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A WRITTEN PROGRAMMED APPROACH
TO TRAIN STUDENT OBSERVERS IN SPEECH PATHOLOGY

BY

ELAINE CAROL MILLER
B.S., Bowling Green State University, 1969

THESIS

Submitted in partial fulfillment of the requirements
for the degree of Master of Arts: Communication
in the Graduate Studies Program of the
College of Social Sciences Florida Technological University

Orlando, Florida
1976

178461

DEDICATION

To my father and mother, who have supported and encouraged my endeavors, and who have given me faith in myself, this thesis is affectionately dedicated.

ACKNOWLEDGEMENTS

My sincere appreciation is extended to Roy for his unselfish love and understanding, and for his patience and confidence in me.

I wish to express a special thanks to my sister, Shirley, for her constant support, for having served as a monitor in this study, and for the endless hours spent in typing the original manuscript. I also wish to thank my friend, Beth, for her assistance and encouragement.

Finally, my thanks is extended to my committee members, Dr. David Ingram, chairman, Dr. Albert Pryor and Dr. Thomas Mullin.

TABLE OF CONTENTS

	Page
LIST OF TABLES	vi
FIGURE	vii
INTRODUCTION AND RATIONALE	1
Speech Pathology	2
Psychology	4
Education	7
Summary and Purpose of Observation	9
Preparation for Observation	11
Rationale for Using a Written Programmed Approach	14
STATEMENT OF THE PROBLEM	18
METHODOLOGY	20
Test Site	20
Subjects	20
Design	21
Instrumentation	21
Stimulus Materials	21
Procedure	22
Dependent Variable Procedure	22
Experimental Group Procedure	22
RESULTS	24
DISCUSSION	27
SUMMARY	33
APPENDIX A. Learning How to Understand Therapy	35
APPENDIX B. Dependent Variable Test Form	72
APPENDIX C. Instructions	74
LIST OF REFERENCES	78

LIST OF TABLES

Table		Page
1	Summary of Analysis of Variance	25
2	Tests on Differences between All Pairs of Means	26

FIGURE

Figure		Page
1	Comparison of mean scores from four groups . .	32

INTRODUCTION AND RATIONALE

University programs in speech pathology undergo continual re-evaluation for the purpose of assessing needs and priorities. Currently, 297 such programs exist at colleges and universities across the country, with an enrollment totaling 30,320 undergraduate majors (Willis & Willis, 1974). Because of the effect these future clinicians will have upon the nation's speech handicapped, the need for constant improvements in training are critical. This study will first investigate various training techniques in the helping professions, then present a rationale for using a written programmed approach to train student observers in speech pathology.

Traditionally, training has consisted of two phases--academic and applied (Van Riper, 1965). The initial learning and gathering of information occurs during the academic phase in which the student attends classes, listens to lectures, and reads related literature. During the course of classroom training, the student studies each disorder separately in some depth, with the amount and quality of knowledge assessed and typically tested by a written examination. But the retention of information and associations will begin to gradually weaken unless they are strengthened by repetition and application (Kimble, 1967). To reinforce learning, a bridge between

classroom knowledge and clinical application is needed.

To facilitate this knowledge strengthening and practical skill application, the student usually enters the applied training phase consisting of (1) observation of therapy at a university communicative disorders clinic, (2) assisting the student clinician, and (3) finally engaging in supervised practicum as the student clinician (Van Riper, 1965). All of these aspects require retention, transfer, and the practical use of knowledge attained in the form of skills (Marx, 1969). Kimble (1967) stated that learning is "a relatively permanent change in a behavioral practice." Therefore, to provide for a meaningful learning experience, the student participates in the three areas of applied training. Various helping professions such as speech pathology, psychology, and education have implemented training in these areas of learning in the following ways.

Speech Pathology

Since 1959, nearly 50 articles published in Asha were related to the problems and methods of clinical training in the field of speech pathology (Kaplan & Dreyer, 1974). An American Speech and Hearing Association conference group agreed that modern instructional techniques, including programmed instruction, should be included in training programs (Asha, 1963). The major intent was to maximize the faculty time available to supervise clinicians, and to minimize the amount of time spent in courses dealing with teaching materials.

Further emphasis was placed on essential areas of study prior to specialization including basic subject matter (1) forming a liberal education, (2) related to normal speech and hearing development, and (3) pertaining to disorders of speech and hearing. Again, in 1967, the ASHA Convention evidenced an interest in improving teaching techniques as they apply to clinical practicum (Miner, 1967). Prather (1967) stated that we are concerned with producing "a competent practicing clinician who is capable of working more or less independently in the field;" and that we do this by teaching him "to evaluate his therapy in an objective and case oriented manner." Part of this evaluation is dependent upon an approach to discussion using a student's written evaluation of various procedures and their effectiveness as it relates to specific goals (Prather, 1967).

Boone and Goldberg (1969), and Boone and Stech (1970) assisted student clinicians in the evaluation of their therapy session by using video and audiotape confrontation, which proved to be effective feedback tools. This was preceded by written and verbal instructions to the student on what to watch for in specific segments of therapy. Starkweather (1974) studied another immediate feedback procedure used in evaluation. He stated that a behavior modification approach has four advantages over traditional training in that: (1) It provides immediate feedback to the student. (2) This feedback is less time consuming and more specific to smaller units of clinical

activity. (3) The supervisor is able to specify responses of desirable behavior and distinguish them from undesirable therapeutic behavior. (4) It enables a more systematic recording and quantitative measurement to be used.

In a more traditional approach, Van Riper (1965) referred to the three areas of applied research. He stated that 'observations' are an assigned part of the course work, and from this status, the student goes on to assist an experienced graduate clinician. After observing and assisting, he then moves to the position of student clinician under the supervision of a faculty member. Thus, it is evidenced once again that the basic steps in training include observation, assistant clinician, and student clinician.

Ward and Webster (1965) suggest that those who teach and supervise students must clarify their concepts about student needs. They call for supervisors to apply clinically valid concepts to students as human beings, and to provide conditions for continued professional growth essential for adequate academic and clinical preparation.

Psychology

Adequate training in a systematic manner has not been limited to the field of speech pathology, but has been a concern in the training of clinical psychologists (Wolman, 1965). Hoch, Ross and Winder (1966) at the Conference of the Professional Preparation of Clinical Psychologists reported that the nature of good training

consisted of a 'core' of courses that need not be specific, yet they must represent essential areas of knowledge; and that clinical psychology must have its base in general psychology. They stated that clinical skills cannot be taught in isolation from their scientific base, and that "good clinical training must rest on an appreciation of the scientific base of psychology."

Researchers have discussed an approach to pre-practicum counselor training using a videotape method and microteaching (Ivey, Normington, Miller, Morrill, & Haase, 1968; Higgins, Ivey, & Uhlemann, 1970). Ivey et al. (1968) proposed that prior to the practicum experience, brief training focusing on specific counseling skills is useful in counselor education. The principle aim of microcounseling is to provide pre-practicum training to bridge the gap between classroom theory and actual practice. To shorten the period of training time, videotaped lessons incorporating basic skills were presented to counselors in training. Because a generalizing of learning from the microcounseling setting to actual counseling is required, videotape is a valuable aid in student understanding. The skill to be taught is identified, and then taught as effectively and meaningfully as possible by microcounseling. Higgins et al. (1970) used three approaches to teach communication skills: (1) full treatment--media therapy, a video method to train clients in behavioral skills, where the counselor acts as a consultant and does not enter into the actual communication, (2) a programmed text and video models, and (3) reading

materials only. The results indicated that the full treatment group showed the most improvement in the quantity of mutual communication, followed by the written programmed group.

Although videotaping has been used extensively in the field of psychology for training, Bolgar (1965) stated that in relation to observation, videotaping still does not solve the problem of ordering and classifying observable phenomena. In fact, when considering the difficulty of reducing the tremendous amount of data presented, it is questionable if the random quality of observation using videotape actually contributes to case studies (Bolgar, 1965). He further suggested that videotaping may hinder clinical observation not only because of extraneous information presented, but due to difficulty in recording observed behavior. Cahoon, Peterson, and Watson (1968) also investigated the use of teaching machines vs. programmed texts, and found that programmed materials are the preferred method of presentation to groups with high literary interests, such as students.

In the field of clinical psychology, Loevinger (1965) stated that "the place of observation and of inference in clinical measurement is a crucial issue." She stated that no surplus meanings should be built into the basic observations made by clinicians. By clearly defining our goals, the specific patterns of behavior can be analyzed (Bandura, 1969).

Derner (1965) stated that therapy training should begin with

theoretical courses, instructional experience, and supervised practicum followed by internship. Franks (1969) further emphasized this, stating that the preferred sequence of events is from experimental observation to clinical practice.

The area of psychology has used a variety of training techniques including microteaching, videotaping, and written programmed materials to impart concrete information to students in the field (Ivey et al., 1968; Higgins et al., 1970). These teaching methods are used to instruct students at the various levels of training.

Education

The training techniques previously mentioned extend to the field of education in teacher preparation. Cooper and Allen (1971) expanded the concept of microteaching stating that it breaks down the complex teaching act into more easily learned skills. The teaching situation is scaled down in terms of time and number of students. The session is from four to twenty minutes in length, and includes from three to ten students. Lessons are scaled down to allow the teacher to focus on selected aspects, one skill at a time, isolating specific events. Manis (1973) reviewed 69 studies on microteaching focusing on the rationale behind its use, the conditions and degrees of possible goal attainment, and policy making in teacher education in relation to use. Perlberg and Theodore (1972) demonstrated a further improvement in education using the microteaching

technique, stating that it allows for the collection of comparable data about supervisory behavior in a short time period under well-controlled conditions. Davis (1970) noted still another educational improvement in the training of students. His study focused on techniques in which students' peers served as a "micro-class" and provided evaluative feedback to the student teacher.

In addition to microteaching, simulation is another training method in education (Cruickshank, 1971; Peck, 1971; McCall, 1973). Manis (1973) referred to the use of this device as a vehicle for peer feedback. McCall (1973) discussed the use of simulation games and student response to this type of training, rate of response, stimulating thinking, and developing skills. She further stated that helping the student to accept critical feedback is a large area of concern common to many training programs, as is giving constructive feedback to peers.

The techniques of microteaching and simulation are dependent upon a successful method of recording observations of behavior in quantifiable form. Medley (1973) stated that objective observational records are useful as a feedback device, in that they are detailed, precise, and comprehensive. Bowden (1973) and Jacobs (1971) referred to the Flanders system of interactional analysis which serves as a written instrument for the teacher to observe his own behavior in the classroom. Teachers who are skilled in the use of this technique are better able to analyze their own behavior and

assess strengths and weaknesses. The feedback provided allows for revision according to newly established goals. Rath (1973) further supported the Flanders method as a means of identifying the unit of observation in a classification system.

Summary and Purpose of Observation

The disciplines of speech pathology, psychology, and education generally agree that observation, assisting the clinician, and clinical practice are the three steps in applied training (Derner, 1965; Van Riper, 1965; Hoch et al., 1966; Miner, 1967; Davis, 1970). Although there are varying techniques by which this is accomplished, each of these fields contributes and exchanges knowledge and experiences with the other. The first step in applied training, that of observation, has long been considered the basis of all effective efforts in evaluating speech disorders (Kunze, 1967). It is recognized as the foundation upon which we first learn how to diagnose and remediate speech handicapped persons. But the necessity for intensive training in the skill of observation inherent in the therapeutic process, has not been focused upon at many universities. Supervisors apparently assume that the students already possess this skill, and that they can apply the theoretical knowledge learned in beginning courses (Van Riper, 1965). However, if students do not know what to look for and how the therapy parts go together, the observation has low yield (Kunze, 1967; Starkweather,

1974). Students need to be systematically trained to acquire observational skills necessary to function as a practicum clinician and finally, as a working speech pathologist (Kunze, 1967).

Berelson (1964), in describing an unpublished study by Holland (1960), stated that programmed instruction elicits and systematically reinforces only correct responses, and that such programs have been successful in imparting technical skills. The evidence indicated that students react favorably to this type of instruction, which progressively exposes information and provides immediate feedback and reinforcement. Each area is mastered by the student and a correct response is necessary prior to continuing to the next step. Programmed material is advantageous in that the presentation is systematic and the learner proceeds at his own pace (Berelson, 1964).

This study will limit its scope of investigation to a systematic, written programmed approach to train student observers in speech pathology. The purpose of observation is to enable the student in training to (1) focus on specific aspects of the therapeutic process, (2) make value judgements concerning therapeutic manipulations, and (3) acquire skills necessary to become professionally competent. The need to train observers as effectively, efficiently, and as economically as possible is critical (Ivey et al., 1968; Willis & Willis, 1974).

Preparation for Observation

Initial student preparation for observation emphasizes achievement in a number of subject matter areas. To an extent, the meaning and value of academic experience and subject matter mastery rests with the student's desire to develop his potential as a professional person. It is a matter of inner conviction and inner satisfaction as much as having met with prescribed standards (Ward & Webster, 1965). The student must not only feel success in having learned the academics, he must be able to apply this knowledge as an observer and evaluator of client-clinician interactions in a therapeutic setting (Loevinger, 1965). Textbook learning becomes increasingly more meaningful when the student observes the learned principles being practiced (Kunze, 1967). Observational procedures are realistic in that they lead to a change of events or other activities, provide valuable beginnings and useful feedback data, and provide benchmarks around which future changes can be compared (Fleming, 1973).

Several methods are used in training students to observe (Kunze, 1967; Boone & Goldberg, 1969; Boone & Stech, 1970; Starkweather, 1974). Some university programs, using traditional training techniques, require that the student completes the academic course work, observes therapy in the clinic, and then is a student clinician under direct supervision (Starkweather, 1974). Kunze (1967) stated that frequently the skill of observation has not been developed in these programs;

but rather it is assumed that the student already possesses the basic observational skills, and that he need only apply what he has learned as a student clinician. Yet the performance of students indicates that they have not attained the skills through observation necessary to do practicum (Kunze, 1967).

Educators, critical of traditional training procedures, stated that students must learn to focus their observations (Loevinger, 1965; Kunze, 1967; Boone & Goldberg, 1969; Boone & Stech, 1970; Boone & Prescott, 1972; Starkweather, 1974). The traditional method of random observing is not as effective as newer, innovative behavioral modification techniques in which feedback is immediate and specific (Starkweather, 1974). A research investigation in the self-education for clinical teachers noted that observers do not know what to look for when casually observing or how to describe it to others. Rather, the observer's preconceived ideas affect his criticism of what he observed. Training must include developing the student's ability to make detailed observations and enable him to communicate them to others. The emphasis here is on self-education and evaluation (Adams, Ham, Mowardi, & Weisman, 1974).

This study exemplifies the need for students to be trained in focusing their viewing on the specifics of therapeutic manipulations, interactions, and responses. Bishop (1973) discussed observation and technology, and cited Provus (1970) who stated:

[There is] a long overdue concern for analysis, for cause-effect calculations, and, more important, for outcome, especially learner gain. These developments require that we sharpen our objectives, select our means, and ascertain what was transacted and what was achieved with much greater provision and care than our generalized institutional approach has provided in the past.

Boone and Prescott (1972) trained speech clinicians to analyze the content and sequence of events in therapy with greater precision. By use of audiotape and videotape replay, a 10-category system allowed for therapy analysis in terms of a quantifiable description of events. This category system was used to determine various dimensions of therapy. Recording good/bad evaluatives enabled students to categorize and count responses, and thus, analyze the therapeutic process. This behavior acquires a new pattern or technique for observation; for gathering evidence regarding effectiveness. It is more focused and insightful than the random observing approach used in traditional methods of training.

The Flanders system of interactional analysis is also a written method in which verbal behavior patterns are identified, counted, and categorized. Feedback provides the opportunity for the teacher to gain self-insight (Bowen, 1973). Medley (1973) discussed the Observation Schedule and Record 3 (OSCAR 3) instrument which assessed the amount and kind of changes that occurred in teacher's behavior during a time period, by coding the observables. He stated that such written instruments enable the observer to record data in an

objective, quantifiable form.

The information presented above provides an overview of the various techniques by which students are trained to observe. Some of these require verbal explanations, some use audiotape and videotape replay, and others stress a written approach (Boone & Prescott, 1972; Bowen, 1973; Medley, 1973; Starkweather, 1974). Brandt and Perkins (1973) stated that students should be made aware of the common factors in the observational process. These are: (1) Observation involves classifications of behaviors, according to various category systems, in which the judgements made are primarily qualitative. (2) When ratings are made, the behavior being judged is often specified so that it is readily distinguishable from other behaviors. (3) Observations are quite useful when focused on only a narrow segment of the total happening.

Rationale for Using a Written Programmed Approach

The three aspects previously mentioned, common to all observation, can be explained in concrete terms using a written programmed approach. Kunze (1967) stated that the first step "is to help the student distinguish between behavioral events and statements of impressions resulting from his observation of behavioral events." The purposes of recording behavioral events are: (1) It preserves data lost when only impressions are noted. (2) It preserves data which may seemingly be unimportant in itself, but assumes importance in relation to behaviors emitted later. (3) Valid and reliable conclusions are

obtained when all data is recorded with accuracy and carefully studied. (4) Behavioral events cannot be distorted by observer prejudice (Kunze, 1967).

Once the student is able to distinguish between behavioral events and impressions, he needs a structured systematic way of recording in order to apply analytical procedures to therapeutic interactions (Kunze, 1967; Boone & Prescott, 1972; Starkweather, 1974). Brandt (1973) stated that narrative records are not really useful unless they are organized systematically, allowing for the recording and classifying of behaviors in an appropriate system. Providing the student with the stimulus-mediation-response-contingency (SMRC) model enables him to accurately analyze and record, by categorizing each of the behaviors (Plauche, 1976). The observer counts and classifies behaviors, and therefore, is able to quantify what he sees, recognize successes and weaknesses, and assess performance (Kunze, 1967; Boone & Prescott, 1972). Starkweather (1974) stated that quantification is advantageous in behavioral training in that reinforcement causes an individual to respond in a particular way. This enables him to think in terms of discrete responses rather than general behavior patterns.

A written programmed text using the SMRC model provides the student with a structured learning situation. Hill (1971) stated:

Much current programmed instruction is in workbook rather than machine form. The student fills in a blank, then turns to another page to check his answer. However, these programmed workbooks differ

from the more familiar type of workbook in that they do all teaching through the items in the program, rather than serving to supplement lectures and textbooks. The same series of items that calls forth the student's responses also provides the information necessary for making the responses.

The SMRC model in the written programmed text provides the observer with a specific approach by which to identify therapeutic processes, thereby avoiding a futile search for irrelevant aspects. This approach, as opposed to videotaping, is preferable in that it does not present an extraneous amount of data (Bolgar, 1965).

The specific information in the written program provides feedback to the student following each reinforcement. Hill (1971) stated that feedback is the process for constructive reshaping, a means of informing the individual of deviations from the correct response. He further stated that in shaping behavior, a response is selectively reinforced by a series of successive approximations, and thus the desired behavior is brought closer to the goal. Feedback does not maintain the status quo, but rather it defines more precisely what is needed (Bishop, 1973). This facilitates optimal learning, and enables the student to become increasingly analytical (Brandt, 1973).

The previously cited literature has shown programmed materials to be advantageous in that they are analytical, organized systematically, facilitate the recording, classifying, and categorizing of data; and provide an efficient means of assessing behavior (Kunze, 1967; Boone & Prescott, 1972; Brandt, 1973; Starkweather,

1974). One critical element remains for optimal learning. A written programmed approach must be a support system that is compatible with the central features of current techniques, and be valuable in terms of process, personnel, priorities, and budget (Bishop, 1973).

STATEMENT OF THE PROBLEM

Speech pathology students who observe speech therapy in a university communicative disorders clinic, without prior training in observational skills, tend not to focus their attention on specific aspects of the therapeutic process (Loevinger, 1965; Kunze, 1967; Boone & Goldberg, 1969; Boone & Stech, 1970; Boone & Prescott, 1972; Starkweather, 1974). The theoretical knowledge learned in beginning coursework must be applied in a therapeutic setting to provide a valuable observational experience (Loevinger, 1965; Kunze, 1967). The skill of observation is the first step in bridging the gap between classroom academics and practicum experience. The purpose of this study was to determine if students' skills of observation can be improved by using a written programmed approach.

The need for this type of study was critical. A total of 30,320 future speech clinicians are currently enrolled in 297 speech pathology programs at colleges and universities across the country (Willis & Willis, 1974). Responsible educators have recognized the necessity of providing students with the most effective, efficient training in the least amount of time, and in the most economical manner as possible (Ivey et al., 1968; Willis & Willis,

1974). The author believed that the available training materials and methods could be better presented to facilitate optimum learning of the basic skills of observation.

This study was designed to compare the observational skills of students trained using a written programmed text with two untrained groups. An attempt was made to answer the following question:

Do students who are trained using a written programmed text exhibit significantly more effective observational skills than those who are untrained?

METHODOLOGY

Test Site

All testing was conducted in classrooms at Florida Technological University, Orlando, Florida.

Subjects

Students in the Communication Disorders program at Florida Technological University volunteered for this study. Of these volunteers, 33 undergraduate students were chosen to participate. These subjects were then divided into three groups. Group I (naive-control) consisted of 11 beginning communication disorders majors who were enrolled in the "Introduction to Communication Disorders" course. These subjects had no previous clinical experience as observers, assistant clinicians or clinicians in the university speech clinic.

The remaining 22 subjects were matched to provide initial equivalence in sex, age, and amount of clinical experience; and then randomly assigned to either Group II (sophisticated training level) or Group III (sophisticated-experimental). Group II consisted of six subjects who had been observers, three subjects who had been observers and assistant clinicians, and two subjects who had engaged

in the complete clinical program: observation, assistant clinician, and clinician. Group III consisted of six subjects who had been observers, two subjects who had been observers and assistant clinicians, and three subjects who had engaged in the complete clinical program.

Design

Group I subjects (naive-control) and Group II subjects (sophisticated-control) viewed and assessed the dependent variable videotape of therapy. The experimental group, Group III (a) read the written training materials (Appendix A), and (b) viewed and assessed the dependent variable videotape.

Instrumentation

The dependent variable tape was presented on a black and white videotape recorder (Panasonic model NV 3020 DD). All subjects viewed the tape on a 19-inch television monitor (Concord Model MR 950).

Stimulus Materials

A written text based on combined learning theories, explained the stimulation-mediation-response-contingency (SMRC) therapy model. The material was divided into two areas. One section explained how to collect critical diagnostic information related to a speech problem. The other described how to obtain baseline measurements

for these variables. Brief subtests were placed at the end of each section of the written materials (Appendix A), and the subjects passed these before proceeding to the next section.

The dependent variable consisted of a written analysis of a three minute videotape replay of a therapy session. All subjects analyzed the test videotape on a form provided by the examiner (Appendix B).

Procedure

Subjects in each group were seated at desks in classrooms and placed six to ten feet from the television monitor.

Dependent Variable Procedure. Instructions, explaining the procedures to be followed in the experiment (Appendix C), were read to subjects in each group. Groups I, II, and III viewed the dependent variable tape separately and answered the posttest questions (Appendix B). The subjects were then debriefed to alleviate any uneasiness they may have felt as a result of having participated in the experiment.

Experimental Group Procedure. The examiner read the instructions (Appendix C) to the subjects. The subjects then read the written materials and answered the subtest questions. Subtests within the stimulus materials were checked by a monitor. If the subject failed to answer the questions correctly on his answer sheet, the monitor instructed him to reread to find the correct answer. If

the subject failed to answer correctly the second time, the monitor wrote in the correct answer and the student was directed to go back and review what he had not learned.

RESULTS

A one-way Analysis of Variance (ANOVA) was performed on the dependent variable scores from Groups I, II and III. The scores indicated that the research question under investigation was not supported. A non-significant F-value ($F=2.80$) was obtained. The results of the ANOVA are summarized in Table 1.

The mean scores were determined for each of the groups. Group I obtained a mean score of 6.64; Group II, 7.36; and Group III, 7.91.

The Newman-Keuls method was chosen to further analyze the mean score data. The differences between all possible pairs of means were tested, and the results are shown in Table 2. The results indicated that there were no significant differences between the means of Groups I and II or II and III. The difference of the means between Groups I and III showed a strong trend toward significance at the .05 level. The analysis indicated a mean score difference of 1.27, with 1.33 needed to obtain significance at the .05 level.

Table 1

Summary of Analysis of Variance of the Effects
of Training Levels on Therapy Analysis

Source	SS	df	MS	F
Training Level	8.97	2	4.48	2.80
Error	48.0	30	1.60	
Total	56.97	32		

$$F_{.95} (3,32) = 3.32$$

Table 2

Tests on Differences between All Pairs of Training Groups

Treatments		1	2	3
	Means	6.64	7.36	7.91
1	6.64	-----	.72	1.27
2	7.36		-----	.55
3	7.91			-----

	$q_{.95}(r, 30)$	$r=2$ 2.89	$r=3$ 3.49
	$\sqrt{\frac{MS_{error}}{n} q_{.95}(r, 30)}$	1.10	1.33

DISCUSSION

Data from this study were subjected to statistical analyses to determine possible implications for the applied training phase of students in speech pathology. The research results revealed the following information.

The mean scores from Groups I (6.64), II (7.36), and III (7.91), though not statistically significant from each other, showed a trend. Examination of the results using a one-way Analysis of Variance illustrated in Table 1, and the subsequent Newman-Keuls procedure illustrated in Table 2, revealed no significance. However, the mean score difference between Groups I and III did approach significance at the .05 level as illustrated in Table 2.

Although the written programmed text to train students to observe critical aspects of therapy did not produce statistically significant results, the written materials appear to play an important role in the applied training phase. As suggested by previous research, a programmed written text systematically reinforces correct responses, as well as having a high literary appeal for student groups (Berelson, 1964; Cahoon et al., 1968). The results of this study indicate that the exclusive use of written material has only a 'beginning effect' on improving the applied

skills used in observation. The traditional training sequence and results of classroom lecture, readings, and written material is limited as to its effectiveness in terms of student preparation for the clinical skill of observation. Since reading about specific aspects of therapy produces only a trend, it would not be expected that students would do well learning a clinical skill if they have had only lectures and written materials.

This 'beginning effect' was observed in the experimental subjects (Group III) who tended to more accurately focus their observations and understand the critical aspects of therapy than their untrained, matched peers (Group II). It is important to realize that the only difference between the two groups was that Group III read the written materials prior to viewing and assessing the dependent variable. Thus, these written materials would appear to be of value in the applied training phase if several alterations were made.

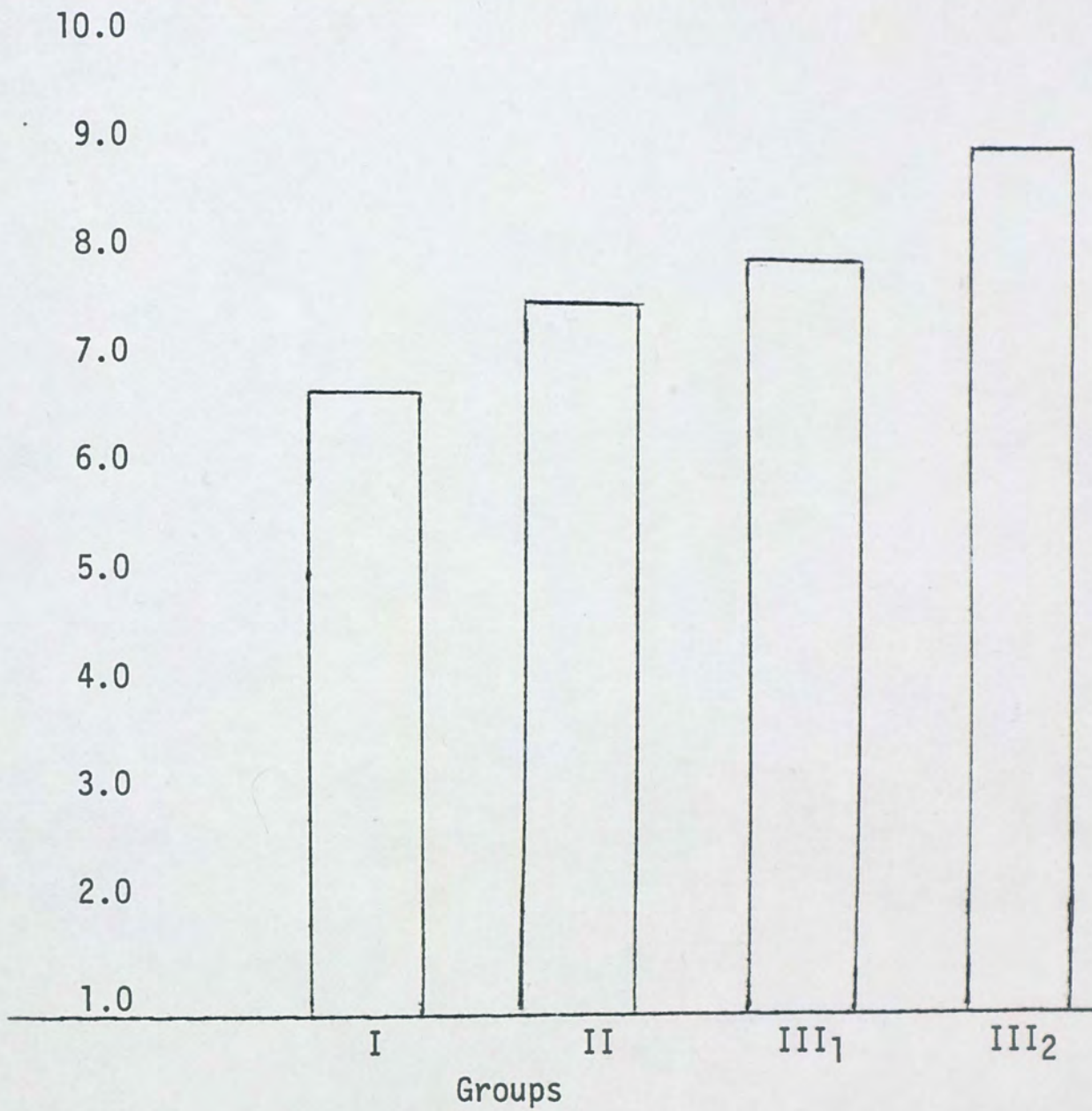
Adding visual examples in the form of videotaping actual therapy sessions has proved to be a beneficial method in training students to observe (Boone & Goldberg, 1969; Boone & Stech, 1970; Plauche, 1976). A more programmed "activity" using both written and audiovisual examples would enable student observers to practice what they had learned in the academic phase of training. Pertinent information needed by the student to become clinically competent can be better understood when examples of therapy are viewed on videotape.

Combining written materials with videotape examples would possibly reduce the time, cost, and number of instructors needed to train observers (Ivey et al., 1968; Willis & Willis, 1974).

The effects of presenting the written training material used in this study with videotaped therapy examples was assessed in a concurrent study (Plauche, 1976). The effects of the mean scores from both studies indicated a trend as illustrated in Figure 1. The concurrent study produced a mean score of 8.91 for the experimental group (Group III₂) receiving videotaped demonstrations of actual therapy sessions. The information presented to both groups of experimental subjects (Groups III₁ and III₂) used in this study and the concurrent one was identical, with only the methods of presentation varying. The concurrent study used the written materials which coincided with the videotaped examples. The results, using the same dependent measure, were compared statistically with the results from the same Group II subjects that were used in this study. An Analysis of Variance, and subsequent t-tests indicated a statistical significance at the .01 level between Groups II and III₂. Thus, the same written material used in both studies may be a part of the apparent training effect.

Group II students were representative of those who receive traditional academic and applied clinical training. The difference between this group and Group I (naive-control) were not statistically significant. Thus, it is interesting to note that the

Mean Scores	6.64	7.36	7.91	8.91
-------------	------	------	------	------



Legend: I (naive control)
 II (sophisticated control)
 III₁ (experimental - written materials only)
 III₂ (experimental - written materials and videotaped demonstrations)

Figure 1. Comparison of mean scores from four groups.

course work included in the present university training program appears to be of little benefit in enabling students to analyze a videotape of an actual therapy session.

In the current study, mean scores from Groups I and III showed the strongest trend, though not statistically significant. Perhaps Group III's performance can be attributed to their more extensive educational background and experience, as well as the examples included in the written materials.

The posttest only design was chosen to reduce the threat to internal validity. Because of the amount of time required to read the stimulus materials, maturation of the respondents may have been operating. History may have threatened internal validity due to the fact that the three groups were not run simultaneously. In addition, a reactive effect as a result of the written materials may have served as a stimulus to the subjects' change in behavior, in which the subjects may have been attempting to memorize material anticipated in the subtest questions.

Further research is needed in three areas. First, this study should be replicated using additional subjects to test the reliability of the linear trend of Groups I, II, and III. Secondly, it is suggested that videotaped demonstrations of therapy be used to strengthen the written examples contained in the text. Researchers in the helping professions have stated that demonstrations of actual sessions which include the skills to be learned are a valuable aid

in education (Ivey et al., 1968; Boone & Goldberg, 1969; Boone & Stech, 1970; Higgins et al., 1970). Finally, another potential area for investigation is to determine how early these materials could be beneficially used in the student training process for optimum learning to occur. If students could begin to understand the clinical process early in their training, course work would be referenced and understood in a more practical way. It is critical that educators use the best methods now available in producing students who will become competent, accountable, speech clinicians.

SUMMARY

The methods by which students are trained to observe has been a recent concern of educators in the helping professions. A review of the literature suggested that a variety of training methods, as well as a controversy as to which is preferable, still exists. Responsible educators desire to train student observers as effectively, efficiently and as economically as possible. The literature further indicated that a programmed approach using examples of therapy is a viable teaching method. Thus, the present study was designed to investigate the effects of using a written programmed approach to train student observers in speech pathology.

Thirty-three undergraduate speech pathology students participated in this study. Each group consisted of eleven subjects; Group I (naive) was composed of beginning students, while Groups II and III (sophisticated) were matched in educational background and clinical experience. Group III served as the experimental group and read stimulus materials. All groups viewed and assessed the dependent variable measure; a videotaped therapy session.

The individual scores from the dependent variable were subjected to a one-way Analysis of Variance, and the mean scores were analyzed using the Newman-Keuls procedure. The results indicated no statistical

significance directly attributed to the written training program, but showed a strong trend between Groups I and III.

Implications for this study include the following: (1) When teaching a clinical skill such as observation, traditional academic methods may be of little benefit in enabling the student to accurately assess an actual therapy session. (2) It was suggested that observational skills may be taught more effectively when specific examples and videotaped demonstrations of therapy sessions accompany written material. (3) When considering the importance of producing a competent, accountable speech clinician, it is necessary that educators seek out the best methods by which to teach students the first step in applied training; that of clinical observation.

APPENDIX A

Learning How to Understand Therapy

David B. Ingram, Ph.D.

INTRODUCTION

There are two overlapping aspects in your professional training experience as a speech pathologist. One part is concerned with acquiring INFORMATION about speech pathology, and the other area is related to the application of USE of those ideas.

You will gather ideas as you read textbooks, listen to lectures and take tests. Later, when you have a better understanding of the key parts of therapy, you play a more active role by observing therapy, and then assisting the clinician in planning, recording progress, and doing therapy. Finally, you will assume the role of "CLINICIAN" and actually do therapy yourself.

The purpose of this training sequence is to help you take the first step and learn HOW TO OBSERVE the critical parts of therapy. As you are watching some therapy sessions we want to make sure you are looking for the right things. You will need to understand these steps in rehabilitation. Before the actual therapy starts, you will want to know what the problem is, so the first step is diagnosis.

Step 1

Diagnosis

The purpose of the diagnostic session is to COLLECT the

important symptoms that make up the problem. You may collect this information by using three different techniques: (1) testing (2) interviewing and (3) observing. Each of these techniques have special advantages and limitations. Although testing is a very formal situation, it also allows you to organize your results and then compare them with norms from other people. Interviewing is less formal and allows for exploring individual differences that are not possible with testing. It can also be well organized, but it's not possible to compare your results with norms. Information which is not accessible through testing or interviewing may emerge when you watch parents and the case interact in an informal unstructured situation. The effective diagnostician uses all the techniques when they are appropriate to collect all of the important information about the problem.

This diagnostic information falls into two areas: behavior and attitudes.

Behavior. It is important to obtain measurements of the behavior of the case. For example, in the situation of stutterers you might measure the number and severity of the stuttered words. You might also measure how long the stuttered words or blocks lasted.

For articulation cases you might record all of the errors the case had as he made sounds in words. You might also obtain measure-

ments in terms of his ability to move the tongue or lips in making sounds.

In cases of delayed language it might be appropriate to measure aspects such as the length and structure of the sentences or how well the case understands spoken language.

The behaviors we are able to measure in communication problems tend to be much more specific and more easily measurable than the attitudes.

Attitudes. When communication is interfered with because of a speech problem such as stuttering, articulation, or delayed language the case usually reacts to this problem emotionally and has feelings or attitudes about the problem. For example, severe stutterers might feel very frustrated in many situations when they are unable to communicate effectively. Even young children might feel embarrassed if they are unable to be understood as a result of a severe articulation problem. When they are not understood they may withdraw or act out. Withdrawal and frustration may also occur in the language delayed child.

So as a result of the testing, interviewing, and observing you will have compiled a "collection" of the case's behaviors and attitudes. In a sense, you have an "x-ray" of the patient's communication problem.

Subtest 1

1. Before actual therapy starts, you must _____ the client's problem by collecting the important symptoms making up the problem. p. 36
2. The therapist must obtain specific measurements of the client's _____ as it relates to his speech problem. p. 37
3. The therapist must also consider the client's emotional reactions and _____ that affect the way he feels about himself and his problem. p. 38

Step 2Selection of Critical Symptoms

Many symptoms are gathered during the diagnosis. Some are not even relevant; some have slight importance; others are very important. Now it is the job of the diagnostician to pull out or select the most important parts of the problem. For example, during the interview, the parents might have gone into some detail about the time Uncle Jack visited and was unable to understand their child. You would probably exclude some of their description and include only the notion that it is difficult for some people to understand the child and the child's reaction to this. Stutterers may, during the initial diagnostic interview, tell you about many situations in which they have been frustrated or penalized as a result of the stuttering. It's important

for you to select the most representative parts of this problem.

Imagine that you had all the symptoms spread out in front of you on a desk. In this step it would be your job to pull out only the most important symptoms - those symptoms that best represented the problem.

Subtest 2

1. The therapist pulls out the most important parts of the client's problem by selecting the critical _____.

p. 39

Step 3

Creating Baseline Measurements for Critical Symptoms

Now that we have isolated those critical parts of symptoms of the problem, it is going to be very important to measure them carefully before we start therapy. Some symptoms lend themselves to easy and fairly objective measurements. For example, we can tell quite accurately how many times a stutterer stutters during a two or three minute conversational period by just counting the stuttered words. If we administer an articulation test to a youngster who has difficulty making sounds in words we can count the number of articulation errors.

However, it is more difficult to measure the amount of struggle a stutterer has while he is stuttering. It is also difficult to measure the amount of rejection a child might

experience as a result of not being understood by his listeners. In recording this type of baseline information we may only be able to indicate that the case experiences a great deal of rejection from specific people. We can also note the types of rejection. You must realize the important advantages in obtaining the best measurements of the condition of the cases' symptoms before beginning therapy. These advantages are:

(1) If we have a specific picture of the unique pattern of symptoms for each case we can plan therapy more appropriately. We are able then to design a therapy approach which really fits the case. So, the selection of critical symptoms and their measurements allows us to plan out the first parts of therapy.

(2) We obtain measurements of the condition of the problem before we begin therapy and then make subsequent measurements during the therapy process. This enables us to demonstrate progress at the end of therapy and the effectiveness or ineffectiveness of the therapy process.

If the baseline measurements or the status of the symptoms do not change as a result of therapy, that provides us with valuable feedback. It lets us know that the particular therapy plan that we have been using is not effective. Hopefully, though, we will have good results and there will be progress in therapy. We can note this progress only if we get pre-and-post therapy measure-

ments. The pre-therapy symptoms then, allows us to demonstrate our progress and become accountable for our therapy.

(3) When we demonstrate progress, this can serve as motivation for not only the case but also for the therapist. This also makes it possible for us to demonstrate the effectiveness of our therapy to other individuals such as employers or colleagues.

Therefore, up to this point, we have collected all of the symptoms in terms of behavior and attitudes. We have pulled out or selected the most important ones and then created base line or beginning measurements for those symptoms. Now we know what is wrong with the patient and the severity of his problem. At this point then, we are ready to begin therapy.

Subtest 3

1. Objective _____ measurements are made of the client's symptoms before beginning therapy.
p. 40
2. The unique pattern of the client's symptoms enables us to design a plan for _____.
p. 41
3. Taking subsequent measures provides us with valuable _____ information and lets us know if our plan is working effectively.
p. 41

Step 4

Plan Therapy Model (Theoretical)

When therapy has an effect we assume that the patient has made

some changes in his initial behavior and attitudes. These changes indicate he has done some new learning, and this is certainly the pay-off in therapy. Whenever the case learns new, more effective types of behavior and attitudes, therapy is working.

If learning is so important in therapy, it is critical that we consult the experts in learning and apply their ideas in therapy.

One group of learning experts discusses classical conditioning. Using this model they indicate that there are certain stimuli or events that happen to people that result in reliable responses. This stimulus and subsequent response pattern is almost guaranteed. It is very predictable. You will probably recall that in Pavlov's early experiment this stimulus was the presence of food for the dog. The guaranteed response in the presence of that stimulus was salivation. Pavlov also included another stimulus (the ringing of a bell) which did not evoke the response of salivation. By presenting both of these stimuli together-the food and the bell ringing-the dog began to learn that the response to the bell ringing, as well as the food, was salivation. Gradually, Pavlov eliminated the food as the stimulus and soon the dog salivated whenever the bell was presented. It is important that we, as therapists, realize that stimuli which would probably never result in that response.

For example, some youngsters who have delayed language are

able to make the response of understanding what a ball is when they are shown the stimulus of a picture of a ball. However, if the therapist said "ball" it would not evoke that response of understanding. By pairing or presenting the picture of the ball and the spoken word, the case can get the idea that they are similar. Gradually, the picture of the ball can be withdrawn until finally just the word "ball" evokes the same response of understanding.

So, for us, as therapists, it is important to realize that if our cases can make the correct response in the presence of one stimulus, we may be able to teach them to make that same response to another stimulus by pairing the two stimuli.

Operant conditioning psychologists talk about another type of learning which is very important to us as we begin to plan our therapy. One of their basic notions is that if we follow a correct response with a reward, the chances of the response happening again increase. If a person makes an incorrect response we can decrease the chances of that happening again by following the response with punishment or by ignoring it. Imagine that a language impaired youngster is delayed in language because he's being rewarded for acting like a baby. The operant conditioning theory tells us that when he has these immature responses they should go unnoticed or be punished. By rewarding the youngster's more mature responses, the desired response patterns are strengthened. This

theory would also suggest that when stutterers begin to make responses in which the stuttered word is controlled more effectively or they make fluent responses, you should be there with some type of reward.

Very simply, the clinical yield then from this theory indicates that when the case makes the right response there should be some type of a desirable pay-off for him. When he makes the wrong response it should go unnoticed or punishment should take place.

So far we have talked about two types of stimuli (weak and strong), responses and contingencies. The last aspect of learning to be discussed is mediation. This is concerned with the "thinking or cognitive" parts of learning. Experts in this area indicate that learning is "thinking". Although there are stimuli, responses and contingencies outside the brain, the real learning takes place inside the brain.

As we begin to plan therapy it is important that we take advantage of all possible contributions from these experts. Although different theorists tend to contradict each other it may be to our advantage to combine their ideas. When they are combined, it could appear as "Stimulus, Mediation, Response, Contingency" or "SMRC" model. Here is an example. The therapist might provide a stimulus in the form of an instruction or a paired stimulus combination; while this is going on we expect that mediation or thinking is occurring in the client. He should be motivated to

focus on or attend to the stimulus, think about it, analyze it, and give it meaning. Next, we expect that having perceived and analyzed the stimulus, he might make some type of response. Following the response, the therapist might provide some type of contingency (reward, ignore, or punish). So, with this inclusive "SMRC" model we can begin to account for more of the activity which you will be observing in therapy.

There will be occasions when you will probably be observing just responses and contingencies as a result of operant conditioning therapy. There will be other times when you will see examples of classical conditioning. You will also probably notice times when the case appears to be just thinking or mediating. However, equipped with the flexibility of the "SMRC" model, you will be able to account for any event in therapy.

These theories will be of little value to you until they are translated into specific activities within the therapy session. This is the purpose of the next section or next step.

Subtest 4

1. The payoff in therapy is when some new _____ occurs,
p. 43
which is shown in the client's behavior and attitude change.
2. The two kinds of learning theory combined in the SMRC model
are _____ and _____ conditioning.
p. 43 p. 44

3. If the case makes a correct response to a stimulus, we can teach him to make that same response to another stimulus by _____ the two stimuli.

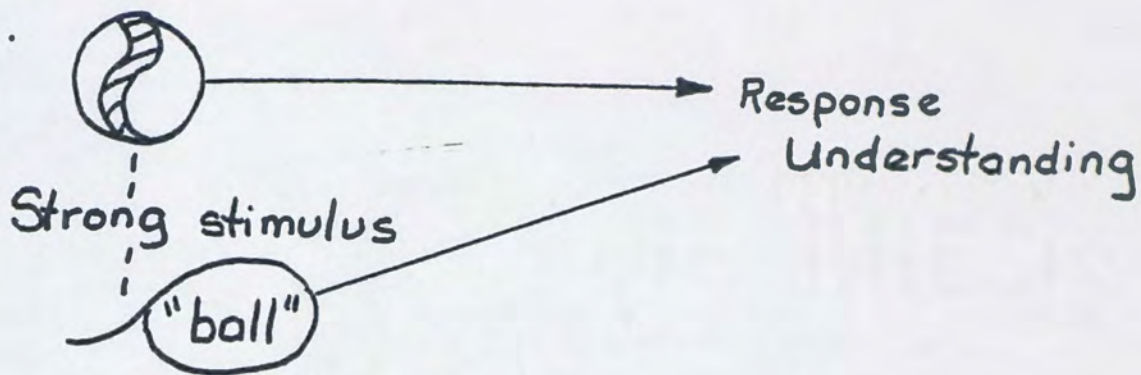
p. 44

Step 5

Plan Theory Model (Applied)

Now you are equipped with the theories or master plans for planning events which you expect to happen in therapy. It is your task, at this point, to think of specific ways the therapist and case will behave during the therapy session. Beginning therapists especially should plan out these little interactions or sequences very carefully before the therapy session.

Here is an example of the applied model for classical conditioning. Previously we mentioned that the picture of the ball (visual stimulus) for the delayed language youngster was guaranteed to evoke the response of understanding of what a ball was. If the therapist said "ball" (auditory stimulus) it would probably not evoke that response. So it is appropriate then to pair the visually and auditorially presented stimuli together in hopes that the weak stimulus will be connected with the strong stimulus.



After several trials the strong stimulus or picture may be dropped and hopefully the weak stimulus will evoke the desired response.

Here is the applied therapy plan.

Therapist: Show the case a picture of a ball (strong stimulus). At the same time the therapist would say "ball" (weak stimulus).

Case: It is expected that the case will make the correct response and understand what ball is as a result of mainly the visual stimulus. However, he will be learning the auditory stimulus.

Therapist: The therapist will repeat this above process several times and finally, she will say "ball" without showing the picture.

Case: Case will demonstrate that he understands what ball means by pointing to the correct object (ball); which is one of 3 objects.

Now here is a "translation" for the operant conditioning theory. In this situation the therapist will reinforce the correct response. She will also ignore incorrect responses.

Therapist: "Show me Ball" (therapist presents pictures of five objects).

Case: Case points to cup (error response)

Therapist: No response (ignoring contingency)

Case: Points to the picture of the ball (correct response)

Therapist: "Good for you" (reward contingency).

Now, here's an example of the SMRC model with the same therapy situation.

Therapist: "Show me ball" (stimulus) (Therapist presents pictures of five objects).

Case: Case looks at and listens to the therapist and thinks about the stimulus (mediation).

Case: Points to fish (response-error)

Therapist: "No" (contingency).

Therapist: "Show me ball" (stimulus)

Case: Points to ball (correct response).

Therapist: "Good for you" (contingency-reward).

You are planning to become a sophisticated and effective therapist. Reaching this goal will depend to a great degree on how successfully you will be able to analyze these key parts of

therapy. When therapy is going poorly, the problems will show up in the case response patterns. That is, he will be making error responses or no responses over and over again. It will be your task then to trouble shoot for the problem areas. If you are sensitive to the things that can go wrong within the stimulus, mediation, and contingency aspects you will be able to figure out what to change so that the therapy will become more effective. As you apply these ideas, they will allow you to interpret your therapy so you can understand where problems are.

It is equally important to make these types of insights with successful therapy so you will know what to continue doing. Now, we will look at the SMRC model in more detail. Here is what you can expect to see in the complete sequence.

Stimulus - S = The therapist will present some type of stimulus.

This may be directions, it may be a model of the behavior that is desired, it may be a suggestion or it may even be an encouraging or supportive statement.

It's going to be important for you to know what might go wrong with stimuli as you trouble shoot for problems in therapy.

(1) The stimuli may be dull and uninteresting to the case and they perceive it as having very little value, (2) The stimuli may be a demand for a response pattern which is too complicated

for the case, (3) The stimuli may be so simple and require such an elementary response that the case may be bored by it, (4) The therapist may also have negative behaviors or attitudes which may affect presentation of stimulus material. For example, a therapist could lack warmth or be very demanding in terms of inflections or attitude. It is important, then, to become sensitive to those ineffective "stimulus packages" that therapists present. If they are placed appropriately in terms of difficulty, presented clearly and are interesting, and the therapist is perceived as a genuine caring person, the stimuli should be effective.

Subtest 5

- A. 1. Understanding learning theories is essential for the therapist so that she can put them into an _____
p. 47
therapy plan or model.
2. _____
p. 48
is the term used when the therapist gives the case directions or presents a model of the desired behavior.
3. The possible things that could go wrong when the therapist presents materials and/or directions are that they may be
1. _____, 2. _____ 3. _____
p. 50 p. 50 p. 50

Mediation - M = As the stimulus is presented we expect that the case will look at and listen to the therapist.
We expect that the case will be motivated to

attend to the stimulus. Following attention we hope that the client will analyze the stimulus, understand it and be motivated to make a response.

Response - R = The case may make several types of responses; (1) the response may be exactly what we expected or a correct response. For example, a lisper (who usually substitutes the /th/ sound for /s/ in the word "sun" and says "thun") may after a stimulus produce the sound or word correctly and say "sun". (2) the case may produce an incorrect response, (in this case the youngster might produce the word "thun" rather "sun"), (3) the case might begin to explore sound productions and in attempting to produce the correct sound he might produce a sound which is between the /th/ sound and /s/ or a distortion. This would be better than the totally incorrect sound and we might call this type of response a shaping response. It's not perfect yet, but it is getting better, (4) it's possible that the case also might make no response.

So, as you observe these moments in therapy which are concerned with the responses which cases make, you will be able to classify

them in one of these four areas:

- Correct
- Incorrect
- Shaping
- No response

Subtest 5

- B. 4. The client's "thinking" about an appropriate response to the therapist's directions, prior to eliciting that response is called _____.
p. 51
5. The four possible kinds of responses a case can make are:
- | | |
|-------------------|-------------------|
| 1. _____
p. 53 | 2. _____
p. 53 |
| 3. _____
p. 53 | 4. _____
p. 53 |
6. A response which is not totally correct nor incorrect is termed a _____ response.
p. 52

Contingency - C = When contingency or pay offs are used, they follow the response in an attempt to encourage or discourage this behavior. As you begin to interpret and understand therapy there are four aspects of contingencies that you will want to know about.

The first aspect is concerned with the type of contingency used. If the right response has

happened and you wish to encourage that response a reward should follow. If the wrong response occurs and you wish to discourage it you may choose to punish the case or ignore that response.

The second aspect is concerned with two characteristics. Contingencies must first be noticed by the client, and second, they must be meaningful. As you observe therapy you may see that contingencies are present, but the client does not even notice them. The therapist may say "Good For You" but the hyperactive child may not even notice it in his flurry of activity. Now, let's consider another case in which a contingency is presented and noticed but lacks effectiveness because it is not meaningful or valued by the case. A small child may have engaged in the right response, the therapist subsequently rewarded the behavior, the child noticed the reward but it may have been only verbal and lacked value for him. An effective reward might have been something good to eat or a hug. So, real problems can occur in the contingency area if the contingency goes unnoticed or is not valued by the case.

Subtest 5

- C. 7. A _____ follows the response and will encourage or discourage the client's behavior.
p. 53
8. A correct response is followed by some type of _____ given by the therapist to increase the occurrence of that response.
p. 54
9. Immature and incorrect responses should be _____ or _____ by the therapist so that they will not occur again.
p. 54
10. The therapist's rewards must be _____ and _____ by the client.
p. 54

The third aspect is the frequency with which a contingency is presented. Constant reinforcement occurs if every response is followed by contingency. This is effective to initially strengthen a response pattern. However, continued, constant praise may extinguish the desired response pattern.

So, it is important that the therapist shift from constant reinforcement to partial reinforcement schedules as soon as possible. You will also want to watch the therapy sessions very carefully for a lack of reinforcement. If the therapist provides no encouragement for the case, don't be surprised if the pattern of correct responses drops off. Also, it is important for you to know that the operant conditioners feel punishment should be used sparingly and that reward is the more effective contingency. If punishments are used

constantly it would be difficult for the case to maintain motivation.

The fourth aspect is concerned with timing of the contingency. If there is a long delay in time between the correct response and the contingency the therapist will risk the possibility that the case may not see the relationship between the correct response and the contingency.

As you can see, there are many, many things to look for as you begin to try to understand what happens in therapy, what makes it good, and what happens to effective therapy when it breaks down. It will help you in your beginning observations of therapy sessions if you can spot the various stimuli, mediation, responses and contingencies and then understand the relationships between them that create effective or ineffective therapy.

Putting It All Together

You will recall in Step 2 we selected critical symptoms that were parts of the problem. In Step 3 we measured the symptoms and the group of symptoms composed the condition of the case; all this was completed before we attempted to make the changes as a result of therapy. It may help you at this point if we could observe one of those symptoms as it progresses through the complete sequence.

Imagine that the therapist has diagnosed (Step 1) an eight-year-old youngster and collected many symptoms indicating that he has a lisp. In Step 2 specific critical symptoms were pulled from the diagnostic information. Two examples were the number of correct and lisped "s" sounds in (a) the cases conversational speech and (b) "s" sounds when the case said them along. In Step 3 the therapist measured the lisp and indicated that this youngster substitutes the "th" sound for the "s" sound all the time in conversational speech. That is, he never produced the "s" sound correctly when she listened to him during conversation. The other baseline measurement indicated that he was unable to produce the correct "s" sound alone, ("sssss"), even after the therapist produced the correct "s" sound first. So, we begin therapy with a youngster who was unable to produce the "s" sound correctly in any situaioon. We will progress through the sequence with this symptom and its measurements.

In Step 4 we set this symptom aside as we begin to understand all of the implications from the learning theorists for our therapy.

As we progress to Step 5, which is planning the applied therapy model using the SMRC plan, it is possible for us to consider specific suggestions so that we will have a plan of attack for therapy.

the relationship between the two.

13. When planning therapy using the SMRC model, the therapist must be aware of the _____ which is the payoff for this case. p. 58

Client's Mediation - What to Look For

As the therapist presents the stimulus you will want to make sure that the case is motivated to look at and listen to (mediation) the stimulus and subsequently analyze it or think about it. Breakdowns in any of these areas may contribute to incorrect responses.

Therapists Poor Contingencies - What To Look For

Response patterns may also be related to problems in contingencies. Too much punishment may discourage the case, in that the case does not perceive them as being rewards. Rewards which occur too late may be a problem. If reward patterns are present, but they are too frequent they may extinguish the correct response pattern. It's a good idea to shift to a partial or a "once in awhile" reinforcement pattern when the correct response or the "s"'s are produced fairly consistently. It's probably better to ignore incorrect productions ("thun, thoup,' etc.) rather than punish them.

Now we are equipped with the suggestions from the learning theorists. We have isolated and measured the problem and are now ready for the next step.

STEP 6 PLAN THERAPY SEQUENCE

Although there are many different types of therapy and strategies, the following system is fairly traditional and will serve to illustrate various steps in therapy. You will see illustrations of the lisper throughout the sequence.

Discrimination Training - First it is important for the case to understand the difference between the correct sound "s" and the incorrect sound "th" when the therapist produces these sounds all alone and in the beginning position of words. The following therapy sequence might take place.

Therapist: I'm going to say some sounds. You tell me when I say "s" and you tell me when I say "th".

Ready? (Stimulus)

Case: Yeth. (Response)

Therapist: s,s,s,s,s,s,s,s,s,s,s. (Stimulus)

Case: thhhh. (Response)

At this point it's difficult to tell whether the youngster is making the correct discrimination. The therapist can't tell because the case can't make the correct "s" sound as he answers. The stimulus directions may not be clear. Here's a better technique.

Therapist: (Using colored sticks - one green, one red)
I'm going to say some sounds, and when I say

s,s,s,s,s,s (therapist holds red stick near her mouth) you hold up this stick. (Therapist removes red stick and holds green stick). When I say thhh (therapist holds a green stick near her mouth) you hold up this stick. Now remember this stick stands for the s,s,s,s and this stick for the thhhh. Let's try it now. (Therapist gives the red stick to the case and puts it in his left hand and holds his left hand with hers) This one stands for s,s,s,s,s (therapist raises his left hand and the stick) (Therapist puts the green stick in his right hand). Now remember this one stands for th,th,th,th. Now let's try it. Do you think you are ready? (Stimulus)

Case: Yeth. (Response)

Therapist: s,s,s,s,s,s (Stimulus)

Case: (Case raises red stick.) (Response)

Therapist: Good for you. (Contingency) Now try this one, th, th, th. (Stimulus)

Case: (Case raises green stick). (Response)

Therapist: Very good. (Contingency)

As you can see the therapist took no chances in terms of presenting the stimuli in a clear and organized fashion. The stimulus package was very carefully planned and rehearsed. These stimuli were

apparently focused on and thought through by the case (mediation) and he was motivated to make correct responses.

In the event that the case's attention wandered, it would have been valuable for the therapist to notice this, and simplify the stimulus or make it more interesting.

These procedures for this step in therapy would continue until the child became proficient in discriminating between the correct and incorrect sound when it was produced in isolation. The therapist would then move to productions of the correct and incorrect sounds in words ("sun, thun"). When the child demonstrated that he was able to discriminate effectively, the therapist could move on to the next step.

Confrontation - At this point we know that the child is able to tell the difference between the correct and incorrect sound when someone else says it. However, he still is unaware of his own error. He doesn't know he lisps. The purpose of this step is to provide him with feedback so that he will realize he is making an error. In this situation we can provide visual confrontation with a mirror. The case and therapist might watch together in a mirror and the therapist could quickly review the discrimination training. The confrontation sequence might go like this.

Therapist: Now watch very carefully while I make this word, "thun". Now watch yourself in the mirror and look very carefully. Make sure your tongue

comes out just like mine did and you make it.
(Stimulus).

Case: "thun". (Response - correct)

Therapist: Good, that was the same as mine. Now watch and let's make the word this way, "sun". (Stimulus)

Case: (As he is looking in the mirror at his mouth)
"thun". Opth, I made it different. (Response - insight)

Again the therapist has presented stimuli and directions which were clear and understandable. The case attended to these directions, he understood them and carried them out. Subsequently, the case made the critical error response, "thun", produced the lisp in the mirror, and was able to make the important insight that he was actually making the incorrect sound ("th") in the word. It's important for you as an observer to realize that there are some times when people do not succeed to making their confrontations. This is because of the early part of the mediational aspect; and because the case may not be looking in the mirror at his mouth during the time he is making the error production.

When confrontation is successful, however, the case knows that he is making an error. This critical perception results in an uncomfortable feeling within the case because he wanted to make the sound correctly. He is then motivated to search out a type of articulation behavior that's more appropriate or very simply, the

correct "s" sound.

Subtest 6A

Plan Therapy Sequence

1. When the articulation case understands the difference between a correct sound and an incorrect sound, he is learning to _____.
p. 60
2. To make the articulation case aware of his errors, _____
p. 62 should be provided to aid in confrontation.
3. When confrontation is successful, the case is _____ to
p. 63 change his behavior.

Searching - During this step in therapy the patient with or without help from the therapist searches out the correct response.

Case: (As he looks in the mirror at his mouth)

"Thun", no thath not right. Thun, thun.

Now the case is attempting to make the correct response but is unable to, and may get frustrated if he continues to make this error response. The therapist should intervene and help him search for the new response.

Therapist: Watch me again in the mirror. Be sure to put your teeth together like this (she demonstrates).

Now your tongue won't come out. Try it.

(Stimulus)

Case: "Shun", "Shun". (Response - searching)

Therapist: That's much better. (Contingency - reward)

At this point the child has engaged in searching behavior which has resulted in the "shaping" response that we discussed earlier. The therapist subsequently rewarded this because it is an improvement over the totally incorrect response. She continues to help the case search.

Therapist: That's very close. Now relax your lips and keep your teeth together while making "sun".
(Stimulus)

Case: "Shun, Sun, Sun, Sun." (Case brightens up).
Thath it!

It is important to realize that the contingency has been supplied by the case himself. Also note that the therapist has selected some stimuli which, as a stimulus package, evoked a correct response. Now the case is ready for the next step.

Stabilization - Although the case has produced "sun" correctly, this new response is very weak and unstable. The purpose of this next step in therapy is to strengthen this weak, new, correct response, and make it more reliable. Although you and I are accustomed to "making "th" thoundth correctly, the cath ith not, and it feelth ath unusual for him to make the correct "s" thoundth ath it doeth for uth to make the incorrect thoundth." Now read this back silently to yourself only mouthing the sounds. You'll get an idea of how unnatural it feels for the case to make the correct sound. Here is what happens in therapy.

Therapist: Now, let's see how fast you can say these nonsense syllables and keep saying that good "s" sound. Let's see how many "so,so,so" nonsense syllables you can say in 15 seconds. Ready, set, go. (Stimulus)

Case: So,so,so,so,tho,tho,so,so,so,tho, oph.
(Response - error)

The therapist realized that the case is trying to produce these sounds too rapidly because of the error response pattern and so she made an adjustment in the therapy.

Therapist: Some of the sounds are coming out pretty well, but there are some "th"'s in there, too. Why don't you slow down just a little bit. (Stimulus)

Case: Okay. (Response)

Therapist: Ready, set, go. (Stimulus)

Case: So,so,so,so, etc. (Response - correct)

When the case is able to produce these similar nonsense syllables rapidly with reliable "s" productions, she may choose to make the task more complicated and have the case produce the "s" sounds in mixed nonsense syllables. (see, so, saw) very slowly at first and then increase the speed. Here's a therapy sequence that has a problem in it. See if you can spot the problem.

Therapist: Now, we'll do "see, so, saw" and let's go real fast.

Case: See, tho, tha, se, tho, the, tho, the, tho.

Therapist: No, no. That's not right. Try to get it right this time.

Case: So, the, sa, tho, tha, the.

Therapist: That's not right. What's the matter?

If you guessed that the stimulus demand was too complicated for the case, you're probably right. He should be saying two mixed nonsense syllables fairly slowly. Also, the therapist made it even worse by punishing him for error responses. The first set of error responses should have been a signal to her that something was wrong, and that she should search out the cause of the problem.

When this youngster has completed the stabilization step he would be able to produce the correct "s" sound reliably in rapid repetitions of three or four mixed nonsense syllables. Then assume that the possibility of the correct "s" sound holding up in simple levels of regular speech would be good. This allows us to progress to the last step.

Generalization - The purpose of the generalization step is to create a bridge between the rapid repetitions of nonsense syllables and correct productions of the "s" sound in conversational speech. Typically, this is accomplished by creating a step by step hierarchy from situations in which it is easy to produce the "s" sound to

situations at the conversational level in which it is difficult to produce the "s" sound. This is often called "carry over" therapy. The hierarchy frequently consists of productions of the correct "s" sound in phrases, sentences, reading, and finally, in conversation. As the case becomes successful in productions of the "s" sound at the lower levels, he "qualifies" for the next step in therapy. When the youngster is able to produce the correct "s" sound consistently in all conversational situations, including home and classroom, he is usually dismissed from active therapy and rechecked later. Here's an example of the parent counseling that would take place near the end of therapy, just before dismissal. See if you can locate a problem.

Therapist: (to the mother and father) Although Jimmy has done well in therapy, the therapy is far from complete now, and I'm sure that he will not be able to do well if you don't help at home. However, he needs to be reminded frequently to produce his "s" sound correctly at home and often parents forget to do this. I hope this doesn't happen in your situation.

Certainly, the stimulus is presented clearly. The parents are focusing, attending and certainly understanding exactly what the therapist is saying. Here, the problem exists in the negative attitude of the therapist. This stimulus also has some elements of

punishment or contingency in it and would certainly turn the parents off. Here is another way the therapist could have handled this situation.

Therapist: I'm really glad that both of you were able to take time out to visit with me today. We are at an exciting point in therapy now, and are just about ready to dismiss Jimmy. We have all worked very hard and should be proud of our progress. After we dismiss Jimmy you'll be in charge of helping him monitor for correct productions of the "s" sound at home. A few helpful reminders now and then will probably be all that he will need.

As you can see, the attitude of the therapist has changed from negative to very enthusiastic and positive.

Now, you have been able to see the diagnostic therapy sequence for one case. We pulled out the critical lisp symptoms, created baseline measurements for them, planned the therapy model and planned the actual therapy sequence. The dramatizations which you just read in the therapy sequence would be similar to what the therapist would go through in terms of planning for the therapy.

At this point we can assume that the therapist is well informed in terms of all of the steps in therapy and how she will implement

them in terms of the learning theory notions. The next step then is the actual therapy.

Subtest 6B

4. When the client "shapes" his responses, he has engaged in _____ behavior.
p. 64
5. The purpose of the stabilization step in therapy are to strengthen the _____ and make it more _____.
p. 65 p. 65
6. The therapist should avoid making the _____
p. 67 too complicated for the case.
7. The generalization phase of therapy is sometimes called _____.
p. 68

STEP 7 DO THERAPY

In this stage of the rehabilitation sequence the therapist actually performs the therapy. It's important for her to keep all of the previous notions in mind and follow the therapy plan in Step 6. It may seem to you that there might be little in the way of creativity in therapy, if so much of therapy is "programmed". Actually, the opposite is true. The more we understand about therapy in terms of specific events the more we are freed from the mundane or routine aspects of therapy, and the more time we have to consider and become sensitive to the individual aspects of the case.

Subtest 7

1. To understand and do good therapy, the therapist must become _____.

p. 70

STEP 8 EVALUATION OF THERAPY

As we noted in the confrontation step (6), the case might make error performances (say "thun") and not be aware of it. The same is true of therapists. Very often therapists engage in error performances and have moments of inefficient or ineffective therapy. If we are unaware of client error response patterns it is impossible to make improvements. For this reason we usually record some of the sessions on audio or video tape and replay them. During these replays the therapists evaluate the sessions and compare their actual results of what they see and hear on tape with what they expected to see and hear. Eventually, therapists can recognize problems as they occur and solve them during therapy.

Subtest 8

1. To evaluate therapy, we would be expected to _____.

p. 71

APPENDIX B

Dependent Variable Test Form

Type of Case: Ten year old girl - articulation problem with a lisp.

Baseline Information (Cases starting point): Case is able to tell the difference between words which contain an "s" sound and words which do not contain an "s" sound (Example; sun and rabbit)

Long-range Goals: Improve articulation skills.

1. What seemed to be the specific goal or objective of the therapy session?
2. Was this objective successfully met? Yes No (Circle One)
3. One teaching technique successfully used by the therapist was:
4. One teaching technique unsuccessfully used by the therapist was:
5. Did the client usually understand what the therapist said?
Yes No (Circle One)
6. List 3 contingencies (reward, punish, ignore, etc.) the therapist used to acknowledge the client's responses.

7. Did the therapist usually respond to the client's accomplishments?
Yes No (Circle One)

8. What 2 goals would you suggest for the next session?

APPENDIX C

Instructions

Instructions Before Stimulus Materials

This is a research project in speech pathology. First, I will give you some materials to read. They contain information about what students need to watch for when observing speech therapy. Please read the material carefully, all the way through. After various sections within the material, there will be subtests for you to complete. Answer the questions carefully, based on the information you have read. Upon completing the first subtest on page 3 and the additional subtests thereafter, raise your hand and the monitor or I will check your answers. If any are incorrect, you must go back to the page listed beneath the blank space and re-read to find the answer you need. Hopefully, you will be able to answer correctly the second time. If not, the monitor or I will write in the correct answer and you may continue to the next section. Please list all of your answers on the answer sheet provided. It is clearly marked to coincide with the reading materials. Do not make any marks on the reading materials themselves.

Afterwards, you will view and evaluate one segment of a therapy session on the videotape. I will explain more about this later.

Are there any questions? If not, you may begin as soon as you get your papers. (Pass out answer sheet and stimulus materials)

Instructions Before Dependent Variable

You will be looking at a videotaped segment of a speech therapy session. I will tell you information about the case and her speech problem. You will see the videotape two times; the first time I want you to watch for the main ideas in the therapy session. The second time, look for the details that will help you fill out the evaluation sheet. (Pass out D. V. sheet)

Please put your name at the top. I am not interested in how well you do, but, I need to know who has participated. The scores will be averaged as a group not individually.

Now take a minute and read the evaluation sheet before I run the videotape for the first time. I will answer any questions. (They read; time: 60 seconds) Don't forget your name.

On the right side of the screen, you will see the speech therapist. On the left side of the screen is the case; a 10-year-old girl. Note at the top of your sheet the baseline information is that. . .and that the long range goal is to improve articulation skills. (Run tape).

Now re-read your evaluation sheet before I run the tape for the second time. (They read; time: 60 seconds) You may take notes during this second viewing. (Run tape again).

Now complete the evaluation sheet. When you have answered all the questions, turn your paper over and wait for the others to finish. (Collect D. V. sheet).

Debriefing

You have taken part in a research project designed to determine if students learn to observe speech therapy more effectively by first reading pertinent information. Please do not tell any of your friends about this experiment, because they, too, may be participating in it.

Are there any questions? Are there any parts of the experiment that concerned or confused you?

Thank you for your time. You are dismissed.

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