmerman Temperament Survey cannot be thought of as a completely new instrument. It is rather a logical revision and condensation of several previous Guilford personality questionnaires.

These previous inventories furnished the trait names for seven of the ten categories used in the Survey and also provided many specific items which were either included verbatim or were reworked for greater effectiveness. By factor analysis the authors of the Survey organized the selected 300 items into the ten personality traits ultimately used. Each trait was represented by thirty items, and no trait was scored for more than one variable.

The factor analysis studies made on the authors' previous tests constitute the basis for the validation of the Survey. Little or no criticism has been directed at this method of validation. Validation studies from numerous sources have provided objective testimony to support confidence in the Survey. Many users of the Guilford series of personality inventories (10) have continued over a period of years to find them valuable. It has been pointed out, however, by Brogden (3) that the high validity reported for the G A M I N is somewhat open to question. Criticism was likewise directed against the Survey's

predecessors by Van Steenberg (16) who, as a reviewer of the Guilford-Martin Personnel Inventory, pointed out a weakness in the number of cases used in validating the inventory. Guilford (6) contends, however, that the internal validity of the scores is adequately substantiated by the foundation of factor-analysis studies plus the successive item-analysis directed toward internal consistency and uniqueness. He implies that what each score measures is fairly well defined and that the score represents a confirmed dimension of personality and a dependable descriptive category. Evidences of practical validity, based upon correlation studies with practical criteria of adjustment, have accumulated. Some of the most impressive validity data have come from the use of the Survey with supervisory and administrative personnel (2).

In general, the statistical work on the Survey is regarded favorably. Stephensen in reviewing the instrument writes: "As one would expect from Professor Guilford's laboratory the Survey, its data, and supporting norms are all adequate, thorough, and factually oriented" (15, p. 95).

In conclusion it can be stated that the Survey is a superior instrument of its kind. In keeping with this Shaffer states: "As the outstanding omnibus instrument based primarily on factor analysis, the Survey will have usefulness for screening, rapid evaluation, and research"

(11, p. 162). Van Steenberg supports this contention by stating: "The Survey gives a very favorable impression of a well-rounded, carefully worked out method of evaluating an important portion of the total personality" (16, p. 93). Administration of the Survey requires about one hour of time. It is thus possible to obtain information about an individual's behavior dynamics in a little more than one hour's time.

As a consequence of clinical experience, the following interpretations of the personality traits obtained from the Survey are described:

- G - General Activity.--A high score indicates a tendency to engage in vigorous overt action. A low score indicates a tendency to inertness and a disinclination for motor activity.
- R - Restraint.--A high score indicates an inhibited disposition and an over-control of the impulses. A low score indicates a happy-go-lucky or carefree disposition, liveliness, and impulsiveness.
- A - Ascendance.--A high score indicates social leadership and a low score indicates social passiveness.
- S - Sociability.--A high score indicates a tendency to seek social contacts and to enjoy the company of others. A low score indicates shyness and a tendency to withdraw from social participation.

- E - Emotional Stability.--A high score indicates a happy-go-lucky or carefree disposition. This trait suggests the level of emotional adjustment. A low score indicates an inhibited disposition and an over-control of impulses.
- O - Objectivity.--A high score on this trait indicates a tendency to view oneself and the environment in an objective and a dispassionate manner. A low score indicates a tendency to take everything personally and subjectively and to be hypersensitive.
- F - Friendliness.--A high score indicates an agreeable lack of quarrelsomeness and a lack of domineering qualities. A low score indicates a belligerent and domineering attitude.
- T - Thoughtfulness.--A high score indicates a lack of introspectiveness and an extratensive orientation of the thinking process. A low score indicates an inclination to meditative thinking, philosophizing, analyzing oneself and others, and an introspective disposition.
- P - Personal Relations.--A high score indicates a willingness to accept things and people for what they are and to be generally tolerant in one's attitude toward others. A low score on this trait indicates an overcriticalness of people and of things in general.

M - Masculinity.--A high score indicates masculinity of emotional and temperamental make-up, and a low score indicates feminine-like qualities in the personality make-up.

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CHAPTER II

SURVEY OF THE LITERATURE

Within recent years much psychological research has emphasized the functional relationship between individual behavior and group interaction. This trend is evidenced in the theoretical approach of the following Gestalt adherents, Brown (8), and Lewin (24), and in the inclusion of social factors in the personality theories of Allport (2), Fromm (12), Kardiner (23), Horney (19), and Sullivan (30). McKeachie (27), in a recent article on teaching methods and group behavior, makes the statement that "one of the most exciting, and frustrating, areas of applied research is research on college teaching . . ." (27, p. 580).

Scheffler and Winslow, in a study dealing with attitude and group position, indicate that:

It is apparent that psychology as a whole, and particularly psychological theories of personality and social behavior, has been gravitating in recent years from predominantly biological emphasis to that of a more definite social or cultured orientation (29, p. 177).

Roseborough has shown in her study that "in the past few years the study of small groups as an area of experimentation has been attracting the interests of an increasing number of social scientists . . ." (28, p. 275).

And in the empirical and theoretical writings of Bales (3) and Bales and Strodtbeck (4) on the study of the interaction of small-group behavior, the group is regarded as a dynamic system of action, which ebbs and flows between instrumental or adaptive behavior as problems are solved, expressive or integrative behavior as socio-emotional problems among the individuals of a group are attended to.

Gross (15) cites Nathaniel F. Cantor, an advocate of the group-oriented technique of instruction, who did a study to determine the validity of the student-centered method of teaching. Cantor used a partially standardized scale for measuring self-insight in a group of students who were registered for his course in "The Dynamics of Learning" and another group who were registered for a course in "Principles of Economics." Both groups were believed to be comparable as to age, level of education, and socio-economic status, although it was impossible to match groups in accordance with a rigorous experimental design. The scale was administered again to both groups after a five-week interval in order to measure the relative change in scores between the two groups during the interim. Findings of the study indicated that student-centered teaching does encourage the development of self-insight on the part of the majority of the students; it may fail to produce any significant behavioral change in a certain minority of the students.

Watson (32), in a study evaluating group-oriented instruction, reports that Teachers' College, Columbia University, has used the group-oriented method of instruction for more than thirty years. He found that teachers using the group-oriented procedure reported that some students enjoyed the experience and rated it more valuable to them than any other phase of the course requirement. Other teachers gave evidence of complaint by the students that their groups got nowhere, that the discussion groups were a waste of time. Commenting on this, Watson asserts: "Few efforts have been made to find out why the group experience means so much more to some students than to others" (32, p. 402). Watson asked each student to rate his group experience for enjoyment, accomplishment, and for what he learned from his discussion group. As reported in this study, it is interesting to note the following:

Students who will enjoy and profit from small group participation could not be identified on the basis of: their own expressed preference; their level of mastery of the course material; their stated interests to learn about "group leadership"; their general level of enthusiasm for course topics; or their responses to clusters of questions apparently indicating sympathy, hostility, self-reliance, or "intellectualism" . . . (32, p. 407).

Watson found obtained differences that were statistically significant as factors in determining the student's attitude toward group-oriented instruction. These

differences presented in the conclusions are stated as follows:

-
- 3) Students especially interested to learn about "fears and anxieties" tended to place high value on group work;
 - 4) Students who rejected all items indicative of "authoritarianism" placed a low value on group work;
 - 5) Students who rated groups low were disappointed mainly in lack of intellectual stimulation from their fellow-members;
 - 6) Men, with little or no professional experience in the field, were responsible for more "High" ratings; women with more than five years of experience gave more "Low" ratings (32, p. 408).

Husband (20), in a study on the comparison of large lecture and small group participation classes, failed to find differences in achievement between the two control groups used in his study. A number of other experiments, namely, those of Johnson and Smith (22), and Eglash (11), supported the findings of this study.

Guetzkon, Kelly, and McKeachie (16), in a study involving recitation, discussion, and tutorial as methods of instruction, found that not only did the more autocratic recitation method produce superior performance on examinations but students gave it preference over the other methods of instruction. It is interesting to note that this conclusion is supported by Gibb and Gibb (14) in a study in which they report that students who were taught by the group-participation method were significantly superior

to students taught by the lecture method in role flexibility and self-insight.

Wolfe (35) did a comprehensible piece of research on teaching methods in which he concluded by quoting Longstaff's statement of 1939:

The experimental evidence submitted to the present time tends to support the general conclusion that there is little difference in achievement in large and small classes and, also, that it makes little difference as to what method of presentation of the materials of the course is used . . . (25, p. 33).

Research to date has not outdated the concept of this statement. However, Hirschman (18) found that group-oriented classes of four students each learned significantly more than a group of about fifty students who spent the same length of time in getting the same concepts by the lecture method. It was also determined that, in general, superior students favored the small-group method of instruction more than did the less gifted student, and that student attitude toward method of instruction changed very little following a recent experiencing of group method of instruction.

Wispe (34) conducted a unique experiment on group-oriented versus lecture-oriented teaching controversy. He used projective like measures to differentiate the sample population into three types of subjects, the "personality-insecure" (51 per cent of the sample), the "satisfied"

(26 per cent of the sample), and the "independent" (23 per cent of the sample). Results of the study show that the insecure students had unfavorable attitudes toward both instructors and fellow students, and had particularly unfavorable attitudes toward group-oriented instruction. The satisfied students had favorable attitudes toward instructors, fellow students, and both lecture and group-oriented teaching methods. The independent students were highly verbal and wanted more group-oriented teaching no matter what technique the instructor used. However, the independent students expressed only moderately favorable attitudes toward fellow students and instructors; yet they were more likely to display aggression against the instructor in the lecture-oriented teaching situations.

Bettis, Malamud, and Malamud combined significant studies on group relations and summarized the results. In general it was concluded that the ability to develop insight into human relations tends to depend upon the degree of attitude change. From the study it was further shown that the group discussion method was more effective than was the lecture method of instruction in changing the individual's attitude toward self and others.

Albrecht, in a study to develop a set of psychological principles to use in classroom instruction, states:

. . . . There is a greater need for more study on this subject. Evidence is favorable, but not enough is accurately known to form reliable conclusions. Aside from common standards of "success," students taught by non-directive methods show greater emotional stability and insight and demonstrate greater social responsibility than do students who remain oriented with traditional methods (1, p. 878).

Haythorn and others (17) investigated the relationship between certain personality characteristics of group members and the pattern of interpersonal behavior that develops of their interaction. Specifically the research was an investigation of groups composed of subjects homogeneous with respect to the California F- Scale.

Their results indicated that the authoritarian subject would respond to the group situation much more aggressively; that such a person is concerned with status hierarchy; and that in striving for social position such an individual displays more autocratic behavior qualities. On the other hand, the equalitarian subject tends to be more group conscious.

The data supported the following fact:

There appears to be a definite tendency for the overall pattern of behavior in the two groups to differ. Equalitarian subjects apparently behave with greater effective intelligence, and more leadership behavior, with an insignificant tendency to show sensitivity to others, to behave in a more equalitarian manner, and to show greater goal striving and security in the experimental situation (17, p. 62).

The conclusion states: "The results indicate that behavior differences between Subjects in groups composed of

high F or 'authoritarian' individuals and those in groups composed of low F or 'equalitarian' individuals can be reliably predicted . . ." (17, p. 71).

Perhaps a word regarding the lack of uniformity in the results of studies reported is in order. Personality differences and student preference regarding method of instruction might partially account for the lack of uniformity in the results of research as reported in the literature. A timely and comprehensible piece of research by Jacob (21) lends support to inference that lack of uniformity or controversy in the results of studies continues because some of the findings appear too contradictory to be conclusive. It was on this issue that Jacob made the following statement: ". . . . One limitation has been the fact that most of the studies have been conducted with 'captive audiences' . . ." (21, p. 89).

On the relationship between personality factors and student's preference of method of instruction, Jacob indicated that student response to a given technique of instruction will often be reflective of his personality pattern or attitudes developed prior to the time that the student experiences a particular method of instruction. It was on the relationship of this concept that the following statement was made: "Some students react very negatively to a more permissive teaching technique. They

feel frustrated and uneasy without more direction and authority exercised by the teacher . . ." (21, p. 9). This statement supports the implication of this study that in some instances students may actually learn less when subjected to a course of study utilizing a method of instruction not of their choice.

In conclusion Jacob states: "This study has discovered . . . no pedigree of instructor and no wizardry of instructional method which should be patented for its impact on the values of students . . ." (21, p. 11). Jacob further contends that a student's preference of teaching method as related to his attitudes may be determined as follows:

The personality of a student and his orientation when he first comes to class has a lot to do with his reaction to the method of teaching, . . . Individual differences among students are more important than differences of instructional technique in determining educational impact (21, p. 90).

Wilerman in an earlier study had attempted to determine the influence of attitudes on motivation as related factors to active and passive participation in which the "K" factor on the Minnesota Multiphasic Personality Inventory was used to test the hypothesis that:

. . . active and passive participation in the organizational function of a group was related to motivation to belong to a particular group, to general tendencies to be oriented toward participating in groups, and to skill in performing the tasks required by the organization . . . (33, p. 38).

It was Wilerman's contention that in any group there are variations in the extent of participation by different members in the activities of the group with some members more active than others. He supported such generalization with the following statement:

Logically, passive participation may result from either low motivation in the direction of participation, or if motivation is present, from counter tendencies which oppose participation. The latter may be labelled "restraint against participation." A plausible type of restraint in social situations is "fear of failure" or lack of self confidence (33, p. 390).

One of the more recent and comprehensive studies of this kind was carried out by Gaier (13). Using the Rorschach, Gaier investigated the relationship between certain personality characteristics and students' thoughts in group-oriented instruction. In part, Gaier found that rigidity predisposition correlated positively with scores on a measure of rote recall and negatively with measures requiring handling of new concepts and new methods of attacking problems. It was further demonstrated that negativism correlated positively with class time spent in negative thoughts about other people and negative thoughts about ideas expressed in class.

The rigidity-flexibility syndrome, as shown by a survey of the literature, seems to have been well substantiated. An area which has been neglected is the important one of attitudes. The importance of continued research on

attitudes lies in the possibility that educational goals may be more easily attained if student preference for teaching method is considered.

It was in keeping with this line of thinking that Calden and Cohen (9), in a study dealing with the relationship of ego-involvement and test definition as related to test performance, found significant differences on certain Rorschach scores for subjects determined to be high and low in ego-involvement. Individuals with high ego-involvement produce test protocols that identify their behavior as less rigid, with better internal adjustment, and as more involved with the social environment.

Beck (5) used the Rorschach to determine the degree of F plus (reality) as a function of the ego in terms of personality organization levels. He states: ". . . F plus is the representative of the unifying psychologic core in personality . . ." (5, p. 398). Beck further contends that there is no ego without F plus, because it is from the F plus score that the following statement is made: "This factor tells us if the patient is willing to live in the world of others at all; willing to observe social canons, to see the realities of his societal environment . . ." (5, p. 398).

Marquies (26), using the Rorschach Ink Blot test, attempted to measure basic personality factors and their

interrelationships of junior high school pupils having a mean I. Q. of 124. For purposes of the study, the sampling population was divided into achieving and non-achieving groups and equated for intelligence, age, sex, socio-economic status, religion, and language spoken in the home. The study produced some marked statistical differences on some of the Rorschach categories. These differences were interpreted to show that unsuccessful students have more signs of emotional disturbance in their capacity to establish personal relationships and that they are more stereotyped in their thinking.

In a similar study, Thompson (31) investigated the relationship between certain personality factors of 100 college students and their academic grade point level. Analysis of the results reveals that the achieving student tends to be more introverted and better adjusted on the whole than the non-achieving student.

Research in instructional skills (10) has been part of the American college scene since the turn of the century. Since that time much effort has been expended developing teaching techniques, but little attention has been given to the role of attitudes as a factor in determining individual preference for method of instruction. Birney and McKeachie are of the opinion that "in research on teaching methods, one of the difficulties has been lack of adequate

description and measurement of the independent variable, the teaching method" (7, p. 60).

The dearth of clear-cut findings in research then can be blamed on such things as difficulty of controlling variables, the lack of adequate measures, or the lack of a theoretical basis for the research. Only from a systematic and theoretical approach can there be developed testable hypotheses that will contribute to greater understanding of the relationship between attitude and group behavior.

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CHAPTER III

THE DEVELOPMENT AND SCOPE OF THE STUDENT INSTRUCTIONAL PREFERENCE SCALE

The Student Instructional Preference Scale is essentially an experimental research instrument designed to measure attitude toward classroom instructional methods at the college level. The scale as used in this study was a fifty-five-item instrument. The statements were in the first person (implied) and were stated affirmatively rather than in question form. It was the investigator's opinion that the affirmative approach made possible more direct and less ambiguous statements.

Before the Student Instructional Preference Scale could be constructed, a preliminary pool of items had to be created. Students were asked to submit statements expressing their "likes" and "dislikes" with respect to lecture-oriented and group-oriented methods of instruction. These methods were defined as specified in the Definition of Terms section of Chapter I.* The statements were obtained primarily from 133 college students. Of the total number of students, 109 were enrolled at Eastern New Mexico

* Cf. p. 7.

University in the following classes: Introduction to Counseling, twenty-three students; Personality Development, fifteen students; Collective Behavior, twenty-seven students; Methods of Research, twenty-nine students; Individual Testing, eight students; Psychometrics, seven students. Twenty-four students were enrolled in two classes of Personal Adjustment at North Texas State College. Valuable assistance was received from the staff of professors at North Texas State College; specifically were the criticisms and suggestions invaluable during the construction of the scale. Test construction rationale was reviewed in research articles by Jones (2), Sanford, Webster, and Freedman (4), Ferguson (1), Webster, Sanford, and Freedman (6), and Webster (5). Pertinent ideas regarding student attitudes toward college classroom teaching procedures were also gained from fellow doctoral club members and graduate students, which aided materially in the development and scope of the scale.

The nature and purpose of the instrument were explained to the students in a regular class meeting. Students were asked, as an out-of-class assignment, to express in simple statements their "likes" and "dislikes" for the following methods of instruction: lecture, panel discussion, student-centered, individual reporting, committee, and question and answer. A total of 1,763 items

was received in response to the assignment. Some of the statements were of superficial value, others were caustic toward a particular method, and a few statements vented pent-up emotion against college instructors in general.

The majority of the students complied with instruction and turned in sentences that were concise, yet meaningful. There were exceptions, however, which merit research into student attitude toward teaching methods. The following statements are examples of student comments:

The lecture method has the advantage of covering a large amount of material in a shorter period of time than does any of the other methods. Provided the student has an inclination or interest, and the teacher presents material effectively, it will result in a greater amount of information and undoubtedly lead to further work by the student on his own initiative

Another student, in expressing preference for the lecture method, wrote:

I much prefer the lecture type method of teaching I love the interplay of classroom and teacher personality in the dissemination of subject matter. Having found that I become like a segment of every personality that I meet, it is always a new adventure for me to find a new personality in the person of my professor.

The committee method of instruction was described by one student as follows:

The committee method of teaching need not be so, yet it almost invariably is the driest, dullest, longest piece of teaching existent. Every committee chairman who prepares a report seems to think himself an undercover Ernest Hemingway.

Individual reports as a teaching method received the following comments:

When a student makes a report he learns not just some subject matter but how to state his ideas in good form. He learns how it feels to stand up and talk to a group of people and express himself so he can be understood

Individual reports were regarded by another student as follows:

Individual reports may be an ideal way of teaching provided the student knows how to go about preparing the report and making it both informative and interesting to the group. If this is not done, again it falls into the category of a whole lot of nothing about nothing.

Student-centered instruction was described by one student as follows:

This kind of teaching could get out of hand very easily unless the teacher is quite an expert at it. The student would learn only as much as he wanted, the lazy one not doing anything. Students need and want supervision although they do not realize it. They need to be taught and directed and led or pushed in the right direction, or what we consider the right direction. This method would separate the men from the boys and show how "mature" each is. But this "mature" group would be, in the majority of cases, the small minority

The panel method of instruction was seen as follows:

The ones on the panel learn, but the panel has to be small or the rest of the class is left out. The aggressive ones and the smart ones do all the participating and all or most of the learning.

Or, as another student expressed his attitude toward the panel method:

A group on a panel can give their own ideas and values where otherwise they wouldn't say anything. The panel is a chance to go deeper into a subject than just from the textbook. It is more interesting if the student can put his two cents worth in and have it recognized

Students were more critical of the question-answer method of instruction than of the other methods, as is evidenced by the following:

The question-answer type of teaching can be of value when it is conducted in such a way that the student doesn't have to be afraid of talking out and giving his views or that the teacher will chew him out if he doesn't know the answer. Also when questions are asked on a voluntary basis it helps the slower ones to feel achievement

One student had the following to say:

The teacher sits at the desk asking questions and calls on a student to answer, going page by page in the text. The student is not allowed to have his book open. The student memorizes the lesson until after class and then promptly forgets. While Mary is reciting, the rest of the class is sleeping, writing notes, thinking of last night's movie, or hoping the teacher doesn't call on them next

Still another expressed his attitude toward the question and answer method as follows:

The question-answer method of teaching is fine for teaching parrots, but people are not parrots. Neither are people "univac" machines to be fed carefully compiled data to be humanly integrated and repeated upon pushing question buttons. Obviously, I think that the question-answer method is a farce and should be eliminated

The initial scale was developed from sixty-three items that seemed to be representative of student attitude toward teaching techniques. In order to ascertain the degree of

ambiguousness and to assist in the refinement of the instrument, the scale was administered as a class exercise to graduate students enrolled in a course of psychology at North Texas State College. In the final revision of the scale, eight of the original items were discarded and the remaining fifty-five statements were put into test form for purposes of this study.

Reliability was established by the test-retest method on a heterogeneous group of fifty-eight college seniors at North Texas State College. The scale was administered during two regular class meetings, with a test-retest interval of two weeks. The initial test had a mean score of 169.64, and a sigma score of 26.24. The mean score on retest was 166.44, with a sigma score of 29.49. The Student Instructional Preference Scale had a test-retest reliability coefficient of .966. A critical ratio of 7.29 establishes the significance at greater than the 1 per cent level of confidence. The significance of the difference of means was tested by Fisher's t . The resulting t was .434; therefore, it can be concluded that the means were not significantly different.

To establish a check on the internal consistency of the instrument, nine statements were reversed with respect to instructional method preference. The following example illustrates the technique employed in an attempt to

establish internal consistency for the SIPS: "More content can be presented in lecture-oriented instruction than in group-oriented instruction." The reversal counterpart of this statement was: "More content can be presented in group-oriented instruction than in lecture-oriented instruction." The original statements had a mean score of 29.24 and a standard deviation of 5.41. The statements when reversed in terms of instructional method preference had a mean score of 27.15 and a sigma score of 5.16. The degree of correlation for internal consistency was determined by determining the relationship between the original statements and their counterparts, the reversed items. The statistic employed to determine the degree of correlation was the Pearson Product Moment Technique (3, p. 119). The scale had an internal consistency correlation of $-.80$ and was significant at the 1 per cent level of confidence. It was concluded that the instrument was fairly consistent in determining teaching method preference as defined by this study.

On the basis of logical validity it was assumed that each statement was adequately defined and that scores defined attitude toward methods of instruction. In a measure of attitudes, as in all measurement involving the cooperation of individuals, one must assume that subjects' responses can be used to define a concept.

Administration of the scale requires a standard fifty-five item answer sheet with five possible answers per statement. Instructions were printed on the fly leaf of each test booklet.*

Scoring of the instrument was a simple procedure and took about five minutes to determine student preference for teaching methods. To score the scale only two stencils were necessary for hand scoring. One stencil for group-oriented statements was designated as the "G" Scoring Card, and the "L" Scoring Card was for lecture-oriented answers. Statements were scored according to the degree of agreement or disagreement with the statement in question and were assigned a numerical value from +1 to +5. Attitudes that strongly agreed with statements favoring lecture-oriented methods of instruction were scored +1, whereas strong agreement for statements pertaining to group-oriented instruction were scored +5. The lower the total numerical value, the stronger the individual agreed with statements favoring lecture-oriented method. A high total score indicated a preference for group-oriented methods. Individuals who strongly agreed with the lecture-oriented statements could obtain a score with a possible low of fifty-five. Individuals expressing a strong agreement for the group-oriented statements could receive a maximum score of 275.

The completed SIPS is presented in Figure 1.

*Cf. Figure 1.

FIGURE 1

STUDENT INSTRUCTIONAL PREFERENCE SCALE

INSTRUCTIONS:

In this scale you will find a number of statements designed to sample attitudes about classroom instructional procedures. There is considerable disagreement as to what constitutes the best procedure; therefore there are no "right" or "wrong" answers in the usual sense of a high score being necessarily the best. The purpose of this Scale will be best served if you indicate your preference as accurately as possible. What is wanted is your own attitude about the statements. Read each statement and decide how YOU feel about it. Then mark your answer in the space provided on the answer sheet.

- If you strongly agree, blacken space under "SA"
- If you agree, blacken space under "A"
- If you are uncertain, blacken space under "U"
- If you disagree, blacken space under "D"
- If you strongly disagree, blacken space under "SD"

Lecture and Group-oriented instructional methods are defined as follows:

Group-oriented instruction method: Group-oriented instruction may include one or more of the following: panel discussions, committee and individual reports, student-centered method, and the question and answer technique. Group-oriented instruction methods allow for student participation, the class decides upon its own activities, students are encouraged to contribute personal experiences, the instructor accepts student contributions, goals are determined by the class, students evaluate each other with emphasis upon affective and attitudinal change, and there is a de-emphasis of tests and grades as goals in themselves.

Lecture-oriented instruction method: In the lecture method there is mainly instructor participation, the instructor determines the activities, discussion is kept on course materials, there is regular use of tests and grades, student contribution is evaluated by the instructor, goals are determined by the instructor, and student participation is encouraged only for the purpose of seeking information from the instructor.

FIGURE 1--Continued

1. Lecture-oriented instruction is better because too much time is spent on unimportant details in group-oriented instruction.
- 2.* More content can be presented in lecture-oriented instruction than in group-oriented instruction.
- 3.* Group-oriented instruction is better than lecture-oriented instruction for the presentation of new material.
4. The lecture-oriented instruction is better because it is more difficult to formulate ideas from group-oriented instruction.
- 5.* It is easier to maintain interest for course content in the lecture-oriented class than in the group-oriented class.
6. More knowledge can be gained from lecture-oriented classes than from group-oriented classes.
7. Personal judgment is utilized more in determining content significance in group-oriented instruction than in lecture-oriented instruction.
- 8.* Group-oriented instruction demands more responsibility from the student in the learning situation than does lecture-oriented instruction.
9. More practical questions are raised in lecture-oriented instruction than in group-oriented instruction.
- 10.* As a method of instruction group-oriented instruction does not compare favorably with lecture-oriented instruction because it is too narrow in scope.
11. Group-oriented instruction is better because lecture-oriented instruction includes a lot of non-essential material.
12. Lecture-oriented instruction is better than group-oriented instruction because students cannot learn much from each other.

FIGURE 1--Continued

13. Group-oriented instruction is more likely to create a division between the aggressive and shy individuals than is lecture-oriented instruction.
14. Group-oriented instruction permits greater freedom of thought than lecture-oriented instruction.
15. The opportunity to learn is greater in group-oriented classes than in lecture-oriented classes.
16. Domination by a few occurs more often in group-oriented classes than in lecture-oriented classes.
17. Lecture-oriented instruction depends less on the skill of the instructor than does group-oriented instruction.
18. Group-oriented instruction is better than lecture-oriented instruction because students need to learn to evaluate themselves.
- 19.* Lecture-oriented instruction provides for a greater systematized coverage of material than is afforded in group-oriented instruction.
20. Attention is better maintained in lecture-oriented instruction than in group-oriented instruction.
21. Lecture-oriented instruction is better than group-oriented instruction because the student knows what is important.
- 22.* More content can be presented in group-oriented instruction than in lecture-oriented instruction.
23. Lecture-oriented instruction is preferable to group-oriented instruction because a few students dominate the group-oriented class.
24. New concepts are presented more efficiently in lecture-oriented instruction than in group-oriented instruction.
- 25.* Interest loss is greater in lecture-oriented instruction than in group-oriented instruction.

FIGURE 1--Continued

26. There is a greater temptation to bluff in group-oriented instruction than in lecture-oriented instruction.
- 27.* Self-responsibility for learning is manifested more in lecture-oriented instruction than in group-oriented instruction because the student must learn to pick out what is important.
- 28.* Group-oriented instruction is more conducive to the small class than lecture-oriented instruction.
29. The more mature student benefits more from lecture-oriented instruction than from group-oriented instruction.
- 30.* More subject detail is presented in group-oriented classes than in lecture-oriented classes.
- 31.* Critical thinking is better stimulated in lecture-oriented instruction than in group-oriented instruction.
32. A greater degree of independence in the learning situation is provided in lecture-oriented instruction than in group-oriented instruction because the student is not held back by the group.
33. Less time is wasted in lecture-oriented instruction as compared to group-oriented instruction.
34. Lecture-oriented instruction challenges one's judgment in the dissemination of content more than group-oriented instruction.
- 35.* New materials are better presented in lecture-oriented instruction than in group-oriented instruction.
36. More factual information can be presented in lecture-oriented instruction than in group-oriented instruction.
- 37.* Group-oriented instruction provides greater scope of content than does lecture-oriented instruction.
38. Lecture-oriented instruction is better than group-oriented instruction for covering material not in the text.

FIGURE 1--Continued

39. Group-oriented instruction is better than lecture-oriented instruction because the student knows his own personal needs better than the instructor.
- 40.* Group-oriented instruction is more confusing to the learner than lecture-oriented instruction.
41. As compared to the lecture, group-oriented instruction is dull and does not add materially to one's knowledge (of the course of study).
- 42.* Group-oriented instruction stimulates thinking more than lecture-oriented instruction.
43. Lecture-oriented instruction is better than group-oriented instruction because more significant points are covered.
44. Group-oriented instruction eliminates confusion and makes for better learning than lecture-oriented instruction.
45. Lecture-oriented instruction is better because in group-oriented instruction individuals get off the subject.
- 46.* The small class benefits more from lecture-oriented instruction than from group-oriented instruction.
- 47.* Group-oriented instruction is less confusing to the student than lecture-oriented instruction.
48. Lecture-oriented instruction is more applicable to the teaching of difficult material than group-oriented instruction.
49. Students pay closer attention to lecture-oriented instruction than they do to group-oriented instruction.
50. General concepts are developed better in lecture-oriented instruction than in group-oriented instruction.
51. Lecture-oriented instruction is "spoon feeding" as compared to group-oriented instruction.

FIGURE 1--Continued

52. Lecture-oriented instruction is better than group-oriented instruction because it facilitates communication within the class.
53. The student knows better what is expected of him in lecture-oriented instruction than in group-oriented instruction.
54. Group-oriented instruction is better than lecture-oriented instruction because students get more different points of view.
55. Lecture-oriented instruction is more informative than group-oriented instruction.

*These were the items used in the test of internal consistency.

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CHAPTER IV
PRESENTATION, INTERPRETATION, AND DISCUSSION
OF THE DATA

Chapter IV will be devoted to the presentation, interpretation, and discussion of the test data as they relate to the stated hypotheses of this study. To acquaint the reader with the statistical procedures used in treating the data, a brief explanation of the statistical treatment will be given. Test data will also be presented since the use of tabular measures will aid materially in the interpretation and discussion of the results.

The results of the study will be drawn together by an interpretation of the data which will show whether significant differences exist between subjects of group "L" and group "G" on the personality traits as measured by the Survey. And finally, the results will be discussed in relation to the consensus of current psychological theory and experimental evidence.

In Chapter I the hypothesis was stated that significant differences would exist between Survey scores of subjects expressing a preference for lecture-oriented and group-oriented methods of instruction. To test the

hypothesis adequately, it was necessary to treat the raw data for measures of central tendency and variability so that levels of significant differences could be determined. Fisher's t was employed to test for significant differences between mean scores for the sub tests of the Survey.

Table I presents subjects by classification, sex, and class experience with lecture- and group-oriented methods of instruction.

The majority of subjects from both groups indicated that they had received more instruction in college by the lecture-oriented method than by the group-oriented method. In isolated instances the reverse was true.

It was interesting to compare lecture-oriented and group-oriented subjects on what they felt to be their experiences with lecture and group methods of instruction. The startling find was the fact that both groups indicated by about the same percentages their experience with lecture- and group-oriented classes. Ninety-six per cent of group "L" subjects felt that more than ten of their classes had been taught by the lecture method. This compares with 98 per cent of group "G" subjects who felt that the lecture method was used in more than ten of their classes. Regarding the group method of instruction, 14 per cent of group "L" felt that it was used in more than ten of their college classes. Again this was in contrast to

26 per cent of group "G" subjects who felt that the group method of instruction was used in more than ten of their classes. It is proper to mention these differences of experience with lecture- and group-oriented methods of instruction because the present study contends that attitude differences determine teaching method preference.

TABLE I

DISTRIBUTION OF SUBJECTS BY SEX, CLASSIFICATION, AND EXPERIENCE WITH LECTURE-ORIENTED AND GROUP-ORIENTED METHODS OF INSTRUCTION

		Group	Lecture
Classification	Junior	10	24
	Senior	25	21
	Graduate	15	5
Sex	Male	28	27
	Female	22	23
Instructional method experience	Lecture-Oriented Method More than 5 classes	50	50
	Group-Oriented Method More than 5 classes	50	50

It is both timely and interesting to note that data in Table I are supported by an experimental study recently reported by Jacob (7). Jacob concluded that experience with a given method of instruction tends to have negligible influence upon determining students' choice of instructional method or on attitudes in general.

Tabular presentation of the data is reported in Table II. For purposes of this study, Survey raw scores were used to compute the group means. Interpretation and discussion of the results are reported sequentially. For mean scores to be significantly different between groups "L" and "G" on traits M, R, S, E, C, T, and P with ninety-eight degrees of freedom, a t of 1.98 was required at the 5 per cent level of confidence, and at the first level of confidence a t of 2.63 was required. For males, with sixty-three degrees of freedom, a t of 2.00 was required at the 5 per cent level of confidence, and at the first level of confidence a t of 2.66 was required. For female subjects of this study with thirty-three degrees of freedom, a t of 2.74 was required at the first level of confidence, and at the 5 per cent level of confidence a t of 2.04 was required.

From Table II, one may observe that the mean score for group "L" on trait G--General Activity was 16.28. Group "G" had a mean of 19.86. A t value of 3.50 was obtained for the mean difference for trait G. The hypothesis of no

difference between mean scores of lecture-oriented and group-oriented subjects was rejected at better than the 1 per cent level of confidence. Thus, the difference between the two groups on questions pertaining to the trait of general activity produced significant differences.

Test performance indicated that group "L" had a mean of 17.02 for trait R--Restraint. Group "G" had a mean of 18.22. A comparison of R for lecture-oriented and group-oriented subjects indicated a t of 1.22. The hypothesis of no difference in mean scores for "L" and "G" subjects was accepted; that is, R did not differentiate the "L" group from the "G" group.

For trait A--Ascendance, group "L" males had a mean of 15.78, as in contrast to a mean of 18.82 for male subjects in group "G." A t value of 2.25 was obtained for this difference between these means. The null hypothesis was rejected at the 5 per cent level of confidence. Specifically, the results were significant at the 2.44 per cent level. It may be concluded that test performance was a significant source of variation between lecture-oriented and group-oriented subjects in this study, and the variation was in favor of group "G."

The means of trait A for lecture-oriented and group-oriented females did not differ significantly. Group "G" had a mean of 16.18, and for group "L" females the mean was

15.46. For a mean difference of 0.72, and in favor of group "G," a t of .043 was obtained. The hypothesis of no difference was tenable.

Group "L" had a mean score of 18.40 and group "G" had a mean of 23.04 for trait S--Sociability. A comparison of group means indicated a t of 4.42 which was significant at better than the .01 level. Specifically, the mean difference for trait S was significant at the 0.001 level. The hypothesis of no difference, in mean scores between lecture and group-oriented subjects, was rejected. It may be concluded that test performance on S was a source of significant variation between subjects in this study.

Group "L" had a mean score of 17.62 for trait E--Emotionality, whereas group "G" subjects obtained a mean of 19.76. From this mean difference of 2.14, a t of 1.73 was obtained, which appeared significant at the 8 per cent level of confidence. Again the hypothesis of no difference between means was accepted.

Group "L" was represented on trait O--Objectivity by a mean score of 18.70, while group "G" had a mean of 19.40. From a mean difference of 0.70 a t of .061 was obtained. One can observe from the data that this difference was not significant. Again, the hypothesis of no difference was tenable.

TABLE II
 MEASURES OF CENTRAL TENDENCY AND VARIABILITY, FISHER'S t, AND LEVELS OF SIGNIFICANCE OF DIFFERENCE BETWEEN THE MEANS OF FACTORS ON THE GUILFORD-ZIMMERMAN TEMPERAMENT SURVEY FOR GROUPS "G" AND "L"

Factor	Mean		Sigma		Standard Error of the Mean		Standard Error of Mean Difference	Fisher's t***	P	Degrees of Freedom
	Group		Group		Group					
	L	G	L	G	L	G				
G	16.28	19.86	5.65	4.52	.80	.64	1.02	3.50	.01	98
R	17.02	18.22	5.38	4.46	.76	.63	.98	1.22	.05	98
A	15.78	18.82	5.71	5.06	.95	.97	1.35	2.25	.05	63
A	15.46	16.18	4.40	5.54	1.25	1.10	1.66	.043	.01	33
S	18.40	23.04	6.19	4.09	.88	.58	1.05	4.42	.08	98
E	17.62	19.76	6.55	5.69	.93	.81	1.23	1.73	.08	98
O	18.70	19.40	5.95	5.40	.85	.77	1.14	.061	.06	98
F	15.18	12.96	5.97	5.56	.99	1.06	1.44	1.54	.06	63
F	16.46	19.13	5.81	3.56	1.66	.75	1.82	1.82	.06	33
T	18.56	19.80	5.15	4.07	.73	.58	.93	1.33	.06	98
P	16.78	18.18	5.79	5.78	.82	.82	1.15	1.21	.06	98
M	20.37	20.00	3.57	4.19	.59	.80	.99	.037	.06	98
M	12.38	10.95	6.01	3.72	1.71	.81	1.89	.075	.06	63

*Males
 **Females
 ***Differences were in favor of Group "G"

From a comparison of the F trait, Friendliness, a mean difference of 2.22 was obtained for male subjects. This difference was in favor of group "L," which had a mean score of 15.81. The mean for group "G" males was 12.96. Upon this difference, a t value of 1.54 was obtained. The hypothesis of no difference was accepted that test performance on trait F was not a differentiating factor between male subjects of this investigation.

The mean score for female subjects on the F trait in the "L" group was 16.46, and for group "G" females the mean was 19.13. For this difference, a t of 1.82 was obtained which approaches significance at the 6 per cent level of confidence. Test performance on trait F was not a significant source of difference between the females of the sample population of this study.

Mean scores of T--Thoughtfulness for groups "L" and "G" were 18.56 and 19.80 respectively. For the mean difference, a t value of 1.33 was obtained. Again, the hypothesis of no difference was tenable that test performance on trait T was not significantly different as a source of variation between lecture-oriented and group-oriented subjects of this study.

For trait P--Personal Relations, group "L" had a mean score of 16.78, whereas group-oriented subjects obtained a mean of 18.18. A t of 1.21 was indicated for the trait P

of the study. The null hypothesis was again accepted, in that trait P did not indicate a significant difference between the two groups under consideration.

The last personality trait, as measured by the Survey, was that of M--Masculinity and Femininity. The high degree of similarity of M scores for lecture- and group-oriented males was obvious. Group "L" males had a mean of 20.37 while the males of group "G" had a mean of 20.00. For a mean difference this small, a t value of .037 was obtained. The hypothesis of no difference in mean scores was again tenable.

A mean of 12.38 was reported for group "L" female subjects for trait M. Female subjects of group "G" had a mean of 10.95. No significant difference between the mean scores for M was obtained when lecture-oriented and group-oriented females were compared. A t of .075 was obtained and it became feasible to accept the null hypothesis that test performance on M did not indicate a significant difference between female subjects of this study.

Discussion of Data

The hypothesis of the present investigation is supported in part by the fact that groups "L" and "G" subjects differ in test performance with respect to their scores of the Survey. Factors other than attitudes, as measured by this study, may have influenced instructional method

preference; hence, the lack of consideration of the other possible factors warrants further research in the area of student attitudes and preference of teaching methods.

As a consequence of the validation information reported in the Survey Test Manual and of the results reported by previous studies, the following discussion of the traits and some possible relationships is offered. These comments will be organized around each trait in turn.

In the section on the presentation and interpretation of data it was reported that a significant difference between mean scores was found to exist on trait G for lecture- and group-oriented subjects. Trait G tends to indicate the level of energy expended, the degree of motivation, and the tendency toward activity in general. A high G score has the general effect of exaggerating the quality of other personality traits, whereas a low score on trait G tends to emphasize traits of submissiveness and withdrawal tendencies. In many ways G may be regarded as a kind of catalyzer.

Group-oriented subjects were characterized as being more active and were possessed by a greater degree of vitality than were lecture-oriented subjects. Group "L" would be identified with behavior that was marked by a tendency for physical lethargy.

The implication of a difference between lecture-oriented and group-oriented subjects on trait G is significant from the viewpoint that the purpose of an individual's behavior is the satisfaction of his own needs; that is, behavior is usually organized with reference to the individual's own phenomenal self as influenced by opportunities and circumstances in terms of social interaction. Behavior development of the lecture-oriented and group-oriented subjects presents so vast a number of possibilities for individual differences that it is unlikely that both groups have identical goals, although their basic needs may be the same and some of their goals may be similar. Thus, group-oriented individuals may have perceived a goal of activity as a source of security, while lecture-oriented individuals may have come to differentiate the trait of activity as a threat to their basic need of security. That is, both groups may have perceived activity as a different kind of goal in terms of its peculiar frame of reference to themselves and to their needs at a given time.

It is noteworthy to mention that the hypothesis was not supported for trait R. A low R score is indicative of a carefree disposition, characteristic of behavior that is marked by a trait of impulsiveness, whereas a high R score suggests a behavior of rigidity with a tendency toward an

inhibited disposition in social interaction. The fact that there was no significant difference between lecture-oriented and group-oriented subjects may best be explained in terms of an attempt on the part of both groups to maintain consistency and unity of their value systems. In general, subjects of both groups were trying to adjust themselves to the totality of the situation in a manner that would be harmonious with their system of values and as they perceived the role of self in relation to the group (8). Thus, though they may be equally rigid, they may choose different ways of attaining goals. The implication of this inference was supported in research reported on the restraint factor. It is suggested, however, that a more sensitive instrument might be applied to ascertain better the restraint factor of lecture-oriented and group-oriented subjects toward teaching method preference. Gross (6) reports the value of group-oriented instruction on individual behavior. In the study it was found that student-centered instruction encouraged the development of self-insight in terms of social interaction. Cowen and Thompson (3) were able to confirm the hypothesis that rigidity was a factor in personality organization. The results of the study showed that the more rigid the personality becomes, the greater will be the inability to enter psychologically into new situations and the poorer

will be the emotional adjustment to society in general. Gaier (5) also found that rigidity made a difference in the behavior of subjects in group-oriented situations. Calden and Cohen (2) found that individuals with high self-evaluation tend to be less rigid, display better internal adjustment, and become more involved with others than do subjects with attitudes of low self-evaluation.

An interesting observation, and one significant to this study, was the established difference of "L" and "G" males on trait A. Group "G" males were characterized by a strong trait of dominance. Dominance, when clinically interpreted, suggests social boldness. This was in contrast to lecture-oriented males who indicated by a low A score that they would tend to be submissive in group situations. Such individuals were submissive to the extent that in social situations they could be imposed upon. For these differences on ascendance one would expect the dominant and socially bold group-oriented male to display superior leadership qualities as in contrast to the more submissively inclined lecture-oriented male. The question that arises from this discussion is what determines whether a trait of submissiveness or dominance would develop and how could such tendencies be related to preference of teaching methods. Perhaps differences could be accounted for and explained in terms of past experiences and the manner in

which the individual learned to identify his needs in terms of social participation. From the preceding statements it could be assumed that either group might regard ascendancy as a means to an end, which would imply that the ascendancy factor would differ for lecture-oriented and group-oriented subjects of this study. Wilerman (11) found that the tendency to be active or passive was dependent upon the motivational factor. The tendency to be dominant or submissive in an individual's social behavior could have developed from an earlier association with others. Lecture-oriented males may have learned to depend upon self for the solution of their needs rather than upon assistance from others. Such behavior would manifest social withdrawal, whereas the group-oriented male might have learned to be dependent upon others because of lack of self-confidence and would be unable to express a trait of independence. This behavior would explain the mechanism of compensatory domination by which the individual would react to feelings of self-inadequacy by exerting control over others. That is, subjects in both groups were responding to the same goal, that of group acceptance, and each according to his own learned style of behavior. The lecture-oriented subjects, from a felt need of belonging to the group, perceived submissiveness as a means to achieve group status and acceptance. The group-oriented subject,

too, felt the need of group acceptance, but in terms of his phenomenological field perceived self as being competent in group participation and chose the more aggressive style of behavior to achieve group position. Individuals who are accustomed to social stimulation do not wait for social acceptance to come to them, but seek situations that will provide them with the feeling of social belongingness.

From the data as presented in Table II, it was evident that female subjects did not differ appreciably on trait A. It might be inferred that lecture- and group-oriented female subjects were possessed by a trait of ascendance to about the same degree. The tendency for female subjects to manifest a similar trait of ascendance may be explained by changes in society's attitude toward the roles women play. The fact that our present society affords women greater political, educational, and economic freedom would tend to justify this explanation and to support the interpretation, as was found, of no difference between lecture- and group-oriented females for trait A. It is widely agreed that the effect of a given situation depends upon the individual's total field at a particular time. Therefore lecture-oriented and group-oriented females may have learned that society thinks highly of women who display behavior characteristics of social boldness and self-confidence. Consequently both groups have come to value their behavior

in terms of what society sanctions. The result is that female subjects of this study have developed styles of behavior with respect to social ascendancy that were determined in part by the demands of the society to which they belong. Some may have perceived the lecture method as providing the means to assert themselves through attaining academic goals, while others perceived the group method as providing this opportunity.

The significant difference between group "L" and group "G" subjects on trait S was outstanding. The higher S score by group "G" was reflective of a positive tendency to seek and to enjoy, by social participation, the company of others, whereas group "L's" lower S score was suggestive of a basic shyness in terms of social interaction. That is, for lecture-oriented subjects, there was a tendency to withdraw from social activity and to display a more seclusive style of behavior. Such individuals possess a certain reserve quality that makes it difficult for others to know them intimately.

In everyday life situations, individuals tend to utilize different means to arrive at the same goal. From this implication it could be inferred that group-oriented subjects may have found the trait of socialization so useful in satisfying their needs that they have developed a frame of reference reflective of a tendency to seek out

and to enjoy group participating experiences. Still other individuals--that is, the lecture-oriented subjects--may have found that shyness and social withdrawal best lead to the satisfaction of their particular needs. That is, both groups may have perceived the same goal but each has developed a characteristic way of achieving this goal. The lecture-oriented subject, because of a particular frame of reference, has learned to perceive his role in terms of group participation by displaying a behavior characterized by shyness and seclusiveness. Lecture-oriented individuals may have learned that in socially competitive situations they have experienced failure, scorn, and criticism so that they now react to social interaction by submission and withdrawal tendencies. The group-oriented subject has learned to perceive the role of self in relation to the group in a different frame of reference and manifests an extratensive style of behavior.

It was reported by Frenkel-Brunswik (4) and Wolff (12) that personality differences do influence the individual's level of social participation. They found that unconscious attitudes determined, to a large degree, one's behavior in group activity.

Although the hypothesis of no significant difference was accepted between lecture-oriented and group-oriented subjects on trait E, there was an indicated tendency that

group "G" was the more optimistic, the more cheerful in social behavior, and the more emotionally stable. This difference approached significance at the 8 per cent level.

If the implication is accepted that the strength and nature of emotional behavior is learned by group interaction, then it is probable that such behavior develops from social experiences in terms of earlier reactions. If the individual experiences painful social situations, the person may in the future react to social interaction with emotional instability and lack of social insight.

Differences in emotional expression toward group participation may reflect earlier group experiences. That is, the lecture-oriented subject may have experienced failure and frustration in earlier relations with others from which relation he learned to place little value on group participation. Therefore, for the lecture-oriented subject to be consistent in his frame of reference toward group participation, he will now inhibit his responses in relation to others, whereas group "G" subjects, too, have encountered group experiences but have learned to value social interaction as a medium for satisfying their needs and personal goals. Albrecht (1) was able to show that students who became oriented toward group-centered methods of instruction showed greater emotional stability, greater social insight, and greater social responsibility than did lecture-oriented students.

As shown by the data presented in Table II, there was no significant difference between groups "L" and "G" for trait O. Both groups indicated that they possessed a quality of behavior that was necessary to view, both objectively and dispassionately, oneself and his environment. It might be expected that this characteristic of college students would be prevalent inasmuch as they represent a select sample of social strata. Such individuals have learned from cultural and educational training to discriminate between "means to an end," to become somewhat realistically and materialistically oriented, and to become somewhat insensitive to the idealistic pressures of their social milieu. That is, the relation of the perceived self to the demands of society in which subjects of this study move has had a very important influence on changes in their phenomenal self. Such individuals are therefore consistent in their behavior by conforming to the total situation in order to comply with the demands of society as related to their experiences. In other words, both groups chose the situation in which they felt they could function most efficiently. This line of thinking is supported, in part, by an excellent summary of research on changing attitudes in college students as reported by Jacob (7).

Differences obtained on trait F present both an interesting and complex situation which further research might clarify.

There was no significant difference in F for males; however, this difference approached significance for females. It may be that women tend more to equate friendliness with group participation, while men, because of a cultural emphasis equating masculinity with independence, do not. Thus women might perceive the group method as an avenue to demonstrate their friendliness, even though they perhaps do not always feel friendly toward all group members. Frenkel-Brunswik (4) confirms the significance of this implication by stating that the assertion by an individual of his attitudes into his overt behavior may be in reality a compensatory reaction to cover up feelings rather than a faithful representation of them.

As was indicated in the presentation and interpretation of data section, no significant difference was found between groups "L" and "G" on trait T. Both groups indicate that they are quite adept at observing the behavior of others. Also such persons are known for their social subtlety and tactfulness. Such individuals may at times tend to be pensive and reflective in their style of behavior. This suggests the influence of college training and group association upon attitudes. That is, the individual has learned how best to conduct his behavior in groups. It was in this relationship that Sherif and Cantril (9) felt that attitudes are formed in relation to

situations and social conditions that tend to satisfy the individual's basic needs or drives as they relate to his level of ego-involvement.

Of all the traits measured by the Survey, trait P consistently correlated highest with all criteria involving human relations. Trait P seems to represent that element of "getting along with others." As reported in Table II, there was no significant difference between the mean scores of "L" and "G" subjects for trait P questions. Therefore it may be assumed that both lecture-oriented and group-oriented subjects have developed personal relationship values as part of their own personal frame of reference, that they were responding with a style of behavior that was consistent with those values that were sanctioned by society, and that they selected the method in which they both felt they would get along best with others.

The last personality trait measured was that of M. From an interpretation of t values, it was concluded that subjects of this study did not differ significantly with respect to their test performance on trait M. The "L" and "G" male subjects indicated by their scores a capacity for being understood by other males and that they were acceptable to other males. Both groups indicated a sympathetic orientation toward others to the point that their behavior would not appear callous in social interaction. Trait M

appears to be the result of an early cultural and social influence upon the individual's identified role of behavior. Interests and the capacity to identify with a given sex role appear to be learned in terms of the process of identification. The fact that there was no difference between lecture-oriented and group-oriented subjects on trait M was significant from the theoretical implication that individuals adopt as their own those masculinity-femininity values that are in harmony with those approved by society. It would appear therefore that the strength and nature of the individual's conformity motive was reflective of behavior that would be learned and that such behavior develops from social experiences.

Certain conclusions may be drawn from the discussion by simply stating in summary form in so far as it was based upon a comparison of test results for the two groups.

Lecture- and group-oriented subjects were found to differ significantly on three of the ten traits measured. It was from departure on these certain traits that attitude differences could be expected to exist for lecture- and group-oriented subjects as measured by this study.

While some of the differences between the groups were not extreme, perhaps several factors can account for these findings:

1. Students may express their attitudes as related to teaching method preference in the selection of a major course of study. The fact that variability was so extreme would indicate this factor.

2. The fact that college students are more homogeneous in intelligence and cultural factors than other groups may account for the small number of significant differences on the Guilford-Zimmerman scores. That is, college students may have learned what the ideal personality is, and this factor alone may have influenced Survey scores.

In view of these findings and their implications, it might be concluded that the lack of a large number of highly significant t values may be due to several factors. The nature of the group studied may have been a factor. Lack of significant differences in the traits studied may have been another factor. That is, there may not be a large number of attitude differences between lecture- and group-oriented subjects. This demonstrated similarity of attitudes may be due to exposure, to mutual influences, or to a conditioning effect exerted by our culture upon the attitudes of the individual; or, there may be differences, but not in the particular traits measured by the Survey.

Perhaps the most significant finding of this study is that if learning is an active process which results from the efforts of the individual to satisfy his needs in a

manner that will be both meaningful and consistent with his value system, then the instructor, to be in agreement with present learning theory, must accept the responsibility for dealing with the individual in terms of his perception of self and of others inasmuch as they are related to the goals of an individual. Furthermore, in order that students may learn to acquire a feeling of competence and social acceptability, they must associate with learning situations that will afford them experiences which they perceive to be in keeping with these perceptions.

In other words, learning is an active, purposeful, and continuous process carried on by the individual for the satisfaction of his needs, and it will be affected by how the learner accepts or rejects the opportunities provided him. If the instructor wishes to change the attitude toward a particular method of instruction, he must first change the student's personal frame of reference, because it is this reference which gives meaning, direction, and consistency to his behavior.

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CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the present investigation was to develop a questionnaire type scale to measure instructional method preference at the college level and to determine if there were significant differences between personality scores of subjects that indicated a preference for lecture-oriented instruction and of those that preferred the group-oriented method of instruction.

This study tested the following hypotheses:

1. That it was possible to develop an experimental instrument that would reliably indicate instructional preference.

2. That significant differences on the Guilford-Zimmerman scores exist between subjects indicating lecture-oriented preference and subjects preferring the group-oriented method of instruction.

The Student Instructional Preference Scale was developed from answers submitted by students at Eastern New Mexico University, Portales, New Mexico, and North Texas State College, Denton, Texas, to the statements of "I like and dislike lecture and group methods of instruction because" The Scale as developed and used in

this study was able to differentiate students' preference of teaching methods into two classifications, namely, subjects who prefer the lecture-oriented method of instruction and subjects who prefer the group-oriented method of instruction.

Subjects of the present study were college students and were selected on the following basis:

A sample of juniors, seniors, and graduates was selected from North Texas State College, Denton, Texas, and from Tennessee Polytechnic Institute, Cookeville, Tennessee. To this sample of students the SIPS was administered. The sample was approximately equal with respect to male and female subjects.

From the total sample, 100 students were selected on the basis of indicated differences in their preference of teaching methods; these students were approximately matched with respect to their experience with lecture-oriented and group-oriented methods of instruction as defined by this study. The Guilford-Zimmerman Temperament Survey was administered to both groups, "L" and "G."

The data of this study indicated certain facts relative to the hypotheses presented in Chapter I. From an interpretation of the data, the following findings are presented:

1. The first hypothesis was sustained that it was possible to develop an instrument that would differentiate students in their preference for methods of instruction.

2. The second hypothesis was partially sustained; that is, some significant differences were found between group "L" and group "G" subjects on personality traits as measured by the Guilford-Zimmerman Temperament Survey.

3. Traits G, S, and E significantly differentiated group "L" and group "G" subjects at the 5 per cent level of confidence or better.

4. Differences between group "L" and group "G" female subjects on trait F approached significance ($P .06$) and suggest tentatively that this trait might differentiate between group "L" and group "G" females, although this needs further study.

5. Difference in mean scores on trait E did not reach significance at the 5 per cent level ($P .08$) but favored group "G."

6. The data further indicated that little discrimination among lecture-oriented and group-oriented subjects on the basis of teaching method preference could be attributed to traits R, O, P, and M.

Conclusions

It can be concluded that of the ten personality traits tested in this study, traits G, S, and E were most

outstanding in determining the differences between the two groups. In general it may be stated that, according to their test scores, lecture-oriented subjects demonstrate a style of behavior that is characterized by an inhibited disposition and an over control of their impulses; that they appear lethargic in overt activity; and that they appear less conventional in their social relations. Furthermore, there is a definite tendency for lecture-oriented subjects to appear socially withdrawn to the extent that they are oftentimes described as being shy and submissive in social situations.

On the other hand, group-oriented subjects, as indicated by their scores, tend to be more active in their behavior and to manifest a higher level of vitality. Such individuals are more cheerful and display greater emotional stability. Group "G" subjects tend to be more objectively oriented and to show greater social conformity to the extent that they seek and enjoy the company of others. And last, it was indicated that group-oriented subjects have a better understanding of their behavior in relation to others.

Recommendations

There is ample opportunity for further research in the area of attitude and instructional method preference. The present study on instructional method preference has dealt

with extreme teaching methods. This was done to maximize the possibility of obtaining significant differences. The present investigation illustrates, all the more, the importance of considering an intermediate or an eclectic preference group.

In designing an investigation similar to the present one, several improvements could be made. On the basis of the preceding conclusions, the following recommendations are made:

1. Many students were lost to the study by the very nature of the limitations imposed. Where possible, future research designs of this nature could be improved by more complete sampling.

2. A study should consider attitudes in relation to method of instruction in order to promote a better understanding of the basic factors related to failures of students under one method of instruction who obtain later success under another method of instruction.

3. An investigation should be made to determine what influence preferences for a given method of instruction have on achievement and motivational outcomes. For example, "Do students achieve better when they receive the method of instruction they prefer?"

4. A study should be made to determine the degree of relationship existing between student ability and method of

instruction received. In other words, "Do bright students achieve better under one method of instruction while the less bright students improve more under another instructional method?"

5. Research should be made into the effect of social, cultural, and home background factors in influencing teaching method preference.

6. Further research in other grade levels is necessary to determine if relationships similar to those in this study would be obtained.

Continued investigation of attitudes as a factor in determining instructional method preference will enable the educator to work more effectively with the student. That is, it might be assumed that the teacher will be able better to relate the aims of education to the student's attitudes by giving additional consideration to the dynamics and influence of attitudes on the learning process.

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