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AFFECTIVE TEACHER BEHAVIOR; DIFFERENTIAL SEQUENCING OF
LEARNING MATERIAL; AND AUTHORITARIANISM OF THE LEARNER

by

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TITLE

Affective Teacher Behavior; Differential Sequencing of Learning
Material; and Authoritarianism of the Learner

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CONTENTS

<u>Chapter</u>	<u>Page</u>
I. PROBLEM.	1
Independent Variables.	1
Affective Teacher Behavior.	1
Differential Sequencing of the Learning Material.	3
Authoritarianism of the Learner	4
Dependent Variable	5
Discussion of the Problem.	6
Hypotheses	7
II. METHOD	9
Sample Selection and Classification.	9
Experimental Conditions.	9
Affective Teacher Behavior.	9
Learning Tasks.	10
Experimental Design.	11
Criterion Measures	12
General Procedures	12
Principles of Number Base Program	12
Prelearning Task.	13
Learning Task	14
Statistical Procedures	15
III. RESULTS.	16
Analysis One	16
Analysis Two	18
Analysis Three	20
IV. DISCUSSION	24
Findings in Relation to Hypotheses	24

Validity of the Experiment	30
Internal Validity	30
External Validity	31
Further Research	33
IV. SUMMARY.	34
REFERENCES.	39
APPENDIXES.	41
Appendix A. Descriptive Scenario for Guiding Experimenter's Behavior and Interaction with the Subject	
Appendix B. Differentially Sequenced Learning Tasks	
Appendix C. Posttest	
Appendix D. Principles of Number Bases Program	

PREVIEW

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Definitions of Factors	11
2	Schematic of the Factorial Design	11
3	ANOVA of Posttest Total Scores for 2 X 2 X 2 Analysis	17
4	Outcomes of Posttest Total Scores and Means and Standard Deviations for 2 X 2 X 2 Analysis	17
5	Posttest Total Score Main Effect Means and Standard Deviations for 2 X 2 X 2 Analysis	18
6	ANOVA of Trials to Criterion for 2 X 2 X 2 Analysis	19
7	Outcomes of Trials to Criterion and Means and Standard Deviations for 2 X 2 X 2 Analysis	19
8	Trials to Criterion Main Effect Means and Standard Deviations for 2 X 2 X 2 Analysis	20
9	ANOVA of Errors to Criterion for 2 X 2 X 2 Analysis	20
10	Outcome of Errors to Criterion and Interaction Means and Standard Deviations for 2 X 2 X 2 Analysis	21
11	Errors to Criterion Main Effect Means and Standard Deviations for 2 X 2 X 2 Analysis	21

CHAPTER I: PROBLEM

Casual observations of different classrooms reveal wide differences in learning situations. There are probably three major classes of variables operating to produce such learning situations. One obvious class centers around the behavior of the teacher and aspects of behavior control and maintenance of classroom order or rapport. A second class of variable in the classroom is an impersonal one related to the method of presentation; the sequencing and arrangement of the learning experience and subject matter. A third major class of variable involves the characteristics of the learner and the qualities brought to the situation by the learner.

This study is concerned with one variable from each of the major classes of variables affecting the learning situation: 1) the affective behavior of the teacher; 2) the sequencing and arrangement of the learning task; and 3) the authoritarian-democratic personality characteristic of the learner. The dependent variable is a cognitive learning task in which the principles of base number systems are applied on a base four number system learning task.

Independent Variables

Affective Teacher Behavior. There have been a number of researches yielding results that confirm the importance of teacher behavior as an important variable influencing performance and learning outcomes. Lewin and his associates (1939) experimentally demonstrated the significance of the power of an adult leader of boys' clubs. Lewin used the authoritarian-democratic dimension of leadership behavior in examining behavior control. Their work stimulated much analogous work in classroom learning situations (Asch, 1951; DiVesta, 1954; Flanders, 1951; Krumboltz, 1955; McKeachie, 1951; and Perkins, 1951). Many labels have been

applied to this dimension in subsequent studies of the teacher behavior variable in studying behavioral change and learning outcomes. These studies have applied this dimension in single-trait dichotomous form: dominitive--integrative, teacher-centered--learner-centered, directive--non-directive, et cetera, and have related these to a concept like classroom control or climate.

The evidence available from these studies fails to demonstrate that teacher behavior studied on these single-trait dimensions is consistently associated with higher productivity in learning situations. Richard C. Anderson (1959) reviewed educational research on such dimensions and found that eleven studies reported greater learning for "learner-centered" groups, thirteen showed no difference, and eight found "teacher-centered" methods superior to "learner-centered."

These studies attempted to isolate qualities or traits of a relatively permanent nature in the teacher's personality or conduct. What could happen in a learning situation if a constellation of teacher behavior variables is viewed as a function and part of some over-all change process? It does not seem that classroom control, for example, can be conceived in terms of permissiveness or punitiveness of the teacher, but in terms of some complex pattern of teacher behavior. For example, one teacher may be friendly and encouraging, praise students, and make classroom relations pleasant, whereas another teacher may remain aloof, rarely praise, use ridicule and sarcasm, both assuming that their behavior will facilitate goal orientation and performance.

This study varies the behavior of the teacher on the affective dimension, which consists of a constellation or group of individual personality surface traits making up negative and positive affective teacher behavior. Negative and positive affective teacher behavior may function

as conditioners of behavior in this study. For example, Mowrer (1960a, 1960b) in general conceives of conditioning as following Pavlovian principles but the responses that are learned are emotional and primarily of two general categories: hope and fear. Mowrer provides two types of reinforcement to serve as the bases for learning which he refers to as incremental and decremental reinforcers. Incremental reinforcers are unconditioned stimuli for fear and decremental reinforcers are unconditioned stimuli for hope. In general, Mowrer theorizes that behavior amounts to coping with or getting rid of stimulation so that a state of quiet balance or homeostasis can be maintained.

Teacher behavior was the first variable manipulated in this study and was manipulated for the purpose of ascertaining the effects on learning which accompany variation of affective teacher behavior.

Organization and Structure of the Learning Task. The teacher is to a great extent an administrator or organizer in that one of the primary tasks is to arrange or program the instructional sequence of the lesson or task to optimize the students' learning of the objectives. That the sequencing of the learning task is an important variable in effecting learning outcomes is consistent with either the behavioristic or cognitive structure point of view. Learning theorists, both cognitive and behavioristic, have emphasized that the sequence and arrangement of the learning task have an effect on learning outcomes.

The behavioristic viewpoint, as exemplified by Skinner and linear programmed instruction, emphasized the logical step by step sequencing of the subject matter. Through appropriate sequential arrangement of

the subject matter, the learner is guided progressively to a desired outcome.

Cognitive theorists, such as Ausubel, Gagne and Bruner, also emphasize the necessity of sequential arrangements of the subject matter. Furthermore, they emphasize the importance of the structure of the subject matter (Ausubel, 1963; Bruner, 1960, 1964; Gagne, 1965). Cognitive theorists also stress the assumption that subject matter which is appropriately structured, sequenced and organized facilitates the subsequent learning of related tasks.

This study takes the sequencing of the learning task as a second independent variable and studies its relationship to learning outcomes in terms of sequencing vs random sequencing of the learning task.

Authoritarianism of the Learner. Common sense suggests that the student's response to teacher behavior and the organization and structure of the learning task is likely to be influenced by personality characteristics of the student.

One of the major determinants of the manner in which the student will respond to the learning situation is his previous learnings, as reflected in concepts, attitudes, and values that he has already acquired. Adorno, Frenkel-Brunswik, Levinson and Sanford (1950) performed comprehensive studies with a personality type called the authoritarian personality. A major finding of this study was the complexity of the attitude-value system of individuals and its influence on behavior. In this study as well as another by Frenkel-Brunswik (1948), it was found that authoritarian personality is a prejudiced person whose attitudinal-value system tends to be inflexible and rigid, with the consequence that he falls back on his basic values to interpret the situation around him. These studies

also found that the authoritarian personality likes the strong, dislikes the weak; admires success, power and prestige; submits to authority and conforms to approved social values.

Adorno et al developed the F scale to measure an individual's attitudinal-value system on the authoritarian-democratic dimension which opened the way for a substantive integration of personality dynamics with social behavior. Even though the F scale developed by this California group has been widely accepted and used as a research variable, only one study by Neel (1959) was found, in a review of the literature, in which F scale scores were compared to classroom or learning performance. The hypothesis that authoritarian personalities would have more difficulty learning humanitarian material than factual material was sustained in the Neel study.

The characteristics of the authoritarian personality as described in the research literature indicate that this personality variable of the learner may be a determinant of his response to the learning situation. Hence, this study uses the authoritarian vs democratic dimension of personality as a variable related to learning outcomes to determine if and to what extent a relationship exists.

Dependent Variable

Because the sequencing of the learning material was a main variable in this study, it was necessary to select a task that could be differentially sequenced. Furthermore, it was desirable to select a task that was not only interesting and stimulating to the subjects, but also similar to the current educational subject matter. Since the materials on base number systems used by Groteleuschen (1967) could be modified to satisfy these requirements, the experimenter modified and used portions

of this material as the dependent variable for this study.

Discussion of the Problem

Most research on teacher behavior control in the learning situation has examined the student-teacher interaction process in the group or class-room setting. In order to do this, these studies have concentrated on single-criterion measures in conceptualizing the significance of behavior in the classroom. Furthermore, the studies have attempted to isolate single qualities, traits, or dimensions of teacher behavior such as permissiveness vs punitiveness and have related these to classroom control and learning. These studies have resulted in global judgments about teacher effectiveness. This undoubtedly has been necessary because of the difficulty encountered in collecting meaningful data from a classroom of student-teacher interactions.

It would seem, however, that what happens in a student-teacher interaction could be examined more thoroughly, accurately, and efficiently by using a simple two-person interaction. Information thus gained in this controlled setting could at least be applicable to the individual student-teacher interaction process of the classroom. Therefore, this proposal is based upon the simple model of two-person interactions in which one person acts as a stimulus for another person. Following are several of the many questions that might be raised:

1. Will the affective behavior of the teacher have an effect on the learner's performance on a learning task?
2. Does the sequencing of potentially meaningful learning material have an effect on the performance of the learner in learning this material? That is, would highly sequenced material be learned more readily than material that is less well sequenced?

3. Does the authoritarian-democratic personality characteristic of the learner have an effect when affective teacher behavior and differential sequencing of learning materials are controlled? That is, will there be a difference in performance of learners who are classified according to different levels of authoritarianism?

4. Will the three independent variables interact?

For the present study a random sample of subjects was selected from two educational psychology classes attending the second summer session of 1968 at the University of Nebraska. Following are specific hypotheses of this study. An experiment that is designed to test each of these hypotheses and to seek answers to the previously asked questions is described in the following Method Section.

Hypotheses

The following hypotheses form the basis for the design of this experiment. They apply to each of the three criterion measures used in ascertaining the effects on differentially sequenced learning tasks.

1. There is a significant difference between learner performance under different affective teacher behaviors. It is expected that positive teacher behavior will result in better learner performance.

2. There is a significant difference in learner performance when exposed to differentially structured and organized learning tasks. It is expected that the greater extent to which the learning task is structured and organized, the greater will be the effect on learning.

3. There is a significant difference between the authoritarianism categories. It is expected that those persons in the authoritarian category will perform better than those in the democratic category.

4. There is a significant interaction between affective teacher

behavior and differentially structured and organized learning tasks. It is expected that those persons who receive conditions of positive affective behavior will perform better on the loosely organized and structured learning task than those who receive negative affective conditions.

5. There is a significant interaction between authoritarianism categories and affective teacher behavior. It is expected that those persons below the median on the F scale will perform better than those above the median on the F scale under negative affective teacher behavior.

6. There is a significant interaction between authoritarianism categories and differentially structured and organized learning tasks. It is expected that those persons below the median on the F scale will perform better on the loosely structured and organized learning task than those above the mean on the F scale.

7. There is a significant interaction among all variables. The expected order of the means is $A_1B_1C_1 > A_1B_1C_2 > A_1B_2C_2 > A_1B_2C_1 > A_2B_1C_1 > A_2B_1C_2 > A_2B_2C_2 > A_2B_2C_1$.

CHAPTER II: METHOD

In this chapter, the techniques and procedures by which this experimental study was conducted are described in the following order: sample selection and classification, experimental conditions, experimental design, criterion measures, general procedures, and statistical procedures.

Sample Selection and Classification

The first phase of this study was the selection of the sample. The sample for this study was drawn from the students enrolled in Educational Psychology 61 and 62 classes at the University of Nebraska, Second Session-Summer School, 1968. All of the students enrolled in these two classes voluntarily signed letters indicating their willingness to participate in this experimental project.

The subjects were then administered the California F Scale (Form 45 and 40) which served as the basis to classify the subjects either as authoritarian or democratic. Those subjects with scores above the mean on the F scale were classified as authoritarian and those with scores below the mean were classified as democratic.

Following the classification of subjects on the autocratic-democratic dimension, they were randomly assigned to the different treatments.

Experimental Conditions

Affective Teacher Behavior. One obvious condition of learning is, of course, the classroom teacher, to whom the major responsibility for devising the learning experiences is given. The affective behavior of the teacher served as an independent variable or condition in this study. It entailed the use of the variable in two forms, positive affective behavior and negative affective behavior.

Under the condition of positive affective behavior, the experimenter

maintained a friendly pleasant interaction with the subject directed toward establishing interpersonal warmth, relaxation, solidarity and interest in the subject. During the interaction process, encouraging remarks such as "you're doing great" and general satisfaction via facial countenance was used to maintain the positive affective relationship.

The condition of negative affective behavior was established by greeting the subject in a formal manner lacking personal warmth and interest in the subject. In order to maintain a negative affective behavior, the experimenter exhibited little concern for the subject and little or no interest in his progress during the learning situation; and made remarks such as "you're not doing so well" were made. General disappointment in the subject's progress was also shown via mannerisms and facial expressions.

A descriptive scenario (Appendix A) served as a guide for the experimenter in establishing and maintaining the appropriate behavior and relation to the subject for the two levels of this factor.

Learning Tasks. This experimental condition consisted of two differentially sequenced sets of 13 symbols corresponding with the first 13 numbers in the base four number system. One of the learning tasks was completely sequenced (e.g., the first stimulus word presented to the subject was "ZERO", the second was "ONE", the third "TWO", and so on through "TWELVE"). The second learning task was not sequentially arranged. The stimulus words were presented randomly. The paired items for each trial of the two different conditions were always presented in the same prescribed order. Thus it was anticipated that the differential sequencing of the learning task would have a differential effect on learning the task. Appendix B shows the two differentially sequenced learning tasks.