

USE OF BEHAVIORAL MODIFICATION TECHNIQUES
TO FACILITATE LEARNING OF
COMPLEX COUNSELING BEHAVIORS

by *589*

GREGG F. REITER

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Approved by:

Sheldon K. Edelman
Major Professor

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CHAPTER 1

INTRODUCTION

At Kansas State University, graduate students in psychology, education, family and child development, and other related fields may enroll in a counseling practicum. The practicum is set up so that each student has an opportunity to see clients in a real clinical setting. Prior to this practicum, all students must take a preparatory course in counseling theories. The counseling theories course introduces a wide variety of counseling techniques, allowing the student to discover a particular method or methods that suits his personality best in counseling others.

Regardless of the methods learned in the counseling theories course, the transition from course study to actual client counseling is usually a long and difficult process. Students, in their first time in front of a client with real problems, find it difficult to refer back to textbook cases. At the same time, they are unsure of themselves in handling the case according to their own beliefs. The not uncommon result of this dilemma is a great amount of stumbling, waiting for the client to respond favorably to some stimulus.

Practicum students are required to record all counseling sessions, with client consent. At a later date

the student and his supervisor listen to the tape. The supervisor gives the student feedback on how well he did during the session and suggestions on how to improve counseling techniques. This is an adequate method, but rather slow. Using this method of supervision, the supervisor and practicum student must have a vast repertoire of cases on tape in order to discuss all the various counseling techniques and their proper use.

What usually happens, therefore, is that the student rarely learns to use those methods and techniques which are not in his supervisor's repertoire. Essentially, this study focuses on the use of behavior modification to facilitate the practicum student in the learning of basic response patterns in counseling.

A study of the literature indicates that much has been written on the use of behavior modification as a learning technique. An offshoot of learning theory and experimental psychology, Hilgard (1962) defines behavior modification as a process in which the frequency of occurrence of a particular behavior is modified by the consequence of the behavior. Using the principles of operant conditioning, which is concerned with the relationship between the behavior of organisms and their environment, this study asks two questions: (1) In practicum students, what counseling behavior is maladaptive, that is, what subject behaviors should be increased or

decreased, and (2) what changes, usually reinforcing stimuli, may be introduced to alter the subjects' behavior.

The experiment is characterized by three major conditions; a group of four practicum counseling students, in the first of three sessions counsel a model client. During the second session each group member while counseling the client receives positive or negative reinforcement for predetermined responses, and in the third session counsel a new client, again without reinforcement. Records and tape recordings are kept of the sessions by experimenters located in another adjoining room behind a one-way mirror.

The four students sit around a table. In front of each student is a box containing two different colored lights. The lights, being the reinforcers, are constructed so that only the person at whom they point can see them.

It was hypothesized that, through conditioning, the practicum students would increase in their use of "reflection," giving the client "alternatives" to problems, and in their use of "positive reinforcement," and decrease in the amount of "questions" asked of the client. It was also hypothesized that the conditioning would transfer to actual in-practice counseling.

CHAPTER II

REVIEW OF LITERATURE

Introduction: Present Counselor Training

For the past several years there has been growing concern with the professional preparation of counselors below the doctoral level. In any counseling setting, the Professional Preparation and Standards Committee of the American Personnel and Guidance Association (APGA), has stated that there should be at least a two year minimum of preparation of counselors for employment. The Association of Counselor Education and Supervision, the American School Counselor Association and the American Psychological Association have all followed with the adoption of a set of standards for the preparation of counselors.

But even with these standards, the demand for counselors is so great that shortcuts in training are still taken. The Vocational Rehabilitation Administration and Office of Education recognize and accept the standards, while the United States Employment Service is struggling to gain acceptance of one year of graduate work as a minimum requirement for employment service counselors.

If the present demand for counselors continues as it has in the past, new techniques must be initiated to facilitate training.

Of particular interest has been the supervision of counselors at the master's level.

Paterson (1964) points out that practicum supervision may not be adequate for today's demand for counselors. The question of whether supervision is teaching or therapy has been a focus of attention, together with the problem of the influence of evaluation as a threat which interferes with the learning of the student. Paterson feels that supervision should involve an integration of didactic and experiential techniques.

The use of video tapes as well as audio, in counselor training has been a great advancement. Walz and Johnston (1963) report that use of tapes by counseling practicum students has been most meaningful.

In research conducted by the NDEA, short term counseling training programs were studied. Over a short period of time it was found that trainees in a counseling practicum do become more permissive and understanding; however, while those low in dogmatism showed these changes in an actual interview with a client, those high in dogmatism did not.

Joslin (1965) found no relationship between the learning of counseling techniques at the beginning of supervision, and ratings of interviewing for counselor competence at the beginning and at the end of the year.

Demos and Zwaylif (1962) studied the effects of

short term supervision on students, by three staff members, one client-centered, one eclectic, and one directive. All of the students became less evaluative, less supportive, less probing, more understanding, and more interpretive on the Porter test. Students supervised by the client-centered staff member showed the only difference, in that they became more understanding and less probing.

In studying the beginning practicum student, Griffin (1966) found that the counseling practice of experienced and inexperienced counselors is distinguished by common elements. Inexperienced counselors in his study showed a lack of (1) communication and understanding, (2) specificity, and (3) exploratory responses, unlike the more experienced counselor.

The study was carried out through the development of the Audio-Visual Counselor Scale (A-V Scale), used to measure counselor behavior with clients.

The A-V Scale consisted of five forced choice, dichotomous dimensions, (1) affective-cognitive, (2) understanding-nonunderstanding, (3) specific-nonspecific, (4) exploratory-nonexploratory and (5) effective-noneffective.

The A-V Scale was used to compare the responses of a group of inexperienced M.A. candidates in counseling and guidance with a group of experienced Ph.D. candi-

dates.

The responses of the Ph.D. candidates were rated significantly more affective, understanding, specific, exploratory, and effective than were those of the M.A. candidates.

Assuming this to be true, Griffen stated that these findings suggest that as counselors become more trained and experienced their therapeutic focus changes more to the affective concerns of their clients in a more understanding, specific, and exploratory manner.

Geoffry and Heiman investigated the verbal behavior of beginning practicum students. Forty-five graduate students were presented three distinctly different types of counselor performance via three different methods, and were asked to react verbally to each counselor performance.

In comparison with more experienced counselors, the beginning practicum students used fewer technical terms, more positive comments, and fewer reflective responses than experienced counselors.

As a consequence of these and other studies on the beginning student in counseling, a great deal of research is being committed to the development of new technique in counseling.

Malcolm, concerned with the education of counseling trainees, discussed the processes involved. He stated

that, "the process of becoming a counselor is not the same as the process of counseling."

The study searches for a theoretical framework that will make meaningful counselor educator-counselor trainee communication.

Using the following underlying assumptions Malcolm derived three of his own tentative formulations essential to counselor education: (1) introgression into the client's life-space, (2) a conscious, cognitive intervention, and (3) its subsequent implementation. Should any one of the three be missing, something short of a counseling relationship would exist.

Underlying Assumption

1. An acceptable formulation must be more than just a theory of counseling; it must consist of teachable concepts specially designed to facilitate communication between the counselor educator and the counselor trainee, and it must focus on the process of becoming a counselor.
2. An acceptable formulation must clarify the distinction between what is counseling and what is not-counseling.
3. An acceptable formulation must represent a broad-spectrum model, on the makes room for a wide range of philosophies and viewpoints.
4. An acceptable formulation must develop its own language; it must specify a precise technical meaning for all key terms basic to it.

5. An acceptable formulation must have broad applicability that will permit the generation of new hypothesis and generalization to areas beyond the immediate confines of the original concerns.

The principle domain of the counseling process, he stated, is the life-space of the client, being that the primary concern of counseling is to effect changes in the topology of the life-space.

Above all, Malcolm feels that a minimum of two years of graduate study is absolutely essential for counselor education both because there is a need for additional depth in the behavioral sciences and because there is little chance of achieving much mastery of intervention short of a second and third semester of closely supervised practicum directed specifically to this task.

Behavioral Modification

Reports concerning modification of discrete child and adult behaviors indicate consistently that when behavior modification techniques are applied systematically to target behavior, a change in rate of occurrence will result for those behaviors. Such outcomes have been reported in work with students and adults in a variety of settings. Recent work by investigators such as Ayllon and Michael (1959), Azrin (1958), Bijou (1958), Ferster (1961), Goldiamond (1964), Lindsley (1960), and

others, have all extended the laboratory analysis of behavior to actual human situations. Their work, for the most part, is characterized by a degree of experimental control and objective measurement, uncommon to the traditional setting of human behavior study. In essence human subjects are placed within a structured environment composed of realistic contingencies and suitable reinforcement. In this type of experimentation, emphasis is placed upon the variables controlling individual performance. In general, these investigators concluded that systematic application of behavior modification methods had produced directly the outcome obtained for each case.

Published studies as well as films designed to communicate details of operant procedures employed in small group situations in a variety of environments have focused primarily upon the techniques that produced behavior change. Because of the relative newness of the use of behavior modification there is a lack of information on its applied usage in a clinical setting as well as its use as a learning tool.

This report, then, attempted to seek out a particular area in counseling, where behavior modification could be applied. Specifically, this study was concerned with the modification of certain behaviors previously diagnosed as maladaptive in counseling practicum

students. The task involved the construction of empirically derived, standardized laboratory environment into which operant techniques could be introduced. Use of such standardized environments, it was hypothesized would (1) increase reliability of observations, (2) provide the environmental conditions needed if valid within- and between-group comparisons of behavior change were made, and (3) provide standard conditions for replication and study of behavioral sequences and their development over time. The relative purity of data obtained from work with animals in a Skinnerbox, it was thought, should not have to be forfeited because human beings were being studied and treated, or because the behaviors to be modified were classified as social, complex behaviors.

Studies in Verbal Conditioning

Presently there is an abundance of literature, studying the effects of conditioning behavior, within standardized situations. Most of these studies follow the Skinnerian design in that the dependent variables are the subjects verbal behavior and the independent variables are generalized conditioned reinforcers intended to bring verbal behavior under the control of the experimenter. Bachrach, Candland, and Gibson (1961) in one of the earlier studies of reinforcement in group

situations, pointed out that the same variables which apply to the individual situation also apply to the group: specifically, the reinforcing stimulus, the schedule and amount of reinforcement, the behavior upon which reinforcement is contingent, and the change in rate of response.

In the following studies, the class of behavior being reinforced varied from very specific types of verbalization to broader units of expressions of feeling or attitudes. Correspondingly, the reinforcing stimuli was divided between verbal, gestural, and mechanical cues.

The most widely used cues is the emission of the "mmm-hmm" sound, Ball (1952), Daily (1952), Greenspoon (1951), and Matarazzo, Wiens, Saslow, Allen, and Weitman (1964).

The gestural cues include head nodding, head shaking and smiling, Hartman et al (1955). Mechanical cues used are lights, buzzers, bell tones and etc.

McNair (1957) studied the effect of a non-verbal stimulus on rate of verbalization in an 18-person discussion-type group. In that study subjects were shown pictures depicting interpersonal situations and were instructed to talk about them. The reinforcer, a bell-tone, was defined in the instructions as signifying approval. Results indicated that rate of verbalization was influenced by the reinforcer, and varied as a func-

tion of the schedule of presentation of the reinforcer.

Ciutat (1959) reported the effects of certain non-verbal gestures on the rate of verbalization in a seminar-type situation. Positive reinforcement consisted of attention directed toward subjects; he was looked at and given occasional nods. Negative reinforcement consisted of inattention, i.e., subject was ignored. Using amount of time during which subject was speaking as a criterion, Ciutat found that this variable was a positive function of attention and a negative function of inattention.

Shapiro and Morningstar (1963), Shapiro (1963), Levin and Shapiro (1962) and Leiderman and Shapiro (1963) investigated the effect of reinforcement in a group situation in terms of conversation and decision making activity. They found that such behaviors can be manipulated under different reward conditions.

Oaks, Drodge, and August (1960) studied the effects of reinforcement on participation in a group discussion. The experiment was designed to investigate the effects of positive and negative reinforcers on rate of verbalization in an operant situation. It was hypothesized that, by the use of non-verbal reinforcement (lights) and by withholding reinforcement once established in a group, the rate of verbalization will increase with positive reinforcement and decrease with negative rein-

forcer will be just the reverse.

Groups of four were used. A group was seated around a circular table, separated by a screen. A signal light was placed in front of each participant.

Each participant received separate instructions. Two members to be positively reinforced, were told they would receive a light flash when they showed insight into the problem being discussed. The other two members of the group, who were to be negatively reinforced, were told they would receive a light flash when they showed lack of insight on the same problem. The participants could not see each other's lights. They were allowed thirty seconds to discuss the problem. A second session, without any form of reinforcement, followed.

In the first session (reinforced) a strong differential effect of the signal meaning was exhibited in verbalization. In the second session, without reinforcement, a tendency toward the reversal of the effect was observed, although not statistically significant.

Oakes, Drodge, and August (1961) in a similar study, investigated reinforcement effects on conclusions reached in group discussions.

Participants in a discussion group were presented with a problem situation with three alternative solutions. They were reinforced for each statement which led them to choose one of these alternative solutions,

preselected by the experimenter. It was hypothesized that the group discussion could be influenced by reinforcement. The apparatus, technique, and methods were similar to the above study by Oakes.

The results indicated that 43 of the 72 participants chose the preselected hypothesis.

In more recent research, conducted by Hastorf (1964) of Stanford University, the reinforcement of individual actions in a group situation was studied. Similar to previous studies by (Oakes), Hastorf reinforced a target individual within a group of four participants.

Three successive sessions were required: operant (1), acquisition, and operant (2). Reinforcement of the target individual was provided during the acquisition session.

The subjects discussed a problem and were told they would receive a signal (light) indicating their contribution or hindrance in the group.

The experimenters played by different rules than those told to the subjects. They reinforced the participants both negatively and positively, in order that a predetermined target individual would emerge as the leader of the group.

The following results were attained: (1) the lights must be in some way contingent on talking, although it does not seem necessary for the experimenters to make

decisions as to what class of talking should be reinforced. (2) The group members notice the behavior change on the part of the target individual. (3) When the lights are withheld in the second operant session, the output and the sociometric status of the target individual tends to fall, but they do not fall to their original position.

Leonard Krasner, (1963) a clinical psychologist interested in treatment procedures and techniques, has done a great deal of research aligning psychotherapy with verbal conditioning. Presently there is controversy over the differences between verbal conditioning and psychotherapy, as argued by Luborsky and Strupp (1962): (1) The role expectancies in operant conditioning and in psychotherapy are quite different. Patients in psychotherapy are ordinarily voluntary participants who want to change in certain areas. Subjects in an operant conditioning experiment do not experience themselves as being in a helping relationship; they participate for a variety of often unrelated and unclarified reasons. (2) The change that can be effected through operant conditioning may not be very deep, lasting, or extensive. (3) The extent of the emotional involvement in operant conditioning experiments is considerably less than in psychotherapy. (4) Change in psychotherapy is mediated quite differently. (5) Individuals who do change via operant con-

ditioning experiments are those who want to change in order to please. (6) The definition of reinforcement is too general in the operant conditioning experiments. It is unclear as to what is being reinforced. (7) The nature of that which is influenced in psychotherapy is much more complex than that which is influenced in operant conditioning; for example, in operant conditioning it is "plural nouns" or some such specific response (Luborsky & Strupp, pp. 312-3).

Krasner feels that these assertions are not justified:

The differences in role expectancy are of the same order as any differences in procedure between types of behavior influence. Further, these differences can themselves be altered by the manipulation of instructional sets" (Ekman, Krasner, & Ullman, 1963). "Further we have provided evidence that changing verbal behavior has consequences for behaviors other than those directly changed (Krasner, Knowles, & Ullman, 1964).

As to the fourth and fifth points of Luborsky and Strupp, the nature of change and the variables involved. It is our contention that the variable effecting change in both instances are the same, and that they include expectancy of change and the interaction between examiner and subject. The sixth point, that the definition of reinforcement is too general in operant conditioning, is somewhat mystifying, since it is operationally clear as to what is being reinforced in verbal conditioning and how it is being reinforced (Krasner pp. 225-226).

In summary, Krasner emphasized that verbal conditioning has contributed a great deal to the investigation of deviant behavior.

Sarason and Kanfer (1964) go further in extending this point, stating that the human reinforcer has a great deal of importance in clinical groups. That is, it is important for the experimenter to realize the influence he has upon his subjects. Though Sarason is concerned about the over-emphasis on contamination on the part of the experimenter, in a recent study by Symons (1964), it was found that, (1) subjects interviewed by high-dominant experimenters made more negative self-reference than did subjects interviewed by low-dominant experimenters. (2) high-anxious subjects, regardless of the personality of the experimenter, generally made more negative self-references than did low-anxious subjects. (3) Low-anxious subjects interviewed by high-dominant experimenters described themselves in more negative terms than did low-anxious subjects interviewed by low-dominant experimenters.

The Factor of Awareness

A further consideration to be dealt with when reinforcing behaviors in a group situation is that of awareness. Saslow (1964) in his study of manipulating behavior in a psychiatric ward, discussed the relationship

between insight and changed behavior. Is it necessary for a patient to verbalize insights in order for his behavior to change, or does changed behavior increase the likelihood of the patient's emitting the verbal behavior labeled by the therapist as "insight"? Saslow states that by manipulating the environment of the subject, he will be aware of his own behavior by comparison between old and new behavior.

Kanfer (1965), in his study of vicarious human reinforcements, raises the question as to whether awareness occurred during the learning process, or whether the post-experimental questionnaire in itself represents a new problem-solving situation to the subject, to be solved by evaluating in retrospect the purpose of the study. Was it necessary for the subject to be aware of what the experimenter is trying to do to him, prior to learning, or could he learn first and then become aware later. Kanfer does not answer directly the consequences of awareness. He does state that in almost all situations, learning is facilitated in the observation and awareness of what others are doing, i.e., in a classroom in which students observe the behavior and reinforcement may provide considerable learning experience.

Naumoff and Sidowski (1959) noted that subjects who were instructed to make the experimenter say "Good" as often as they could produced more conditioned verbal

responses than subjects who did not have these instructions. This variable is, with little doubt, related to the problem of awareness. Most studies of verbal conditioning eliminate the data of subjects who report that they isolate the relationship between the experimenter's response and their behavior and who were aware of the reinforcer.

Medini (1957), for example, asked subjects in a group if they understood or were aware of the rule that determined where the experimenter said "Good." This procedure was continued until the participants became aware of the relationship. A significant relationship between the speed at which a subject recognized the relationship and his degree of learning was found.

Other studies which have analyzed the role of awareness in interviews, report that unaware subjects perform differently than subjects who are aware (e.g., Matarazzo, Saslow, & Pareis, 1960). They noted that awareness plays an important role in classical conditioning; however, remarkably little is known about its role in operant training. One curiosity is that so few of the subjects used in verbal conditioning studies are able to discover the relationship between the reinforcer and their speech. It is apparently not uncommon to find 90 percent of the subjects professing total unawareness, although in one detailed study (Krasner, Weiss, & Ullman, 1959), 38

percent of the subjects reported some degree of awareness.

Greenspoon (1951), reports a tendency for his subjects to continue naming the general class of responses if one response was reinforced. He noted that if, for example, "potatoes" was reinforced, some subjects would continue naming vegetables until this behavior extinguished.

Dulany (1961) suggested that the function of saying "Mm-Hm" or of providing any other cue is to enable the subject to form hypotheses about the nature of the response which are required of him. For example, Dulany questioned subjects who had received training in which "Mm-Hm" followed each plural noun. Twenty-five percent of the subjects said that whenever they heard "Mm-Hm," they assumed that they were to continue to associate. Thus, if "Mm-Hm" followed a plural noun, the subject assumed that further plural nouns were wanted. These subjects showed an acquisition of the response of saying plural nouns. The investigator suggests that rather than explain these experiments in terms of conditioning, we may assure that for the subjects cue or reinforcer produced a set to associate. Thus, the subject forms hypotheses, based on the occurrence of the reinforcer, and tests out these hypotheses, often by continuing to say words in the same set as those reinforced.

It seems to be a generalized conclusion by most concerned experimenters that awareness poses no particular problem. Only when awareness plays a causative role in determining behavior does it create trouble. In Greenspoon's studies, he indicated that even though we determine that all subjects who condition are in some sense aware, it is not logically defensible to say that the subject conditioned because he was aware. According to Greenspoon (p. 29, 1963), "...even if he verbalizes the contingency, we do not know if he is aware because he showed a change of rate of emission of critical responses, or if he showed a change of rate of emission because he was aware."

Holz and Azrin (1963) in their studies on conditioning of human behavior through verbal reinforcement state:

The problem is not far removed from our earlier example of the rat pressing a lever. We saw that there was a beguiling simplicity in saying that the rat pressed the lever because he was aware that by doing so he would produce a food pellet. It would be no more feasible to attempt to show that such inner processes were not functioning with the rat as it is to who that they are not necessary for the analysis of human behavior. Such inner events are possible in both cases, but the question posed by the behaviorist remains: Can external events be identified which control the behavior? An appeal to hypothetical constructs which intervene between

the controlling environment and the behavior is no resolution. It simply changes the form of the questions posed. If awareness is postulated we must then ask what are the conditions which produce awareness and what conditions cause the response to occur or not occur once awareness exists? If these questions can be answered, the law of parsimony may again be exercised to eliminate the intervening constructs, (p.807-Honig).

Summary

A review of the literature revealed that although much has been written in the area of verbal conditioning, little has been done [?] on applying it to training procedures for counselors in a practicum situation. It further revealed that not much has been written on the transfer of the conditioning to related areas of use. The goal of this research was to explore both these areas, that of facilitating the training of practicum students in counseling, and that of determining the amount of transfer of training to actual counseling situations.

CHAPTER III

The Design and Conduct of the Study

Recently a great deal of research has been done on the use of behavior modification as therapy in counseling clients in a clinical situation. This study attempts to explore the use of behavior modification as a tool to facilitate the learning of complex counseling process for beginning practicum students in counseling.

Design

The research was designed to investigate the use of some basic counselor responses, commonly found to be a problem with beginning practicum students. Among the difficulties faced by beginning students is the proper use of, "reflection," "asking questions," giving "positive reinforcement," and finding "alternative" solutions for clients. These responses were defined as follows:

Reflection: Reflection is used to help the client clarify his underlying feelings and attitudes. The technique consists of repeating the attitudes and feelings expressed by the client. The therapist acts as a sort of mirror in which the client is enabled to see the attitudes and feelings that he has expressed for what they are.

Asking Questions: There are many occasions when the clarification of feelings and the promotion of insight are best served by direct questions and requests to the client to elaborate on the meaning of the statement. But, in the case of interpretation, questions must be used appropriately if they are to prove effective. Premature probing, morbid curiosity on the part of the therapist, and the unearthing of unnecessary details may seriously interfere with the effective therapy.

Alternate: Alternate simply means alternate solutions the therapist gives the client to a particular problem, or alternative interpretations of an issue.

Positive Reinforcement: Positive Reinforcement was defined as when a client make a statement concerning his deeper feelings; the therapist may nod his head or simply lean forward in a more attentive fashion. In response to other types of material which he wishes to elicit from the client he may smile or say "good," or "I think that was the right thing to do," or "I'm glad to hear you're doing so well," etc.

These four responses, "reflection," "asking questions," "alternatives," and "positive reinforcement," were chosen through discussions with the practicum supervisors at the Counseling Center. Although there were a number of other counseling techniques which practicum students had difficulties with, it was decided

that these four were the most urgently needed to deal with in promoting a good counseling repertoire.

Early in the semester, the seven practicum students were requested to keep all of their counseling audio tapes, so that three or four of them could be used at a later date for this research. The tapes were taken at random, and only those tapes in which practicum students described test results (such as the Strong or Edwards) with the client, were excluded. All of the tapes used were over thirty minutes in length.

A tally sheet was constructed for manual tabulation of the four responses. It was divided into fifteen sections totalling thirty minutes, each section representing two minutes. (See Appendix (B) for sample tally sheet)

A number of practicum supervisors were instructed on recording responses from the tapes onto the tally sheet. In order to insure rater reliability, three supervisors rated the same tape and a Friedman H Test was applied. (See Appendix (B) for instructions)

Table (1) presents an analysis of rater-reliability (Friedman H) between the three supervisors. Percentages of seventy and above allowed for the rejection of a null hypothesis that there were significant differences between the raters and acceptance of the hypothesis, that there were minimum differences and that rater-reliability

TABLE 1

FRIEDMAN (H) ONE-WAY ANALYSIS OF VARIANCE
FOR THREE RATERS RATING TWO COUNSELING
TAPES FOR RELIABILITY TESTING

TAPE	RESPONSE CATEGORIES	RATERS			RELIABILITY	
		1	2	3	H	(P)
1	REFLECTION	13	11	13	0.26	.90
	ASK QUEST.	36	39	38	0.35	.80
	ALTERNATIVE	0	0	0	0.00	.99
	POS. REIN	4	3	3	0.10	.95
2	REFLECTION	7	10	8	0.60	.75
	ASK QUEST.	20	23	21	0.60	.75
	ALTERNATIVE	2	2	3	0.10	.95
	POS. REIN.	6	4	4	0.10	.95

was well within the acceptable range.

In all, fifteen tapes were rated, three for each practicum student. Because the experimental design called for only four subjects, a fifth student whose tapes had been rated, was trained as an experimenter.

The basic experimental design was modeled after research conducted by Albert Hastorf as described in the review of literature.

Three sessions were used: Operant (1), Acquisition and Operant (2). Each session lasted for thirty minutes. During Operant (1) the group members counseled a model client without interruption. During the Acquisition period, reinforcement was provided and during the Operant (2) session, reinforcement was withheld.

This model was used in order to, one, attain baseline data in Operant session (1), two, to condition the preselected responses in the acquisition period and three, to note any changes due to conditioning in Operant session (2).

The experimenters were assigned the task of recording all responses in both Operant session (1) and Operant session (2).

Three weeks later, tapes were again collected from the practicum students and rated in the same way as in the beginning of the research.

The Conduct of the Study

The Setting: The experiment was conducted in two rooms separated by a one way mirror, in the Counseling Center at Kansas State University. The four subjects sat around a circular table with no other obstructions except for the experimental apparatus. A microphone above the table allowed the experimenters to hear the subjects.

The Subjects: All of the subjects were beginning practicum students in counseling. Three of the members of the group were graduate students in the Department of Education, and one was a graduate student from the Department of Family and Child Development. The prerequisite for the counseling practicum is three hours of counseling theory and a generous background in the behavioral sciences, which all the members of the group had completed. There were three men and one woman.

Subjects were told nothing of the details of the research except that they would be counseling a model client and would be given information on their insight or lack of insight in helping the group progress satisfactorily in helping the client.

Apparatus: Appendix (C) provides a diagram of the apparatus, which was constructed to put the operant method into practice. A modification of the apparatus used by Hastorf (1964) was built on aluminum chasis. The con-

trol panel housed four pairs of lights, one green and one white in each pair. Each pair was operated separately by a single, double-pole-double-throw, center off switch.

The control panel was connected to a junction box which in turn was connected to four separate boxes, with two lights on each. The pair of lights on the box, one white and one green was operated in conjunction with the lights on the control panel.

Each box was covered on three sides by a cardboard box, and placed in front of each member of the group. No one member of the group could see the lights of the others.

The lights, being the reinforcing stimuli, were labeled: A green light when lit was to positively reinforce the subject for showing "insight" and a white light when lit was to negatively reinforce the subject for showing "lack of insight." A flasher built into the apparatus was used when necessary to signal a subject to terminate his counseling turn.

General Organization of the Treatment

The experimental procedure went as follows. Four beginning practicum students, who had volunteered to act as subjects, arrived and were seated around a circular table. Each subject received written instruc-

tions. Appendix (A). The instructions stated that they would be participating in a 90-minute counseling session, divided into three, thirty minutes segments. Subjects were also made aware that they would be counseling a model client.

Because of the unusual setting, in that four counselors were to deal with one client, specific ground rules were given. In order for all the subjects to have an equal opportunity to speak, it was decided that it would be necessary to have them take turns responding to the client. Subjects were told that they did not have to follow the lead of the student speaking in turn before them. This would allow each student to deal with the client in his own manner.

The participants were also told who would be conducting the experiment behind the one-way mirror. This was done to put the subjects at ease as well as to assure them that experts would be giving them proper feedback.

Operant Session (1)

During the first session, a model client entered the room and sat down at the table. He introduced himself and briefly described his problem, which was earlier predetermined and discussed with the experimenter. No intrusions were made during their discussion, and records as well as tape recordings were kept of the total

number of times each individual used "reflections," "alternates," "positive reinforcement" or "asked questions."

Acquisition Session

During this session, as explained in the instructions, the subjects were told they were going to receive feedback of the following sort. "Whenever you make a statement which is helpful or functional in a facilitating manner, your green light will go on. Whenever you make a statement which will eventually hamper or hinder personal growth, your white light will go on." They were told not to mention to other members of the group that they had received either a white or green light.

As previously discussed, the experimenters behind the one-way mirror followed somewhat different rules than the subjects had been told. The experimenters gave lights to the subjects not contingent upon insight or lack of insight into the clients problem, but upon responses falling into the predetermined categories. When the subjects gave positive reinforcement, alternates, or used reflection, they were given the green light. When the subjects asked questions they were given a white light.

Operant (2)

A third session followed with a new client. In this session no lights were given and individual responses were recorded.

Hypothesis

This study seeks to investigate two hypotheses:

(1) The subjects' behavior, participating in the experimental session, will change in predicted directions as a result of reinforcement. (1A) Incidence of "reflection," "giving alternatives," and the use of "positive reinforcement" will all increase from operant 1 to operant 2 as a result of positive reinforcement during the acquisition period. (1B) Incidence of "asking questions" will decrease as a result of the acquisition period between operant 1 and operant 2.

(2) The conditioning of responses acquired in the experimental session will be transferred to post experimental counseling.

CHAPTER IV

RESULTS

Two dependent variables were selected as indices of subjects having acquired the responses which had been predicted. Percentage increase and decrease of the pre-selected response categories indicate acquisition. These changes in response should appear in two ways: first, from one operant period to the other in the experimental session; and, secondly from analysis of actual counseling tapes evaluated before and after the experimental session.

The Experimental Conditioning Session

The first dependent variable studied has to do with whether the presentation of the signals indicating positive reinforcement and negative reinforcement results in an increase and decrease respectively, of the response categories on the part of the four subjects. In other words, does the combination of both positive and negative reinforcers influence the subjects' responses in the expected direction? In order to answer this question, the responses were tabulated for each thirty-minute period during the experimental session and compared for each subject in the group. These tabulated responses are presented in Table (2). Figure (1) represents these responses graphically; the arrows show

TABLE 2

THE AFFECT OF REINFORCEMENT ON
THE FOUR SUBJECTS DURING THE
EXPERIMENTAL SESSION

RESPONSE CATEGORIES	SUBJECTS	NO. OF RESPONSES		
		OP-1	ACQ	OP-2
<u>REFLECTION</u>	A	1	2	5
	B	1	4	8
	C	3	3	5
	D	2	4	6
<u>ASK QUEST.</u>	A	5	4	2
	B	6	6	3
	C	1	2	1
	D	7	8	5
<u>ALTERNATIVE</u>	A	0	0	2
	B	1	0	0
	C	0	0	0
	D	1	0	2
<u>POS. REIN.</u>	A	0	1	2
	B	1	2	3
	C	3	3	4
	D	5	5	9

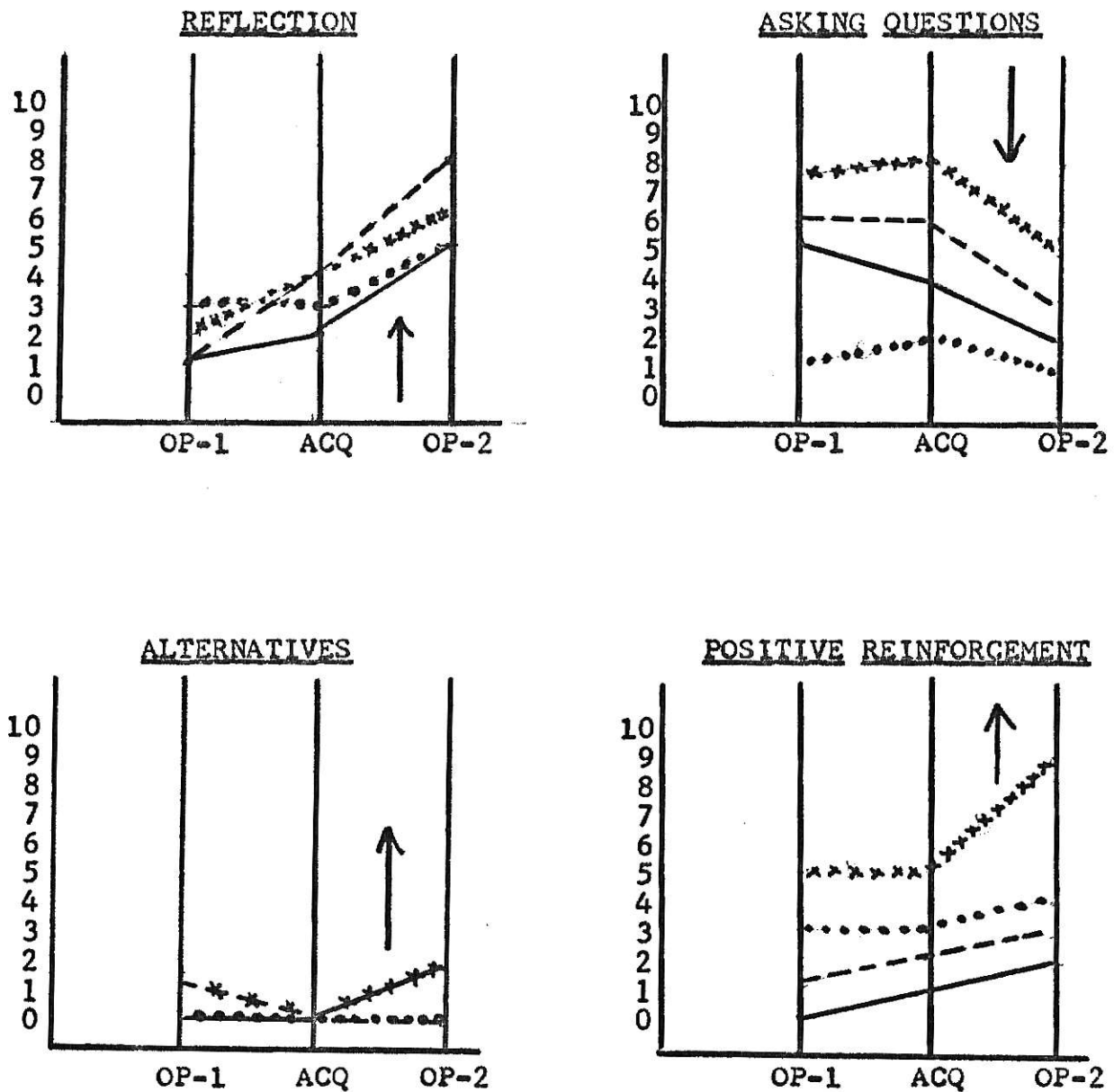
TABLE 3

STATISTICAL ANALYSIS OF THE EXPERIMENTAL
SESSION TO DETERMINE THE AMOUNT OF ACQUI-
SITION BEYOND .05 FOR ALL FOUR SUBJECTS

RESPONSE CATEGORIES	RANK SUMS		MANN-WHITNEY Z TEST	
	OP-1	OP-2	Z	P>.05 (1.64)
REFLECTION	10	26	2.4	2.4
ASK QUEST.	22	14	1.2	
ALTERNATIVE	16	20	0.59	
POS. REIN.	14.5	21.5	1.05	

FIGURE 1

THE AFFECT OF REINFORCEMENT ON
THE FOUR SUBJECTS DURING THE
EXPERIMENTAL SESSION



SUBJECT

CODE: A — B --- C D x x x x

the predicted direction reinforcement was hypothesized to produce.

To determine which responses demonstrated successful conditioning, the Mann-Whitney U test was applied. Table (3) presents the summary of the tests, comparing the first operant period (OP-1) to the second operant period (OP-2). It can be seen that only "reflection" showed significant changes. Reflection doubled after the acquisition period, with a significant z score of 2.4, well above a ($P \geq .05$). We could conclude that although "asking questions" ($z = 1.12$) and "positive reinforcement" ($z = 1.05$) were not statistically significant above ($P \geq .05$), there was a moderate amount of change in the predicted direction. Giving "alternatives" showed no significant change at ($z = .59$).

Transfer of Conditioning

The second dependent variable studied concerns the amount of conditioning transferred from the experimental session to actual in-practice counseling. The pre-experimental counseling session tapes and the post-experimental counseling session tapes were recorded approximately six weeks apart, or as soon as the beginning practicum students had accumulated enough counseling tapes for evaluation. Because of certain complications, it was impossible to get final tapes from one of the subjects.

TABLE 4

EVALUATION OF THREE PRE-EXPERIMENTAL
COUNSELING TAPES FROM THE FOUR SUBJECTS
TO DETERMINE THE NUMBER OF PRE-SELECTED
RESPONSES SPOKEN

SUBJECTS	RESPONSE CATEGORIES	NO. OF RESPONSES FOR 30 MINUTES			AVERAGE NO. OF RESPONSES FOR 30 MINUTES	AVERAGE NO RESPONSES EACH 2 MIN SEGMENT FOR 30 MINUTES
		TAPES				
		1	2	3		
A	REFLECTION	7	5	3	5.0	0.16
	ASK QUEST.	19	30	22	23.6	0.79
	ALTERNATIVE	3	1	0	1.3	0.043
	POS. REIN.	4	5	3	4.0	0.13
B	REFLECTION	6	5	3	4.6	0.15
	ASK QUEST.	21	37	29	29.0	0.91
	ALTERNATIVE	0	0	4	1.3	0.043
	POS. REIN.	3	1	1	1.6	0.053
C	REFLECTION	13	7	7	9.0	0.31
	ASK QUEST	32	30	29	30.0	1.0
	ALTERNATIVE	0	2	0	0.66	0.022
	POS. REIN.	6	4	3	4.3	0.14
D	REFLECTION	15	12	16	14.3	0.47
	ASK QUEST	11	15	12	12.6	0.42
	ALTERNATIVE	2	0	0	0.66	0.022
	POS. REIN.	0	2	1	1.0	0.033

TABLE 5

EVALUATION OF THREE POST-EXPERIMENTAL
COUNSELING TAPES FROM THE THREE OUT OF
FOUR SUBJECTS TO DETERMINE THE NUMBER
OF PRE-SELECTED RESPONSES SPOKEN

SUBJECTS	RESPONSE CATEGORIES	NO. OF RESPONSES FOR 30 MINUTES	AVERAGE NO. OF RESPONSES FOR 30 MINUTES		AVERAGE NC RESPONSES EACH 2 MIN SEGMENT FC 30 MINUTES	
			TAPES			
		1	2	3		
A	REFLECTION	10	7	8	8.30	0.27
	ASK QUEST.	17	20	15	17.30	0.57
	ALTERNATIVE	1	2	1	1.30	0.04
	POS. REIN.	6	8	5	6.30	0.21
B	REFLECTION	10	7	6	7.70	0.25
	ASK QUEST.	15	19	17	17.00	0.57
	ALTERNATIVE	1	0	0	0.33	0.01
	POS. REIN.	4	2	6	4.00	0.13
C	REFLECTION	9	6	-	7.50	0.23
	ASK QUEST.	27	21	-	24.00	0.80
	ALTERNATIVE	0	0	-	0.00	0.00
	POS. REIN.	9	6	-	7.50	0.25

Table (4) presents the average amount of responses for each category for each two minute segment within the thirty minutes, in individual counseling sessions prior to the experimental acquisition. This was used as a baseline in order to determine transfer of conditioning from the experimental session to post-experimental counseling. Table (5) presents the post-experimental counseling tape evaluations. Because of the small sample the pre- and post-experimental tape evaluations were compared non-statistically.

For the three subjects represented, there was an increase in the use of "reflection" for two of them; subject A and subject B. Subject C showed a small decrease. All three subjects showed a decrease in the number of "questions" asked during counseling sessions. In giving "alternatives" solutions to client problems, there was no significant change after the experimental session. There was a moderate but not significant change in the use of "positive reinforcement" for all three subjects. Over-all, the use of "reflection" and "positive reinforcement" in post-experimental counseling sessions increased, asking "questions" decreased, and giving "alternative" solutions showed no change.

CHAPTER V

DISCUSSION

The procedures and results that have been described permit us to conclude that through operant conditioning, complex behavioral changes can be made in a relatively short span of time using lights as reinforcing stimuli. In this initial experiment in conditioning complex counseling techniques, results show that selected verbal responses could be increased and decreased in a predetermined direction.

Insofar as the results bear out the predicted hypothesis, there are a number of implications that should be discussed related to the outcome of experimental session and to transference of the conditioning to actual counseling.

Experimental Conditioning Session

Table (2) in Chapter IV presents a summary of the four subjects' behavioral changes from Operant session (1) to Operant session (2). It is clear that the lights used during the acquisition period of the experimental session were strong reinforcers. In a short period of time (one experimental session), subjects A, B, and D in Operant period (2) increased significantly their use of "reflection" and moderately increased their use of "positive reinforcement." In the same session subjects

A, B, and D moderately decreased the amount of "questions" asked of the client in Operant period (2). Increases and decreases of response categories were slight but non-significant for subject C. No changes appeared for giving "alternative" for all the subjects.

In reviewing these results, a number of considerations may be discussed concerning the carry-over of conditioning from the acquisition period to the Operant (2) period.

First, although there were increases and decreases in the response categories between Operant session (1) and Operant session (2), it may be argued that the reason "asking questions" decreased in Operant session (2) was because that over a period of time the subjects received most of the information they needed to progress satisfactorily with the model client's case. The same can be said for the other response categories, for a single client can be given only so much positive reinforcement, reflection, or alternatives. It was decided that this variable could be minimized by having two different model clients. One client was used for the first operant period and the acquisition session, and a second client was used for Operant period (2).

Secondly, in most operant conditioning paradigms, in order to attain a reasonable amount of validity, pre- and post-operant sessions must be equally paired; that

is, both sessions, Operant (1) and Operant (2) should maintain similar situations. Needless to say, all client cases differ in one way or another and where one client may need a great deal of positive reinforcement or reflection, etc., another client may need none at all. For this reason, both model clients were instructed to construct their cases so that they were similar to one another.

Finally, because this is strictly a methodological study to investigate the possibility of integrating operant conditioning techniques into a didactic counseling practicum, only one experimental session was run. In further research, it would be most feasible to run a greater amount of experimental sessions over a longer period of time.

Transfer of Conditioning

Tables (4) and (5) present the analysis of the pre- and post-experimental counseling tapes. It is not necessarily assumed that the selected response categories evaluated increased and decreased purely from the results of the experimental conditioning session. Although both the pre- and post-experimental counseling tapes were evaluated approximately three weeks before and after the experimental session, it would be very difficult to determine how much behavioral change resulted from the condi-

tioning and how much change resulted from normal student growth and maturity in acquiring complex counseling techniques.

However, because of the significant increase in the amount of "reflection" used and the decrease in the amount of "questions" asked for subjects A and B over a six week span, it can be presumed that the conditioning of the selected response categories in the experimental session was definitely transferred to post-experimental counseling.

— No valid conclusions can be given concerning the decrease in the use of "reflection" and the only moderate decrease in the amount of "questions" asked for subject C, although two factors may be postulated: (1) In the experimental session presented in Table (2), subject C showed the least conditionability of the four subjects which would presumably affect any transfer. (2) It is possible that in the counseling session tapes evaluated for subject C after the experimental session, there was no necessity to use the selected response categories with the client. This would naturally apply to all the subjects. In other words, the client's case has a great deal to do with the selected response categories used by the counselor. For this reason, six tapes were evaluated for each subject, three before the experiment and three afterwards. Unfortunately, only two tapes were

*C never wished
to take part in
the experiment.*

received from subject C after the experimental session. In future research it would be feasible to acquire a greater number of tapes from each subject.

An important aspect of this study not previously discussed is the fact that conditioning was applied to the subjects as a group. Though each individual within the experimental group received separate evaluation and consequential reinforcement, future research of this type may find savings in time and intensified interaction, both useful and important in facilitating the learning of beginning practicum students in counseling.

Further implications in this research deemed necessary to discuss are (1) individual personality differences among the subjects and the effectiveness of the lights as a reinforcer on each; (2) the amount of time each subject talked during the sessions; and (3) the model client.

Individual Difference

In the present study, it was quite obvious to the experimenter that the lights, whether or not they were adequate reinforcers, had a powerful effect on the subjects. One of the subjects stated that upon receiving a signal showing "insight" he just kept talking, saying anything that he could think of regarding the client's problem. Others stated, that upon receiving the light indicating "lack of insight" that they felt frustrated

and quit speaking until they regained composure and started anew with what they hoped would be a more acceptable counseling procedure.

Another important factor in the experimental sessions was the attitudes of the subjects before the session began. One of the subjects, even though he volunteered for the research, became very apprehensive about what was going to take place. The subject's main concern was who were the experimenters and what gave them the right to say when he showed either "insight" or "lack of insight." He was not immediately satisfied with the instructions that he was given because of their apparent abstractness. This posed a problem for both the experimenter in charge of getting the subjects started as well as to the participants in the group.

was volunteered.

In order to relieve the subject's anxiety, the experimenters decided to tell him and the rest of the group that they had previously discussed the case with the client and that they were well aware of the direction that the client should be taken during the course of the sessions.

This seemed to relieve some of his anxiety, but the other members of the group stated that he was uneasy much of the time during the session.

Those subjects less apprehensive about what was going to take place felt much better about what was

*The whole experiment
was plastic!*

going on and stated in the discussion afterwards that the session was enjoyable and that they were anxious to see the outcome of the analysis.

Time Factor

Another problem in the experimental sessions was that no strict time limit was placed on the individuals' length of speaking. Although the subjects had been instructed to take turns talking, going around the table, some of the subjects who felt they were really getting somewhere with the client's problem took up too much time. To curb this, a light built into the apparatus in front of each subject flashed when the experimenter wanted to stop the subject.

Stemming from the subjects' differences in their amount of verbalization, differences would also result in the amount of reinforcement that would be given to each subject. In other words, the longer a person talked, the more apt he would be to receive different forms of reinforcement.

A third problem and probably the most important was that, even though the subjects were instructed to counsel the client according to their own desires, if one subject uncovered an important aspect of the client's problem, the next subject in turn usually took off with that clue, with no need to ask further questions. Therefore, one subject would be negatively reinforced for asking

questions and the next subject possibly positively reinforced for reflecting or clarifying the statement. In part, this was controlled by the number of times each subject received a turn during each thirty minute period which was approximately five times.

The Model Client

In the planning of the experimental procedures, it had to be decided whether to give the subjects a client's case study to discuss or to let them counsel a model client.

Giving the subjects a case study to discuss would have allowed for greater group interaction but not a chance to verbalize the responses desired by the experimenters.

Although it was undoubtedly awkward as well as unusual, having the subjects take turns counseling a model client was the only way in which to attain verbalization that could be examined and reinforced.

A third alternative would have been to reinforce the subjects individually, one counselor-one client, but this would allow for even less group interaction, sought out as an important aspect of this research.

The two model clients participating in the experiment discussed their individual cases with the experimenters before the beginning of the operant sessions. It was also discussed at this time what would be an appropriate method for handling each case and what would be the desired outcome to head for. This was not done

in order to guide the subjects toward a particular conclusion but to give the subjects, who knew the case had been previously reviewed, confidence in the experimenters when they signal "insight" and "lack of insight."

Further Research

For the greater part, most counselor training emphasizes didactic orientation. Supervisors pass down an accumulated repertoire of knowledge in the traditional learning setting, hoping to integrate their counseling techniques with those of the beginning practicum student. The student's position is to accept and incorporate these established techniques according to which seems to coincide best with individual personality characteristics.

It seems reasonable that the integration of a didactic and an experiential approach to counselor training would be beneficial. The research set forth in this paper presents an experiential approach to training counselors that could easily be integrated with present didactic supervision: the supervisor brings to bear his knowledge of counseling from accumulated experience of his own while an integrated experimental program facilitates the learning and conditioning of this knowledge.

A program could be arranged so that in the first few weeks of a counseling practicum, the student would

be taught selected techniques, basic to beginning counseling therapy. After a period of time, when the student accumulates a number of counseling hours, evaluations would be made through the use of tape recordings, video tapes, or both of the counseling sessions. From these evaluations, experimental sessions could be held, such as presented in this paper, to facilitate the learning of complex counseling processes, not readily acquired through the didactics of supervision or the processes of counseling. This paradigm would be repeated throughout the period of supervision.

An interesting study could be conducted comparing two groups of practicum students for counseling competence: one group participating in a didactically approached counselor training program, and a second group participating in an integrated didactic-experiential program.

Further, much research is needed in exploring the almost unlimited number of ways in which conditioning complex counseling techniques could be conducted. The following are some of the questions which can be posed for experimental answers: under what conditions are non-verbal cues such as the lights more effective than the usual verbal cues; what are the personality variables which distinguish a good verbal conditioning subject from a poor one; what are the personality correlates of

being "conditionable," which verbal behaviors are the most conditionable as well as transferrable to other situations? It would also be interesting to study the effects of the participants acting as the experimenters for each other. In other words, can you compound conditioning by reinforcing others while at the same time being reinforced yourself?

CHAPTER VI

SUMMARY

This study investigated the use of an experimental operant conditioning session to facilitate the learning of complex counseling techniques.

Four beginning practicum students from the Kansas State University Counseling Center participated as a group in an experimental conditioning session in which the use of "reflection," "positive reinforcement," and giving "alternatives" to clients was positively reinforced and "asking questions" was negatively reinforced. The experimental session was divided into three periods: Operant 1, Acquisition, and Operant 2, in which the four subjects took turns counseling a model client. In Operant 1 the subjects counseled the client without interruption. During the acquisition period each subject received a green light (not visible to other group members) indicating "insight" (positive reinforcement) each time he used "reflection," "positive reinforcement," or gave "alternatives" to the client. A white light indicating "lack of insight" (negative reinforcement) was given when a subject asked a question. In the second operant period reinforcement was withheld.

Two hypotheses were studied. The first hypothesis was that the subjects' behavior participating in the experimental session will change in the predicted directions as a result of reinforcement. That is, incidence

of "reflection," "given alternatives," and the use of "positive reinforcement" will all increase from Operant 1 to Operant 2 as a result of positive reinforcement during the acquisition period and incidence of "asking questions" will decrease as a result of negative reinforcement during the acquisition period.

The second hypothesis stated that the conditioning of responses acquired in the experimental session will be transferred to post experimental counseling.

In the analysis of the experimental session, the use of "reflection" showed a significant increase above .05. Incidence of "positive reinforcement" increased moderately although not significantly and giving "alternatives" showed no change. "Asking questions" showed a moderate decrease although it too was not statistically significant beyond .05.

The amount of conditioning transferred to post-experimental counseling was evaluated by comparing pre- and post-experimental counseling tapes. For the three subjects evaluated three weeks after the experimental session, two subjects tended to increase their use of "reflection" and "positive reinforcement" and decrease the amount of questions asked of their clients. Giving "alternatives" showed no change for all three subjects.

Analysis of the results tends to indicate that experimental conditioning sessions such as the one

presented would be useful in facilitating the learning of complex counseling techniques when integrated into a didactic counseling program.

APPENDIX A

INSTRUCTIONS FOR SUBJECTS

INSTRUCTIONS FOR PRACTICUM STUDENTS

Subject_____

Date_____

For ninety minutes you will be participating in a model counseling session. The ninety minutes will be divided into three periods, each period lasting thirty minutes. Do not be concerned with elapsed time. We will signal you when to begin and stop.

As you can see, there is a box in front of you with two lights attached, one white and one green. The green light, labeled "I" (Insight), when on is meant to give you feedback whenever you make a contribution which is helpful or functional in facilitating group process toward helping the client. Whenever you behave in a way which will eventually hamper or hinder group process, your white light labeled "L.I." (Lack of Insight), will go on.

You are not to mention the fact that you have received either a white light or green light to the other members of the group. If you do not receive any lights during the three periods, this fact should also not be discussed either during or between the three periods.

This is an unusual setting, in that four of you are counseling one client. You may have a tendency to follow the initiative set by other members of the group. In order to restrain from this, please feel free to use your own counseling technique. Most important of all, be yourself.

APPENDIX B

INSTRUCTIONS TO RATERS

INSTRUCTIONS FOR RECORDING RESPONSES FROM
PRACTICUM STUDENT'S COUNSELING INTERVIEWS

Data Sheet

The data sheet has been constructed for manual tabulation. It has been divided into fifteen sections totalling thirty minutes. Each section represents two minutes. Using a stop watch, tabulate the amount of responses falling into the respective categories, throughout the two minute duration, for thirty minutes.

DEFINITION OF RESPONSE CATEGORIES

Reflection

Reflection is used to help the client to clarify his underlying feelings and attitudes. The technique consists of repeating the attitudes and feelings expressed by the client. The therapist acts as a sort of mirror in which the client is enabled to see the attitudes and feelings that he has expressed for what they are.

Asking Questions

There are many occasions when the clarification of feelings and the promotion of insight are best served by direct question and requests to the client to elaborate on the meaning of the statement. But, in the case of interpretation, questions must be used appropriately if they are to prove effective. Premature probing,

morbid curiosity on the part of the therapist, and the unearthing of unnecessary details may seriously interfere with the effective therapy. You are requested to record all questions asked by the therapist without regard to the questions insight into the case in question.

Alternate

Alternate simply means alternate solutions the therapist gives the client to a particular problem. In the case that a therapist gives several alternatives within one unit of verbalization, i.e., in order to get better grades, you could study longer hours or study in the library or etc., record it as one response.

Positive Reinforcement

When a client makes a statement concerning his deeper feelings, the therapist may nod his head or simply lean forward in a more attentive manner. In response to other types of material which he wishes to elicit from the client he may smile or say "good." Using audio tapes, only verbal responses will be available. Statements from the therapist showing insight on the part of the client should be recorded, i.e., very good, I think you did the right thing, I'm glad to hear your're doing so well, I think your attitude shows a great improvement, etc.

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SUPERVISOR _____ DATE _____

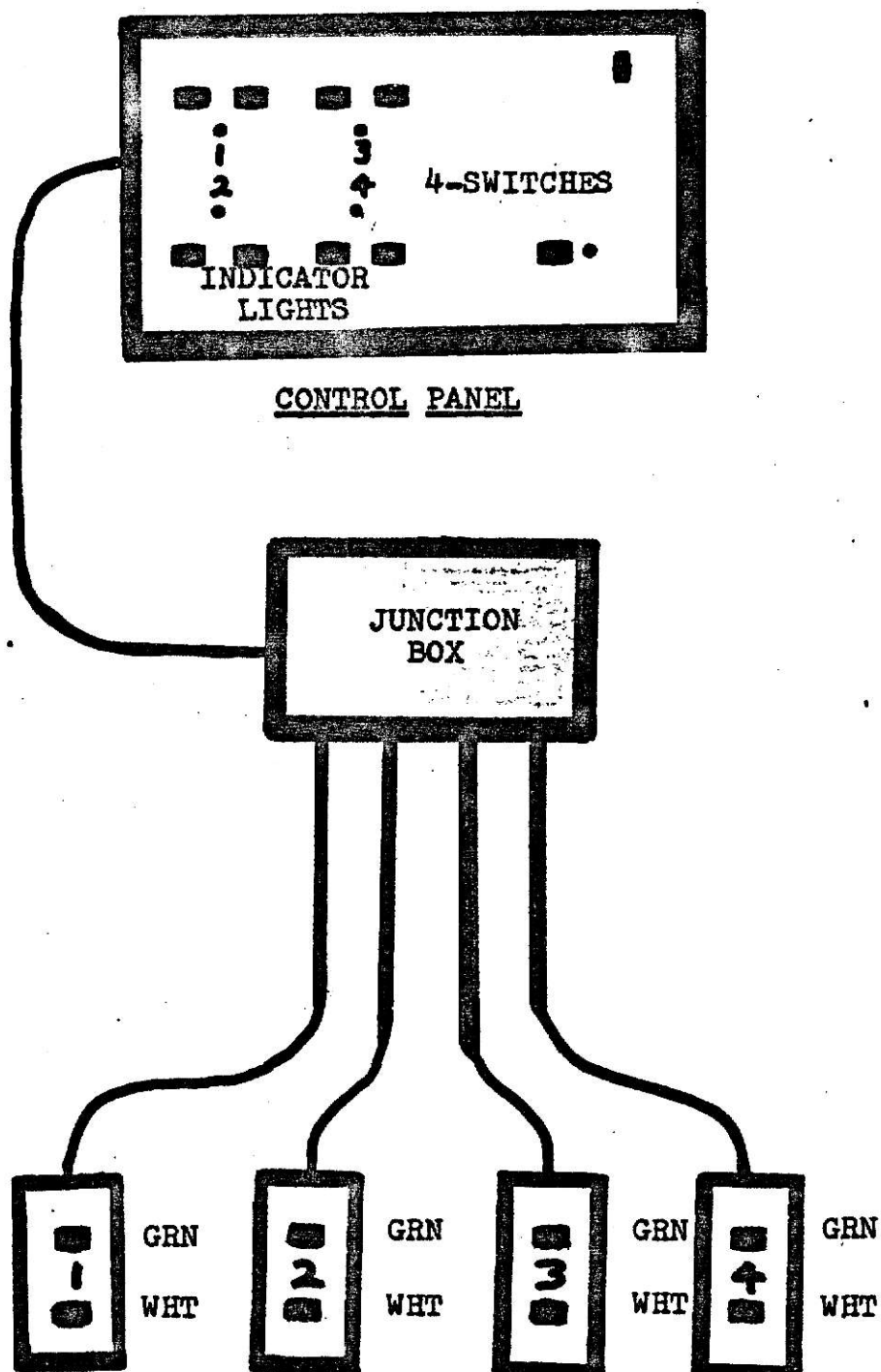
SUBJECT _____ TAPE NO. _____

	2	4	6	8	10	12	14	16
REFLEXION								
NO. R								
CUM. R								
ASK QUEST								
NO. R								
CUM. R								
ALTERNATE								
NO. R								
CUM. R								
POS. REIN								
NO. R								
CUM. R								

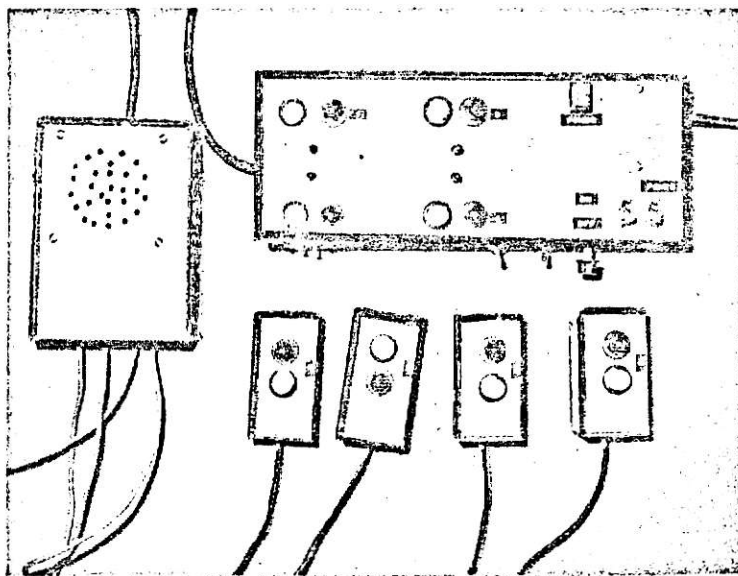
	18	20	22	24	26	28	30
REFLEXION							
NO. R							
CUM. R							
ASK QUEST							
NO. R							
CUM. R							
ALTERNATE							
NO. R							
CUM. R							
POS. REIN							
NO. R							
CUM. R							

APPENDIX C

APPARATUS

APPARATUS

LIGHTS: ONE BOX FOR EACH SUBJECT



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USE OF BEHAVIORAL MODIFICATION TECHNIQUES
TO FACILITATE LEARNING OF
COMPLEX COUNSELING BEHAVIORS

by

Gregg F. Reiter

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This study investigates the use of an experimental operant conditioning session to facilitate the learning of complex counseling techniques.

Four beginning practicum students from the Kansas State University Counseling Center participated as a group in an experimental conditioning session in which the use of "reflection", "positive reinforcement", and giving "alternatives" to clients was positively reinforced and "asking questions" was negatively reinforced. The experimental session was divided into three periods: Operant 1, Acquisition, and Operant 2, in which the four subjects took turns counseling a model client. In Operant 1 the subjects counseled the client without interruption. During the acquisition period each subject received a green light (not visible to other group members) indicating "insight" (positive reinforcement) each time he used "reflection", "positive reinforcement", or gave "alternatives" to the client. A white light indicating "lack of insight" (negative reinforcement) was given when a subject asked a question. In the second operant period reinforcement was withheld.

Two hypotheses were studied. The first hypothesis was that the subjects' behavior participating in the experimental session will change in the predicted directions as a result of reinforcement. That is, incidence

of "reflection," "given alternatives," and the use of "positive reinforcement" will all increase from Operant 1 to Operant 2 as a result of positive reinforcement during the acquisition period and incidence of "asking questions" will decrease as a result of negative reinforcement during the acquisition period.

The second hypothesis stated that the conditioning of responses acquired in the experimental session will be transferred to post experimental counseling.

In the analysis of the experimental session, the use of "reflection" showed a significant increase above .05. Incidence of "positive reinforcement" increased moderately although not significantly and giving "alternatives" showed no change. "Asking questions" showed a moderate decrease although it too was not statistically significant beyond .05.

The amount of conditioning transferred to post-experimental counseling was evaluated by comparing pre- and post-experimental counseling tapes. For the three subjects evaluated three weeks after the experimental session, two subjects tended to increase their use of "reflection" and "positive reinforcement" and decrease the amount of questions asked of their clients. Giving "alternatives" showed no change for all three subjects.

Analysis of the results tends to indicate that experimental conditioning sessions such as the one

presented would be useful in facilitating the learning of complex counseling techniques when integrated into a didactic counseling program.