

MODULE 7: CLASSROOM MANAGEMENT
(Behavior Analysis and Modification)

INTRODUCTION

Every teacher has her own style of managing the organization and conduct within her classroom. Yet each year thousands of teachers seek advice on how to handle behavioral problems of their students. Teaching children in a classroom today probably demands more diversified skills than ever before, not the least of which is effective behavioral management. This module is primarily concerned with the most modern techniques of classroom management: Behavior Analysis and Behavior Modification.

WHAT ARE BEHAVIOR ANALYSIS AND BEHAVIOR MODIFICATION?

These terms sound intimidating but they involve the simple observation that people learn their behavior and that behavior is usually learned from other people. The principles of behavior modification are based on "social learning theory"--the study of how behavior is learned and how it may be changed most effectively. When people learn, they change. When a child whose disruptive behavior has interfered with his studies learns to sit quietly and listen, he has changed. Two of society's most important functions--child rearing and education--are devoted to changing learners. Behavior analysis and behavior modification are simply carefully researched techniques for changing behavior constructively and efficiently along lines that will lead to improved learning and social experience for the individual child and improved organization for the whole classroom.

HOW ARE THESE TECHNIQUES DIFFERENT FROM OTHER CLASSROOM MANAGEMENT?

Most traditional behavior management techniques have proven to be somewhat inefficient as numbers of students in the classroom have increased, rendering the



teacher's attention to classroom management sporadic and inconsistent. We have all seen teachers practically driven out of the classroom by "lively", disruptive students. Many teachers complain that they spend half their time creating sufficient quiet and attention to allow for some (even a little) teaching. The old fashioned and time-consuming techniques of punishing and lecturing for misbehavior thus have not proven entirely satisfactory in recent years.

Behavior analysis and modification techniques are not new or entirely different from the traditional methods. They are merely a condensed and systematized form of the most workable techniques for humane classroom control, many of which have been in use in the classroom for years. These techniques have been observed, defined and refined in experimental work and then brought back to the classroom in step-by-step form.

Behavior Analysis involves three basic steps:

- 1) Defining what behavior is maladaptive, that is, what behavior should be increased or decreased in a child (The target behavior).
- 2) Pinpointing what events or contingencies in the classroom environment currently support the student's behavior (either to inadvertently maintain the undesirable behavior or to reduce the likelihood of his performing a more adaptive response.)
- 3) Identifying what environmental changes, usually reinforcing event, may be manipulated to change the student's behavior in the desired direction.

Behavior Modification then picks up where behavior analysis leaves off. It involves putting the identified environmental changes into effect through the use of a series of specific behavioral management techniques described in this module:

- 1) Getting the new (desired) behavior started.
- 2) Reinforcing the new behavior.
- 3) Using contingency contracting to record and maintain behavior change.

Some of these techniques will be familiar, others may be new. The most important thing to remember is that behavior analysis and modification is a complete system that cannot be expected to work successfully if it is learned and implemented half-heartedly or only partially. Like any new system, behavior modification will be somewhat time-consuming to learn, but is designed to save the teacher much valuable time in the long run and to help her total classroom organization, as well as improve the quality of the learning experience for her students. Thus, it is important to make the initial investment of time and energy to master the new concepts and techniques thoroughly before giving up. You will reap the benefits in a much shorter time than you might expect. It is also important to learn and use all the techniques in their proper relationship rather than adapting only part of them; to work properly, they must all be used together.

WHAT ARE THE GOALS OF THIS MODULE?

To provide the teacher with an introduction to the concepts and techniques of behavior analysis and behavior modification, as adapted for use in the regular classroom or the special classroom.

To make a teacher aware of the consistent, efficient behavior modification techniques already in her repertoire, and also of the inconsistencies and inefficiencies in the way she responds to her students' behavior.

To help the teacher pinpoint and define a specific "target" behavior well enough that she can also trace its original causes or "catalysts" and count the frequency of its occurrence.

To clarify the new concepts of "reinforcement" and to develop the teacher's skill in getting the desired behaviors started and shaping them into constructive form through the efficient use of reward or "reinforcers".

To teach quick, efficient methods of keeping records and maintaining desired behaviors through contingency contracting.

To increase the teacher's awareness of the general applicability of behavior modification techniques in education.

WHAT DOES MODULE 7 INCLUDE?

- 1) A list of assigned activities, page 5
- 2) Selections from Behavior Analysis and Modification Course:
 - A. Introduction, page 7
 - B. Behavior Analysis and the Classroom, page 9
 - C. The Role of Reinforcement in Learning, page 23
 - D. Putting the Parts Together: Recording and Reinforcing, page 47
 - E. Behavior Modification in the Classroom: How to Use Contingency Contracting, page 64
- 3) Attitudes Toward Special Children: How to Build Acceptance, page 82
- 4) Bibliography, page 86

MODULE 7

PRE-TEST

1. Most teachers have found that formal contingency contracting is most useful with:
 - (a) preschool age pupils
 - (b) elementary age pupils
 - (c) junior high and high school age students
 - (d) all of the above

2. Most uses of contingency contracting will have to do with:
 - (a) social behavior in school
 - (b) homework outside of school
 - (c) academic work done in school
 - (d) none of the above

3. In addition to having to be clearly specified so that it can be directly observed, behavior to be measured should be:
 - (a) important to learning
 - (b) based on the Premack Principle
 - (c) negative in nature
 - (d) complex

4. The amount of time taken to finish lunch on a particular day is an example of the _____ method.
 - (a) Interval
 - (b) Frequency
 - (c) Duration
 - (d) Intensity

5. Check the student behaviors which can be recorded accurately. The student
- (a) types while the teacher is giving instructions
 - (b) completes at least 90 percent of written assignments
 - (c) misbehaves on the playground during recess
 - (d) leaves his seat without permission
 - (e) scores a minimum of 80 on each spelling test

MODULE 7

PRE-TEST

KEY

1. C
2. C
3. A
4. C
5. a, b, d, e

1) ACTIVITIES FOR MODULE 7

- 1) Read the enclosed material on behavior analysis and modification. It includes an introduction which should give you an idea of what to expect from the reading.
- 2) See the film Glasser on Discipline (approximately 30 minutes). This film presents the ideas of William Glasser (author of Schools Without Failure) on classroom organization and management. While it does not deal specifically with the contingency contracting discussed in Activity #1, it uses many of the same concepts and provides suggestions for developing systems much like contingency contracting in your classroom.
- 3) Read the enclosed material on management and development of attitudes toward special children.
- 4) Practice in Behavior Modification techniques:
 - a) Using "Status Report," page 13 , "Specifying Target Behaviors," page 47 ; and "Increasing Social Reinforcement," page 54 state in writing one or more specific classroom behaviors you would like to change. We recommend you choose only one very simple one to begin, to keep time consumption to a minimum and to yield clear results in a limited time.
 - b) Write one page detailing a plan for changing the target behavior, the change desired, method of recording behavior, reinforcement (or punishment) to be used, schedule of reinforcement, estimated time required for achieving noticeable change (if possible).
 - c) Schedule a conference with your instructor to review your plan or to request help in developing a plan.
 - d) Implement the plan in your classroom with one child. Keep daily records called for and hold to your schedule of reinforcement.

- e) At the end of the target period set, review your records and evaluate your success.
- f) Write a summary of your activities.

2) BEHAVIOR ANALYSIS AND MODIFICATION

A) INTRODUCTION

The material on behavior analysis on pages 9 through 81 was excerpted, with permission, from the prototype version of CLAIM - Classroom and Instructional Management: A Teacher Training Program in Behavior Analysis, copyright c 1975, CEMREL, Inc. CLAIM is the result of six years research, development, field testing and feedback from over 100 classroom teachers. It was developed by the Instructional Systems Program of CEMREL, Inc., a national educational laboratory in St. Louis, under the direction of David R. Buckholdt with Daniel E. Ferritor, Howard N. Sloane and Kathryn S. Rogers. The final revised CLAIM program consists of the 260-page "Participant's Book," four filmstrips and tape cassettes, and a "Coordinator's Book" and is available from the publisher, Walker Educational Book Corporation, 720 Fifth Avenue, New York, New York 10019.

This introduction to behavior analysis and modification is designed to present the concepts of these modern classroom management techniques, to present and clarify basic terms, and to teach the techniques of behavior modification relevant to classroom management. As you read, you will find several comprehension checks. These are entirely for self-evaluation; fill them in as a means of verifying your grasp of the concepts presented to that point and for practice in recording. You will also find numerous suggestions for classroom activities or projects. It is not required that you do these as you read them, but it is suggested that you think about them as you go along. This process may help you in completing the assigned activities when you have completed the readings.

The activities for this module, described on page 5, require that you use the following chapters to help you choose one child in your classroom whose behavior you wish to modify, define a target behavior to change and, using the

techniques described in this module, implement a plan for modifying that target behavior. Read all of the following chapters carefully before attempting to plan and implement your behavior modification program.

B) BEHAVIOR ANALYSIS AND THE CLASSROOM

Behavior analysis and modification were developed in research laboratories, but their design is for use in everyday living. How does the teacher take such techniques from the theoretical discussion to the day-by-day planning for her classroom? Let us consider some classroom problems that illustrate the use of behavior analysis and modification techniques.

A teacher who worked in our CEMREL Lab School several years ago was asked to work with children who displayed extreme behavioral problems which most teachers see only in a much milder form. She was an experienced special education teacher who was responsible for our experimental school for pre-school aged children. The children were all highly aggressive and uncooperative. They had been enrolled in this school as a last effort; no other agency had been able to change them. The following blow-by-blow account describes a typical scene in the classroom early in the school year:

Mike, John, and Dan are seated together playing with pieces of Playdoh. Barry, some distance from the others, is seated and also is playing with Playdoh. The children, except Barry, are talking to each other about what they are making. The teacher turns toward the children and says, "It's time for a lesson. Put your Playdoh away." Mike says, "Not me." Dan says, "Not me." The teacher moves toward Mike. Mike throws his Playdoh in the teacher's face. She jerks back, then moves rapidly and snatches Playdoh from Mike. She puts the Playdoh in her pocket. Mike screams for Playdoh, says he wants to play with it. Mike moves toward the teacher and attempts to snatch the Playdoh from her pocket. She pushes him away. Mike kicks her on the leg; kicks her again, and demands the return

of his Playdoh, kicks her again; picks up a steel chair and throws it at her. She jumps out of the way. Mike picks up another chair and throws it more violently. The teacher cannot move in time and the chair strikes her foot. The teacher pushes Mike down on the floor. Mike starts up, pulls over one chair, then another, another; stops a moment. The teacher is picking up chairs, Mike looks at her. She moves toward Mike. Mike runs away. John wants his Playdoh. The teacher says, "no." John joins Mike in pulling over chairs and attempts to grab Playdoh from the teacher's pocket; she pushes him away roughly. John is screaming that he wants to play with his Playdoh, moves toward gramophone, pulls it off the table and lets it crash onto the floor. Mike has his coat on, says he is going home. The teacher asks Dan to bolt the door. Dan gets to the door at the same time as Mike. Mike hits Dan in the face. Dan's nose is bleeding. The teacher walks over to Dan, turns to the others and says that she is taking Dan to the washroom and while she is away, they may play with the Playdoh. Returns Playdoh from pocket to Mike and John.

What could the teacher have done with these boys? Punish them? She tried scolding, shaking, and even spanking them, but the boys only became more aggressive. Give them more freedom for inquiry and less supervised instruction? The children were in control of the classroom, not the teacher. The teacher needed more freedom to act, not the children. Talk with them, counsel them, and set rules for them? The teacher tried, but these tactics had no effect on the children's behavior. Consult with the parents and learn about their family and cultural backgrounds? This inquiry lead only to the already well-known fact that these children were highly aggressive. What else could the teacher do? She had

supplied them with interesting materials and well-planned lessons, set rules for them, punished them, counseled them, and consulted with their parents. In addition, the boys had all been receiving professional help for their aggressive behaviors. The teacher had tried all the generally recommended strategies of managing a classroom and teaching that she knew. Had she not met her responsibility to her children and to herself? What else could she possibly have done?

Actually, she did do more, more than she ever imagined possible with such problem children. We will return to this teacher's story shortly for a description of the procedures that succeeded for her, scientific procedures which have general application for solving many types of classroom learning and behavioral problems.

These procedures are applicable for other classes, also. Many teachers (unfortunately) have had experiences with unruly fourth or fifth graders. Consider the following class. It is typical of many.

The teacher asks the children to begin their work in groups for social studies. At least 10 children make "do we have to" noises, but most of the children move towards their pre-assigned work areas in groups of three. Matt and Robert and John have their straws in hand and Matt shoots two pieces of rice through his straw at Joy. Joy yells and says "Quit it" to Matt and grabs Terri and tells her what Matt did. Terri looks concerned and pulls Joy to standing and both go find the teacher and tell her what happened. Matt puts straw away but keeps rice ready in hand. Meanwhile John and Robert are hard at it blowing rice at each other. Robert has hollow pen to blow through and rice is all over floor. Teacher approaches and takes straws and pen from boys and tells them no more teasing. Terri is back

in her seat, she leans back in her chair and falls over with a loud bang, laughs, picks up her chair. Joy screams with laughter. David on opposite side of room shoots rice through straw at Joy, she gives him a dirty look, calls teacher. Teacher is busy separating desks of Judy and Nancy who play incessantly and haven't done any work. Teacher approaches Joy carrying Judy's desk followed by Judy. Joy says it isn't fair to separate friends and teacher says it is too. Joy says it is "mean" and teacher says, "We'll talk about it after school." Joy says it is fine with her and then she tells teacher David is hitting her with rice.

Teacher sits on desk in middle of room and says "Alright" in loud voice. The noise subsides slightly. Teacher continues, "If you don't want to do this work you can sit and read a book." Children look up expectantly, they are quieter, Teacher continues, "But you must write a long book report on your reading." Children shout, "That's no choice, we don't want to do anything, we won't! That's not fair." Teacher, "Okay, then be quiet and do social studies." David draws "war" pictures, Mike drums his hands loudly on a book, Ron has scuffle with Bruce and both knock over waste basket loudly disclaiming responsibility. Three girls ask for a lavatory pass and Julie asks to use phone to call her mother as she has a sore throat. Matt and John are spitting rice at Robert who is getting rice from floor and throwing it at them.

Many classes such as this have been helped by the systematic use of behavior analysis procedures. What can be done in your class? Whether it is similar to the above class, better, or worse, let's take a look at it! Time for a status report.

STATUS REPORT

On the status report which follows, there are several things for you to fill out to help you assess your class. In the column headed "Behaviors" list the five things students do which you find most disruptive, annoying or unproductive. In the second section of this column, list the five things students do not do about which you feel most strongly. Be very specific--describe the behaviors objectively and concretely.

In the next column you must make an estimate of how general these problems are. Is this typical of all students? Is it typical of just a few? If the latter, write down their actual names. Remember, disruptive behavior by even one or two children can upset an entire classroom.

In the next column you are asked to judge the frequency of the problem. Does it occur (or is it absent when you desire it) once a week, once a day, three times a day, once an hour, every 10 minutes? Make an estimate, and write it in this column.

In the next column ("Original Cause") give your best guess as to how or why this problem originally started. In the column after that ("Maintenance") indicate what you think is currently keeping it going in your classroom.

The final column says "I . . ." From the list below, fill in the number or numbers which best fit each problem.

1. I want to change behavior.
2. I know how to change this behavior right now.
3. I should be able to change this behavior.
4. I will change this behavior before the school year ends.
5. Other (write it in).

S T A T U S

This is for your use only.

BEHAVIORS	WHO ACTUALLY DOES NOT ENGAGE IN THIS BEHAVIOR?	FREQUENCY
Five things students do I wish they would not do.	Who engages in this behavior?	How often does it occur?
Five things students don't do I wish they would do.	Who does not engage in this behavior?	

R E P O R T

Fill it out accurately for greatest benefits.

ORIGINAL CAUSE	MAINTENANCE	I

Status Report Critique

This sheet is to help you assess how useful your status report is, and to make changes which may increase its helpfulness.

1. Behaviors. Give yourself credit for each behavior which is listed completely descriptively. If it refers to a judgment or evaluation ("good," "bad," "poor") or to something subjective or mental which you must judge but cannot see directly ("doesn't want to," "desires to," "not eager," "over enthusiastic") do not give yourself a point. Rewrite unsatisfactory items. The goal is to help you describe what is actually happening in a factual way.
2. Who? Again, you should be specific, and have several listed by name.
3. How often? Give credit only for those which list a number, and a unit of time, such as "three times a day." Do not give credit for unspecified estimates, such as "often" or "rarely" or "daily." This will give you some idea of what you are coping with, and what you can shoot for.
4. Original cause. This is usually impossible to judge. Perhaps you should get more credit if you wrote "I don't know" or the equivalent, than for giving a cause. In some cases, of course, you may be able to make a good educated guess. Do you think knowing these original causes will help you much in the classroom?
5. Maintenance. Sorry, you only get credit where you have listed:
 - a. Something you do in class.
 - b. Something other students do in class.
 - c. Something to do with materials or equipment used in class.No credit for maintaining events which are out of class, or for mental states or subjective factors. No credit for neurological causes

or diseases, or vague references to learning disorders or other diagnostic labels. Most of these are guesses, none of them directly cause a specific behavior. This means you do not get credit for listing things such as "anxiety," "poor self image," "emotional disorder or neurosis," "retardation," "minimal brain dysfunction," "learning disability" and similar factors. You also do not get credit for "out of class" factors such as "family" or "socio-economic status." Sorry.

6. I . . . You evaluate this. It will give you some idea of what you want to do.

An example may help you to evaluate your status report. Look at the report prepared by a second grade teacher on the following page.

STATUS REPORT

This is for your use only. Fill it out accurately for greatest benefits.

Behaviors	Who actually does or does not engage in this behavior?	Frequency	Original Cause	Maintenance	I . . .
Five things students do I wish they would not do.	Who engages in this behavior?	How often does it occur?			
<ol style="list-style-type: none"> 1. Fight, especially during recess and lunch 2. Talk while teacher is giving directions 3. Copy answers from neighbor's paper 4. Throw things at one another in the classroom. 5. Call out answers before teacher can choose someone to answer. 	<ol style="list-style-type: none"> 1. Jim, Fred, John, Eric and Nancy 2. Almost all of the children 3. Tina, Judy, Fred and Shelley 4. Tony, John, Eric and Wade 5. Most of the children engage in this behavior 	<ol style="list-style-type: none"> 1. Average of 5 fights/day 2. 5 - 10 children are talking 3. Look 4-8 times/hour 4. 20-25 times per day 5. 50% of time teacher 	<p>I really don't know how these things got started, I would only be guessing and guesses are not much help to me in the classroom.</p>	<ol style="list-style-type: none"> 1. Other children give attention to fights and so do I. 2. I think they do it because it makes me so mad. 3. Don't know. 4. Attention getting 5. Attention getting & effort to win teacher praise 	
Five things students do not do I wish they would do.	Who does not engage in this behavior?				
<ol style="list-style-type: none"> 1. Complete spelling in allotted time 2. Return homework assignments 3. Continue working when teacher leaves room 4. Check arithmetic problems for errors before handing them in. 5. Assist other children who have difficulty with a lesson. 	<ol style="list-style-type: none"> 1. Mark, Terry, Joan, David, Diane, and Mark 2. All of these children 3. Lou, Fred, Bill, Warren, Wendy, and Howard 4. Most of the children, only Gail and Jim regularly check their papers 5. All of the children 	<ol style="list-style-type: none"> 1. Do not complete 4 of 5 assignments 2. Return rate about 50% 3. Do not complete 4 of 5 assignments 4. 30% of the children do not check work 5. Never occurs 	Don't know.	<ol style="list-style-type: none"> 1. May need more time to finish--I don't know 2. I generally forget to check on homework or praise students 3. Don't know, instruction may be too teacher directed 4. Could be there are no consequences for silly mistakes 5. Don't know 	

You have begun to think about and describe specific behaviors you would like changed instead of talking in generalities about a child's behavior. This process is part of defining the "target behavior" (see Chapter D, Page 47) which you hope to modify.

You have also begun to think about some of the events, relationships and contingencies in the classroom which may cause and maintain the undesirable behaviors which you wish to change. The most difficult part of this process is facing up to the ways in which you, the teacher, may have unwittingly and unwillingly been "teaching" a child his undesirable behavior, perhaps by giving it too much attention and thus rewarding it, or possibly by ignoring or taking for granted his desirable behaviors thus forcing him to be disruptive in order to get attention. Is it possible that teachers, parents and other children may actually teach a child undesirable classroom behavior? Emphatically YES!! None of us wishes to contribute to such behavior, but we all do it all the time without thinking about it, by letting desirable behavior go unreinforced and by turning our attention to undesirable behavior. Let's look at some of the examples of how this might happen in the classroom:

Recall the highly aggressive pre-school children that we described earlier? Could their teacher possibly have encouraged their aggressive behavior? On the surface it didn't seem probable. She was not a violent or aggressive person and she made it clear to the children that she disapproved of their continual fighting and disruption. Our initial feeling was that the children either had learned their aggressive behaviors from their parents and/or peers and continued to use them in school in spite of the teacher's best efforts, or that they had genetic, chemical, or biological imbalances which spurred them to aggression.

These were some of the explanations that seemed reasonable to us, until one day we noticed an intriguing pattern of interaction in the classroom. The

teacher would generally *attend* to the children when they were misbehaving, but would usually *ignore* them when they were working quietly or otherwise cooperating with her. Her attention to misbehavior was not of a positive nature; in fact, it was often threatening or punishing. Nevertheless, it was attention and the children seemed to enjoy it. The more attention of any kind she gave to inappropriate behavior, the more frequent it became. Could it be that the teacher's attention was actually promoting disruptive behavior? Was the teacher unknowingly creating the problems which were so distressing to her?

In the language of behavior analysis, the teacher was positively reinforcing aggressive behavior. A *positive reinforcer* is an environmental consequence which over time increases the behavior or behaviors which closely precede it. When a behavior is followed, on many occasions, by a consequence which increases the rate of the behavior in the future, the consequence is called a positive reinforcer. In the case of our pre-school boys, when they were disruptive, they generally received immediate attention from the teacher. If this attention was a positive reinforcer, the rate of aggressive behavior should have increased, which it did, as the teacher continuously attended to and thus reinforced aggressive acts. It appeared that the teacher was indeed inadvertently promoting these unwanted behaviors.

With this possibility in mind, the problem became one of first changing the teacher's behavior or of designing a set of procedures for the teacher which would both eliminate most aggressive behavior in the children and teach more functional academic behaviors instead. To this end, we formulated two basic rules which the teacher learned to follow:

(1) *When behavior which is harmful to learning is occurring regularly, locate the events in the classroom which closely follow the behavior and which thus may be reinforcing the unwanted behavior, and remove those events which appear to be reinforcing the unwanted behavior;*

(2) *at the same time begin to reinforce more desirable behaviors, behaviors which are incompatible with the unwanted behaviors.* Behaviors are incompatible when they cannot occur simultaneously. For example, a child cannot be running in the hall and sitting in his seat at the same time.

Based upon this analysis, in the space provided below describe in a few brief sentences what you would recommend to the teacher to handle the aggressive preschool boys described in the first illustration. Do this *before* reading any further. Then go on to the next page and see what the teacher actually did.

Now that you have written your suggestions, let's look at what actually happened. Remember, the general strategy suggested was to (1) stop inadvertently reinforcing unwanted behavior and (2) to start reinforcing more desirable behaviors incompatible with the unwanted behaviors.

In the case of the aggressive boys, this two-pronged strategy was actually implemented by training the teacher to ignore the children as much as possible when they were aggressive or otherwise disruptive in the class, and to attend to children only when they were working or otherwise cooperating. In addition, when the children were behaving properly, they were given small plastic tokens which could be periodically exchanged for desirable activities materials. What happened? Aggressive behavior diminished quickly to a tolerable and finally to a satisfactory level and cooperative behavior increased substantially. By the end of the 15 week experiment, these boys appeared to be normal preschool children to the casual observer. It appears that the teacher's attention was indeed no longer given for disruptive behavior, but instead for cooperative behavior; disruptions were substantially reduced and cooperation increased dramatically.

A Review of Unit One

1. A scientific discipline known as behavior analysis is developing and testing some new approaches to behavior and learning problems. Some suggestions can be given for the ways teachers should behave in order to produce predictable changes in children.
2. A basic discovery of behavior analysis is that the behavior of children is heavily influenced by the environment of the school, and by the way teachers, administrators, and other children behave. In order to change children, the school has to change.
3. Positive reinforcement is the basic concept in behavior analysis. It has a precise definition: a positive reinforcer increases the frequency (strengthens) of the behavior which it closely follows.
4. An elementary rule of teaching can be derived from behavior analysis.
 - a. when an undesirable behavior persists, locate the events which closely follow the behavior and eliminate or remove them.
 - b. at the same time, consistently reinforce more desirable behaviors which are incompatible with the unwanted behaviors.

C) THE ROLE OF REINFORCEMENT IN LEARNING

As indicated earlier, behavioral scientists have discovered that all behavior is learned and that, whether they mean to do so or not, parents and teachers are the primary sources of all behavior a child learns -- desirable and undesirable. They do so by determining the consequences of a child's behavior, even in small ways. Even saying "thank you" to a child is a consequence of a behavior of his. Ignoring him is also a consequence, and so is scolding him. Any response we make to any behavior of a child is a consequence.

Behavioral consequences fall in two categories: reinforcers (rewards) and aversive stimuli (punishment). There has been much controversy in education and the child rearing field about the use of rewards and punishment, but research has clearly shown that the most effective means of teaching a behavior is by reinforcing it. Both adaptive and maladaptive behaviors are learned because of the reinforcers available for such behavior. When a behavior is reinforced the chance of that behavior occurring again is increased. If the behavior is not reinforced, the behavior tends to stop occurring or "drop out" of the student's compoment. This is called the "law of reinforcement", and it applies to all living creatures, animals and humans alike. It seems simple and yet is endlessly interesting and complex when one attempts to trace some behaviors back to their origins.

But let's begin with simple examples. First let's think about the terms we are using and how they work. Look at Table A on the following page:

TABLE A: REINFORCEMENT AND PUNISHMENT

		EFFECT ON FUTURE RESPONSE FREQUENCY		
		None	Increase	Decrease
Consequence	Presentation of Stimulus	<i>nothing</i>	<i>positive reinforcement</i>	<i>punishment</i>
	Removal of Stimulus	<i>nothing</i>	<i>negative reinforcement</i>	<i>punishment by "response cost"</i>

From this table, you will note the following possibilities:

1. If a stimulus is presented after a response, with a resulting increase in future response frequency, the procedure is called positive reinforcement. An example of this was praising Miguel each time he asked a question, so that, as a result, he asked more questions. The stimulus is called a positive reinforcer (in the illustration it was "praise").
2. If a stimulus is removed after a response, with a resulting increase in the future frequency of the response, the procedure is called negative reinforcement. An example of this was where Jane's crying was strengthened by the removal of her galoshes each time she cried. The stimulus is called a negative reinforcer (in the illustration it was "galoshes")
3. If a stimulus is presented after a response, with a resulting decrease in future response frequency, the procedure is called punishment. An example

of this was where Father spanked Henry each time Henry screamed; and as a result, Henry learned to scream less often. The stimulus presented is a negative reinforcer (in the illustration it was "spanks").

4. If stimulus removal after a response leads to a decrease in future frequency of that response, the procedure is called punishment by response cost. An example of this was where Father "fined" Henry a penny each time Henry screamed, and Henry learned to scream less often. The stimulus removed is a positive reinforcer (in the illustration it was "pennies").

These definitions are based only upon what is done, and what happens and not on subjective evaluations. For instance, if you give a student a penny each time he answers in class, and, as a result, he answers less and less, the procedure is punishment (the behavior becomes less frequent), and in this case, the pennies are negative reinforcers.

Note that words ending in "ment" like "reinforcement" and "punishment" are the names of procedures, while words ending in "er" like "positive reinforcer" and "negative reinforcer" are the names of stimuli.

Making Reinforcement More Effective: Immediacy, Repetition, Schedules

Reinforcement is more effective when it is immediate; the shorter the delay between the behavior and the reinforcement, the more effect the reinforcement will have on the future frequency of that behavior. Especially with younger children, even a small delay may be very important. When a first or second grader volunteers a correct answer and the teacher says "You were really paying attention, Marilyn," attending and answering may be substantially strengthened. However, if the teacher waits 5 minutes, and then at the end of the period praises all children who volunteered, the reinforcement may have no effect. With preschool children, retarded children, or disturbed children, delays of a second or a fraction of a second between responding and reinforcement are believed to significantly reduce effects.

Immediate reinforcement also prevents the problems that may arise with delayed reinforcement due to the accidental strengthening of undesired behavior. Consider the following situation. Arnold usually spends his time bothering his neighbors. His teacher is helping Juanita with her math book, but she happens to notice that Arnold is working at that moment. However, as she is occupied with Juanita, she says nothing. A few seconds later, Juanita starts working on her own, and the teacher then says "I like the way you are behaving today, Arnold." However, in the few seconds between her noting Arnold working and her making a praising remark, Arnold threw a spitwad at Harry. This behavior was instantly followed by her praise (reinforcement), and is more likely to be strengthened! Immediacy would have prevented this undesirable outcome.

Course grades, or grades on tests or papers, often have little effect upon the studying behavior of students. A probable reason contributing to this is the long delay between studying and receiving a grade. Having students grade

their own papers or tests immediately after completing them is one procedure which solves this problem; self-instructional materials where students verify their answers at once provide another solution to the problem.

As might be expected, reinforcing a behavior twice (that is, reinforcing it when it occurs on two occasions) has more effect upon its strength than reinforcing it once, and reinforcing it 10 or 20 or 100 times has even more effect. Repeated reinforcement of a response has two effects:

1. With a newly learned behavior, the responses will become more frequent as it is reinforced more, until it reaches some maximal level.
2. Once a behavior is learned, the more times it is emitted and reinforced the longer it will take to extinguish if, for some reason, reinforcement is no longer available for that response. Thus, a behavior which has occurred and been reinforced many times will probably continue to be emitted for some time if it is not reinforced for a while. However, a newly learned behavior which has only occurred and been reinforced a few times will probably extinguish quickly if it is no longer reinforced.

Well learned behaviors or behaviors which have a relative long history of reinforcement, need only to be reinforced intermittently to remain strong behaviors. When a response is reinforced every time it occurs, we say the schedule of reinforcement is continuous. When a response is sometimes reinforced when it occurs, and sometimes is not, we say that the schedule of reinforcement is intermittent. Obviously, in life most reinforcement is scheduled intermittently. Children in school are not called upon every time they raise their hand, nor praised every time they work. Every effort of the teacher in class is not reinforced with some positive result.

When a behavior has a long history of intermittent reinforcement, it becomes very resistant to extinction. Gamblers continue to gamble even though the payoff (reinforcement) is very infrequent (intermittent), and many teachers continue to teach even though highly reinforcing results may occur infrequently.

These various relations between responses and reinforcement generate several practical rules for teachers.

1. In teaching a new behavior, reinforce every instance of the behavior.
2. In maintaining a well established behavior, reinforce intermittently.
3. Whenever possible, and particularly with new behaviors, reinforce as promptly as possible.
4. When teaching behaviors which you wish the students to persist in, use intermittent reinforcement once the behavior is initially established.

Getting New Behavior Started: Shaping

How can a teacher get new behavior started? If a child is not already doing what you wish, however infrequently, you cannot reinforce it. So what procedures are there to get new behavior started so it can be reinforced?

One procedure is called shaping. In shaping, the teacher reinforces better and better approximations to some desired behavior, perhaps starting with a behavior that does not closely resemble the final target behavior, but gradually reinforcing behaviors which are more and more like the desired behavior, until finally the objective is reached. Shaping basically depends upon two procedures.

Selective reinforcement. No matter what a child is doing, there is probably some variability in his performance. We may say that Isaac never does his work, and he may not, but what he does do is not always exactly the same. Sometimes he may sleep in class. Sometimes he may stare at the clock. Sometimes he may just flip the pages of his workbook. In all these cases he certainly is not working, but he also is not doing the same thing. To use selective reinforcement,

the teacher picks the variant of behavior which is occurring which is closest to what is ultimately desired, and temporarily reinforces this. In Isaac's case, flipping through his workbook is closer to working than the other responses he makes when he is not working, so this behavior is selectively reinforced, and other behaviors are ignored (extinguished). The best variation of behavior, no matter how bad, is selected for reinforcement to start the shaping procedure.

Successive approximations. When one response is reinforced, and other responses which occur in that setting are extinguished, the reinforced response will become more frequent. In Isaac's case, we would expect him to start flipping through his workbook more, and sleeping and staring less, at least if a powerful reinforcer was used. But children, like all living beings, rarely do things exactly the same way. When Isaac spends a lot of time flipping through his workbook, his method of doing this will also vary. Sometimes he will flip through pages without looking at them, sometimes he will read a part of a page, sometimes he will go fast, sometimes slower. A newer and better variant is now selected for reinforcement--perhaps the teacher will now reinforce Isaac only when he stops and reads a bit as he flips through the book. Other responses or variations of thumbing through his workbook will now be extinguished. Regularly switching to a new and better response variant, one which is a closer approximation to the desired target behavior, is called using successive approximations. Over time, better and better approximations are selected for differential reinforcement. The sequence with Isaac might end up to be something such as the following:

1. First, reinforce any kind of flipping through the workbook, and ignore other behaviors that occur during seatwork time.
2. In step 2, only reinforce Isaac for stopping to read, even for a second, as he flips through his workbook.

3. In step 3, only reinforce if Isaac reads for about 3 seconds.
4. In step 4, only reinforce when Isaac reads for about 3 seconds in the unit which is assigned.
5. In step 5, only reinforce if Isaac reads for 3 seconds in the assigned unit and has his pencil in his hand.
6. In step 6, only reinforce if Isaac reads for 3 seconds in the assigned unit, and makes any mark in the workbook.
7. In step 7, reinforce if Isaac completes any fill-in or writes any answer, correct or incorrect, in his workbook in the correct unit.
- 8-12. In these steps, the amount of work required might gradually be increased until Isaac was completing (correctly or incorrectly) all the problems or blanks.
13. Reinforce Isaac only if he completes all the problems, with at least one correct.
- 14-18. In these steps, the percent correct required might be gradually increased until Isaac reached the level diagnostic work indicated was appropriate for him.

In this example, note that at each step, one response received selective reinforcement while others were extinguished. When the step was successful, a better approximation was then selected for reinforcement. By selective reinforcement of better and better successive approximations over time, Isaac finally reached the goal behavior required.

Mrs. Jones required her sixth grade children to identify 20 new words each week from outside reading and to record their meaning each week in a vocabulary notebook. Most of the children submitted a list of at least 20 new words each Monday, but Jimmy never had even one new word listed. Mrs. Jones then tried a simple shaping procedure. On Monday, Jimmy was reinforced if he had identified and defined at least one new word. Words that other children had located were then reviewed and Jimmy could copy one of them if he wished. He was also given the chance to do supplementary reading during the day. The following week he had to identify three new words, and then five the next week. The minimum number remained at five for the next week, but now Jimmy was required to identify and define the words on his own before coming to school on Monday. The minimum number then was gradually increased weekly until finally Jimmy was able to bring a list of 20 new words every Monday.

Janie was a kindergarten child who was socially isolated from the other children. She never talked or otherwise interacted with her classmates. Instead, she would sit by herself in the corner of the room or beside the teacher's desk. Janie's teacher decided that Janie should learn to interact with the other children. In order to build interaction behavior, the teacher decided to shape more elementary behaviors which together would lead toward interaction. The following behaviors were strengthened one at a time:

1. Sitting somewhere between the teacher's desk and the other children.
2. Sitting at a table with other children.
3. Sitting next to another child.
4. Attending to the interaction of other children; i.e., appearing to watch and listen.
5. Interacting with other children; i.e., talking, smiling, touching.

Shaping is a difficult and skillful process. A teacher must decide:

1. When to use it. The shaping process is not as efficient a way to get behavior going as instructions, prompts, or imitation. However, if a child will not follow instructions or imitate, shaping procedures probably must be used.
2. What successive approximation to select for reinforcement at each step. Experience, observation of children in general, and observation of the target child are the best guides. A series of very small steps is better than a few large steps. Each approximation must be only slightly different from the last, and should be a variant of what the child has been doing.
3. How fast to move. If the teacher moves too fast, the new behavior and its variants will not be well established, and the whole set of behaviors will extinguish. If the teacher moves too slowly, the process may take forever, or at least be very inefficient. Children, of course, in some circumstances may prefer to continue to be reinforced for an easier approximation.
4. When to move back. If a child fails to succeed with a new reinforcement, the teacher should move back to the old one. With further reinforcement, the change may be attempted again. Possibly, the approximation selected was not a good one, and a move to a different one would be attempted.

Getting New Behavior Started: Prompting

Prompts are methods of getting behavior started when you already have available some antecedent stimuli which control the appropriate behavior. The most common type of prompt is instructions--here the teacher may say "Sometimes when we see the letters 'ei' we make the long /ā/sound, as in the word 'neighbor'." In this case, the children already can say the /ā/ sound and are under control of the simple instructions given (usually worded as "can understand the instructions"), so using instructions (prompts) is the most efficient way to get the behavior started. Other types of prompts, all of which involve using a stimulus which already controls behavior, are not always called instructions. Some common examples of prompts are:

1. The teacher takes the child's hand and guides his pencil around the curves of the letter "S."
2. Arrows are used under letters to remind the children to read from left to right.
3. A teacher exaggerates the position of her mouth for the letter "M" as she asks a child to make a sound.
4. The teacher raises her hand to model how the children are to raise their hands before asking or answering questions.
5. Children are reminded that "I" comes before "E" except after "C."

Prompting is used to get behavior going. However, eventually the child must be able to perform without the prompt. The teacher wants children to learn how to pronounce "ei" words correctly without her instructions, and children must learn to write correctly without guidance of their hands or arrows to remind them which way to write. The prompt is used to exert *temporary* control over the behavior so it can occur correctly and be reinforced. Eventually, though, we want the typical stimuli in the situation to control the correct behavior, so

the prompt has to be faded out. For instance, in the "ei" word situation the teacher may repeat the rule a few times, then she may remind the children that "ei" is often pronounced like the long sound of some vowel, then she may merely say that "ei" is often pronounced differently from the way it looks, and then drop all prompts completely. In teaching the children how to make the "M" sound, the teacher may exaggerate the position of her mouth less and less with each illustration.

Getting New Behavior Going: Imitation (Modeling)

New behavior can be started through shaping or through prompting. Another way to get new behavior going is to use imitation, also called "modeling." Children who have been reinforced for imitating others in the past are likely to imitate other behavior when requested. This is particularly so if they see someone else being reinforced for performing that behavior.

Many teachers in our program have discovered that they can use modeling techniques effectively to teach children, particularly to get new behavior started. For example, instead of scolding disruptive or inattentive children, many teachers have found that it is often better to positively reinforce cooperative or attentive children (i.e., good models) in full view of the other children.

This procedure has several advantages:

1. The cooperative and attentive children receive direct, positive reinforcement for their behavior, hence their good behavior is maintained.
2. The other children are provided with clear models to imitate.
3. The teacher avoids the risk of unintentionally reinforcing unwanted behavior by attention while trying to punish it.

A first grade boy named Tyrone had difficulty concentrating on his seat work assignment when the teacher was occupied with a reading group in a far corner of the room. Instead of completing and reviewing his lesson, Tyrone would roam around the room bothering other children or sit idly in his chair staring out the window. The teacher first tried to eliminate these non-productive behaviors by making frequent requests for him to "get to work" and by giving warnings that he better "shape-up." When this strategy failed to produce a change, the teacher began to ignore his non-working behavior while she frequently praised students who were working diligently at their seats. "That's good, Fred," the teacher would say, "I like the way you are working quietly at your seat. I wish all the boys and girls would work as hard and quietly as you do because they learn better and enjoy school more." Tyrone continued to procrastinate and disrupt for several days after the new procedure was put into effect, but then one day he sat down at his desk after the assignment was given and began to work. "Good for you, Tyrone," the teacher immediately cried, "I like the way you got right to work." On the following days, the teacher continued to compliment Tyrone for his improving work habits as he learned to work quietly and efficiently at his seat. Modeling had paid off for Tyrone and for his teacher.

Pinpointing Behavior

Behavior analysis can provide effective procedures for changing or modifying behavior, that is for strengthening or weakening behavior. The identification of appropriate behaviors to be strengthened or weakened, however, is beyond the scope of behavior analysis. The job of setting educational goals for children belongs to the community. Parents, teachers, administrators, and

perhaps students themselves must decide on what behavior or skills should be strong and which should be weak.

Whatever behaviors are selected for modification, however, they must be clearly identified if behavior analysis principles are to be much help in changing behavior. Behaviors must be pinpointed. Goals for change must be stated in terms of what the children actually do, how they behave.

Goals for educational change that cannot be directly observed or measured as behaviors are not appropriate for behavior analysis. Many of the commonly stated goals for education will not do for an effective application of reinforcement principles. Goals such as improved "self-concept," "achievement motivation," and "intrinsic motivation" are too vague. They do not specify exactly what behavior should be strengthened or weakened or when positive or negative reinforcement should be delivered. We are not saying that these are not important goals. To be useful, however, they must be extended to the point where they specify exactly what behaviors are indicative of the goal; i.e., how can we tell from a child's behavior if he is getting closer to a goal or further away. A teacher must know how a child is behaving at a later date before either positive or negative reinforcement can be effectively used to reach target goals.

Teachers generally pinpoint behavior in two areas: social behaviors and academic behaviors. Social behaviors are the observable interactions which children have with other children, with their teachers, and with instructional and play materials. Academic behaviors are often pinpointed in terms of the products which result from children working on instructional tasks. Some examples of pinpointed behaviors in the social and academic areas are given in Table 2-2.

TABLE 2-2

Social Behaviors

Academic Behaviors

-
- | | |
|--|---|
| <ul style="list-style-type: none"> - raise hands before answering or asking question - listen to directions as indicated by eyes on teacher - tutor other children who need help - begin working assignment within two minutes after paper is distributed - arrive at school on time, by the time the bell rings - work at seat without disturbing the work of others - clean up food after lunch | <ul style="list-style-type: none"> - score above 80% on arithmetic assignment - read at least one library book per week and write a report - identify, record, and learn to spell at least 20 new words per week - write at least one short story a week - complete at least two social studies units per week |
|--|---|

Descriptions of student behavior should be:

Physical: Behavior is described in terms of its physical attributes, visible to all people. Thus, it is much more accurate to say that Marvin "shouted and yelled and punched Terry," than to say that he "lost his temper" or "got angry." The latter do not actually tell you what he did. It is much more communicative to say that Sally said she would "pour water all over you" than to say that she "threatened" you.

Non-judgmental: It is difficult to reach agreement on judgmental descriptions of behavior. Who knows what Harry did when we are told that he was "incompetent" or "immature" or "not up to par" at recess. More subtle judgmental descriptions are things such as "babyish" or saying that he "did not do a good job." All of these tell you something about how the speaker reacted to Harry, but not about what Harry did.

Quantitative: Different people may not agree as to what "a lot" or "a little" is. It is much more communicative to say that Mary gets out of her seat "7 or 8 times every math period" than to say that she does this "often."

JUST WHAT ARE REINFORCERS?

1. Except for a few basic items such as food and water, no item or activity can be positively identified as a reinforcer before it has been tried and shown to work, i.e., to modify the behavior which it immediately follows. Also, remember that with overuse, satiation can set in and then even the most powerful reinforcer will lose its strength. It is better to have many reinforcers which are rotated in use than to have only a few reinforcers which are used too much.
2. What is highly reinforcing for one child may not be for another. A teacher probably should provide a variety of reinforcers not only to prevent satiation, but also to satisfy the individual preferences of all her children. Many teachers provide a "cafeteria of reinforcers" for their children. On any given day a variety of reinforcing items or activities are available to satisfy the diverse needs and interests of different children. The total "menu of reinforcers" changes from time-to-time to prevent satiation.
3. The job of observing the effects of existing reinforcers and searching for new reinforcers is never complete. A good reinforcement system is an ever changing blend of established reinforcers with potential but untried reinforcers.
4. Remember to be careful not to think of reinforcers only in terms of candy or other material items which have to be purchased. There are many activities and privileges which are as good, if not better, reinforcers than material items. Some teachers prefer to use material reinforcers initially to be certain of powerful consequences, but most have found that non-material reinforcers can quickly take over. A list of some of the reinforcers that teachers have used follows. The list certainly is not complete, but it does

present a wide range of alternative reinforcers. Remember, each teacher must locate reinforcers which are effective for his or her particular children.

Social Reinforcers.

hugging	smiling
congratulating	applause
shaking hands	recognition (teacher remark)
touching or patting	nodding
praising	winking
paying special attention to	tickling
peer approval	kissing

Activity reinforcers, privileges, special activities.

free time	help collect displays, and so on, for units
extra turn in a game	use extra art materials
carry library books upstairs	help custodian
listen to own voice on tape recorder	throw ball, bean bag
walk around in high heels	read library books
paint at easel	chew gum during classtime
reading to the principal	read to class
carry library books downstairs	extra swim period
carry purse, briefcase	help secretary get milk for other classrooms
build up, knock down blocks	be turned around in swivel chair
take a message	blow out match
pop balloon, paper bag, milk carton	use playground equipment: slide, swings, jungle gym, merry-go-round, see-saw
special library time	look in mirror
first up to bat at recess	be pulled in wagon
pull other person in wagon	write on blackboard
play with magnet	ten minutes for a game at milk break
water plants	watch train go around track
feeding room animals for week	listen to short recording
lead the pledge	mark papers
play with squirt gun	fifteen minutes in library
wear funny hats	be swung around
look out window	run errands
be a line leader	run other equipment, such as string pull toys, light switch
be team captain	pull down screen
roll wheeled toy	push adult around in swivel chair
sing a song	be pushed on swing, merry-go-round
take care of the calendar by the week	be a student teacher
read comic book	field trip (available once every two weeks)
show film strip	erase and wash chalkboard
string beads	movies
listen to a song	
help with audio visual equipment	
sit at teacher's desk for reading	
paint with water on blackboard	

Activity reinforcers (cont.)

operate jack-in-the box
comb and brush own or adult's hair
solve codes and other puzzles
sharpen pencils
select seat or desk by a friend or
in a chosen place in classroom
pass out paper
extra time at recess (for self, class,
with a friend)
play instrument: drum whistle,
triangle, piano, and so on
be tickled
run in hall with truck for 2 min.
buy extra straws
do an extra ceramic project
draw and color pictures
perform before a group: sing a song;
tell a poem or riddle; do a dance,
stunt, or trick
talent shows
captain of team at recess
write on blackboard: white or
colored chalk
study with a friend
prepare for holidays (Christmas,
Thanksgiving, Easter)
parties
assist teacher teach
make a game of subject matter
dance
perform for PTA
help other children
exempt a test
look at projected slide
blow up a balloon; let it go
play with typewriter
pick a story for the teacher to
read to the class
early dismissal from class period
turn filmstrip projector
sit at the teacher's desk for
spelling
cut with scissors
take a class pet home on weekends
turn off lights
recess or play periods
outdoor lessons
caring for class pets, flowers,
etc.
file Peabody cards
pass out scissors
"senior sluff day"

play short game: tic-tac-toe, easy puzzles,
connect the dots
represent group in school activities
decorate classroom
be a line monitor
feed fish for a week
display student's work (any subject matter)
present skit
clean erasers
blow bubbles: soap, gum
straighten up for teacher
ride elevator
put away materials
puppet shows
lead discussions
construct school materials
answer questions
get milk at break
an extra cookie at break
sit on adult's lap
go to museums, fire stations, courthouses,
picnics, etc.
compete with other classes
work problems on the board
dusting, erasing, cleaning, arranging
chairs, etc.
go home five minutes early
jump down from high place into arms of
adult
first for drink at recess
omit specific assignment
talk periods
visit another class
pour water through funnel, from one
container to another, and so on
crafts
time in science library
classroom supervision
choose activity for the class
field trips (subject matter)
model with clay, putty
put blinds up or down
participate in group organizations
(music, speech, athletics, social clubs)
plan daily schedules
extra five minutes at lunch
musical chairs
show and tell (any level)
answer telephone by day
outside supervising (patrols, directing
parking, ushering, etc.)
climb ladder

Material reinforcers

jump ropes
hair brushes
address books
silly putty
bookmarkers
jacks
playground equipment
stuffed animals
ribbons
story books
pencils with names
coloring books
pictures from magazines
toy musical instruments
pennies or foreign coins
miniature cars
snakes
comics
cards
toy watches
combs
pick-up sticks
birthday hats
commercial games
class pictures
collage materials
games
counting beads
subject matter accessories
yo-yo's
paint brushes or paints
bean bags
grab bag gifts
cowboy hats
toy guns
bats
whistles
pins
headdress
book covers
toys
pencils and pens
crayons
perfume
key chains
box of crayons
good citizenship award certificate
rings
scarves
elastic bands
marbles
stickers
fans
tape recorders
flowers
dolls
badges
money (play, real, exchangeable)
pins
pencil holder
classroom equipment
boats
stationery
make-up kits
blocks
seasonal cards (Valentines, birthday)
chalk
dollhouses
toy jewelry
playdough
marbles
puzzles
compasses
clay
purses
calendars
kaleidoscopes
beads
buttons
flashlight
dolls
plastic toys (animals, indians, soldiers)
household items (pots, coffee cans, spoons,
all sizes of containers)
paper-mache
jumping beans
bubble blowing kit
stamps
model kits
surprise box with candy, toys, decals, etc.
wax lips and teeth
balls
masks
balloons
flash cards
banks
kickball
pets
colored paper
pencil sharpeners or eraser

Material reinforcers (cont.)

striped straws
magnifying glasses

cars

NOTE: CHILDREN MAY EITHER PURCHASE ITEMS THEMSELVES OR PURCHASE RIGHT TO USE THEM WITHOUT OWNING THEM.

Edible reinforcers.

penny candy	Lemon drops
smarties	jujy fruits
jawbreakers	sugar-coated cereals
milk	ice cream
m & m's	marshmallows
chocolate	sugar cane
creams	cake
apples	candied apples
raisins	lemonade
sips of fruit juice or soda	cracker jacks
gum	jelly beans
crackers	candy bars
candy canes	candy corn
lollipops	animal crackers
popcorn	fruit
candy kisses	
doughnuts	

When selecting reinforcers via the "watch-and-see", "ask the children," "ask other teachers," and "try and see" strategies, there are several additional suggestions for individualization that a teacher should bear in mind. Place a check beside the number of items which describe an important consideration for selecting potential reinforcers.

1. It is better to have many reinforcers which are rotated than only a few reinforcers which are used too much.
2. The job of observing the effects of reinforcers and searching for new reinforcers is never complete. A good reinforcement system is a blend of established reinforcers with potential but untested reinforcers.
3. A variety of reinforcers not only prevent over-use or satiation of reinforcers, but also satisfies the diverse needs and interests of different children.

Items 1, 2, and 3 should all be checked. Each of them describes an important consideration in selecting reinforcers.

We can summarize Unit Three by describing how Mr. Jones, a fourth grade teacher, selected reinforcers for his class. Mr. Jones first learned to be a careful observer. From the beginning of the year he watched the children during their work, play, and free time periods and recorded the activities which they selected themselves and seemed to enjoy, things that appeared to be reinforcing. He noticed, for example, that children lingered in the gym after the end of the period, that they often talked about sports and other current events in open classroom discussions, and that they requested to read short stories from the supplementary reading series. Mr. Jones also asked the other fourth grade teachers which activities and events their children preferred. He learned that they often asked to listen and dance to popular records during free time periods, and that they also enjoyed spelling contests. Mr. Jones discussed these possible reinforcers which all the children would vote on. The children decided upon 60 possible reinforcers. Mr. Jones accepted 50 of their suggestions. He also added a few which had not been suggested. These would be a special surprise for the children.

The children in this class earned points every day for their performance on reading and arithmetic lessons. Mr. Jones graded the papers quickly each day with the help of the students, compared each student's performance that day to how he had been doing the past few days, and then awarded points according to a schedule that he and the children had worked out. The children decided that they would like to exchange their points about once each week. They asked Mr. Jones to select the "menu of reinforcers" for each week and to set the prices for the reinforcers.

The specific activities which would be purchased, of course, changed from week-to-week. Each Friday afternoon, however, Mr. Jones set aside 60 minutes for the children to purchase and enjoy their selected activities. (Early in the program a reinforcement period came every second or third day.) The children

monitored this period by themselves so Mr. Jones could work with a few who needed individual attention. The reinforcer menu from one Friday follows as an example of the kinds of activities that the children could choose:

40 points: *play basketball in gym*
dance to records
play with special game (an ice hockey game in this case)
watch practice for school play

30 points: *go to library*
serve as crossing guard for the day
play with classroom games
watch television

20 points: *sit and talk quietly with friends*
help teacher clean room
draw or work with water colors
do extra reading

The points that were earned but not spent were recorded in a special "bank account" which was used for a class party about every six weeks. The children who did not want to buy any activity or who did not have enough points to participate went to study hall where they worked with the teacher or tutor on lessons which they had missed or failed. The great majority of children participated enthusiastically in these planned activities and worked hard during the week to earn their Friday privileges. For a few children, however, these activities did not appear to be reinforcing. One boy requested nothing but food or candy reinforcers--doughnuts, cupcakes, and chocolate. A girl wanted only to sit by herself in a quiet room and read. Mr. Jones discussed these individual preferences with the members of his reinforcement selection committee and they

decided that special privileges should be provided for the children for whom the activities selected by the committee did not seem to be very reinforcing.

Thought Provoker

Using the techniques discussed in this unit, do you think you could come up with some useful in-school reinforcers for teachers? Might these improve teacher performance and morale?

D) PUTTING THE PARTS TOGETHER: RECORDING AND REINFORCING

Specify Target Behaviors

A behavior should have two characteristics before it becomes a candidate for measurement. First, it must be clearly specified so that it can be directly observed. Second, the behavior to be measured should be a behavior which is important to learning or the management of instruction. Study the examples which follow.

<u>BEHAVIOR</u>	<u>DIRECTLY OBSERVABLE?</u>	<u>IMPORTANT?</u>
<i>Frustration</i>	<i>No</i>	<i>Yes</i>
<i>Desire to excel</i>	<i>No</i>	<i>Yes</i>
<i>Striking another child</i>	<i>Yes</i>	<i>Yes</i>
<i>Number of homework assignments completed</i>	<i>Yes</i>	<i>Yes</i>
<i>Raised his hand at an angle (instead of straight up)</i>	<i>Yes</i>	<i>Probably not</i>

To tell if a behavior is directly observable, you simply ask yourself questions like: *Can I tell if a child has the behavior? Can I tell how much of the behavior he has? If three people observe the child without talking to each other, would they agree on how much of the behavior a child has?*

To tell if a behavior is important is not as easy. It is often a matter of your own preference. Ask yourself, *"Is this behavior an important objective?"* If you want children in your class to raise their hands when they want to answer a question, it probably doesn't matter if the hand is raised straight up or at a 45 degree angle.

Now You Practice Doing It

For each of the behaviors below specify whether they are directly observable and important.

<u>Behavior</u>	<u>Directly Observable?</u>	<u>Important?</u>
a. Hostile to authority		
b. Low self-esteem		
c. Bob is confused		
d. He completed all assignments		
e. He got at least 80% on every assignment		
f. He slept in class during the study period		

Answers: After you look over the answers, take the ones which are not directly observable and specify one or two specific observable behaviors for each of them. The answers to the above exercise are: All of the behaviors are probably important, but only d, e, and f are directly observable. Now, for a, b, and c, specify below one or more directly observable behaviors for each of the "global descriptions" given.

- a. _____
- b. _____
- c. _____

To check, ask yourself if the examples of directly observable behavior you gave are such that you could tell if a child exhibited the behavior or how much of the behavior he exhibited. Some examples are presented here. If yours are as specific as these, they are fine. They need not, of course, be the same.

- a. *Hostile to authority.* Jim says 'I won't' whenever the teacher makes a simple request to the entire class such as: 'Will all the boys please raise their hands? Will those who want to study this period instead of next period raise their hands?'
- b. *Low self-esteem:* Sally cries when she is criticized. Sally says 'I can't do it' when given an assignment.
- c. *Bob is confused:* Bob doesn't follow directions or rules when asked to do so. Bob came up with the wrong answer each time after five examples were completed for him.

Now You Try It: Specify Some Target Behaviors

Which of the following can be measured directly?

- a. Marie is bored.
- b. Bill stares out the window when assignments have been given.
- c. Sally is unhappy with the results of her test.
- d. Tim sits with his eyes lowered.
- e. She tears up all her assignments.
- f. She is usually angry and tense.
- g. Johnny doesn't agitate the other students.

Give two or three specific measurable important behaviors for each of the global descriptions of classroom behavior below.

a. Studying: _____

b. Disturbing the class: _____

c. Understanding the "Declaration of Independence": _____

Now Practice Doing This For Your Own Class

Find some actual student behavior which you would like to increase or decrease but which you currently define very broadly in "global" form like "good study habits," "good in discussion groups," "confused," or "hostile to authority." Now specify two or three specific observable behaviors for the global one. Discuss the results with your group and coordinator.

How to Record Behavior

Some behaviors can be recorded directly by counting. You can tell how many times they occurred. For others, it makes more sense to tell how long the behavior lasts. For each behavior you are interested in measuring, there is a recording procedure that is more appropriate than another. Study the three recording methods below. Do not try to memorize them, but simply study them until you can put the meaning of each into your own words.

1. Interval recording method. To use this method, break the observation period into small intervals (usually from five seconds to one minute, depending on how frequently the behavior occurs). Record whether or not the behavior observed occurs in each interval. What is recorded is the presence or absence of a behavior during each interval. For example, "paying attention or not paying attention."
2. Frequency method. To use this method, simply count the number of times the behavior, as you have defined it, occurs in a given block of time.

An example of a situation in which the Frequency Method might be used is observing a retarded boy who has an inappropriately high rate of asking

questions. The observer would count (tally) every time the boy asks another question. What is recorded here is a tally for each time the behavior occurs.

3. Duration method. To use this method, run a stopwatch continuously while the behavior is occurring during an observation period of a specified length.

An example of the use of this method would be recording the amount of time a child talks. While the child talks, the watch is running. When he stops talking, the watch is stopped.

What is recorded here is the amount of time a specific target behavior occurred.

Now Practice Labeling Recording Methods

For each recording procedure on the left, write in the correct name of the procedure on the right. The three names are: *Interval Method*, *Frequency Method*, and *Duration Method*.

<u>Recording Procedure</u>	<u>Name of Procedure</u>
a. Number of times a student asked to be excused to go to the bathroom on a certain day.	_____
b. Amount of time taken to finish lunch on a particular day.	_____
c. Number of fifteen second time blocks during which child was "hitting" another child in a playground period.	_____

Now check your answers here. The Interval Method is being used for recording the occasions on which one child hits another child (c) because it records the presence or absence of the behavior during each fifteen second interval. The Frequency Method is used for recording the number of times a student asks to be

excused (a) since this is a simple frequency count. The Duration Method is used for the amount of time taken for lunch (b) since this records "elapsed time" from beginning to end of the occurrence of the behavior.

How Do You Conduct "Time Sampling?"

Suppose you want to observe a behavior over a long period of time and it is inefficient to observe it continuously. A sample of the behavior may then be recorded. The procedure is simple and involves only a minor variation in the procedures described above.

Divide the observation period into equal intervals and with the help of a timing device (stopwatch, kitchen timer, wrist watch) observe the behavior only at the end of each interval.

For Example, suppose you have a two-hour observation period. That is, 120 one-minute periods. If you decide to observe only every *sixth* minute, you will set your time (e.g., stopwatch) to zero and whenever it reaches "six" you will observe for a minute and then return it to zero and wait again for it to reach six.

If you wanted to observe six children every six minutes, all you would have to do is rotate observations from one child to another for a minute at a time.

Increasing Your Use of Social Reinforcement

There is much evidence to suggest that the majority of teachers use social reinforcement of appropriate behavior too sparingly. There are several reasons for this. Many of us find it awkward to praise or compliment very frequently--we find it saccharine or "phoney." Most children, who after all are the important individuals in this drama, do not react in this manner, at least not to praise or attention given for behavior which warrants reinforcement. This, however, may give us a clue as to why many of us find very frequent social reinforcement distasteful. A great majority of the teachers who have a "naturally" high rate of praise and compliments do not deliver these consequences as a function of a child emitting appropriate behavior for which valid reasons exist for reinforcement. Such teachers usually have not pinpointed target behaviors for individual children, nor monitored individual progress and approximations, thus their praise is essentially unrelated to the child's performance. Such consequences, which are not response-contingent, are not part of a behavior analysis program, and should be viewed as "flattery" or "bribery" rather than as reinforcement.

Another reason why most of us do not use enough social reinforcement is the tendency to attend to the "bad" and to take the "good" for granted. In school, the child who works well and steadily is frequently overlooked or ignored; the child who is disruptive or does not work gets the teacher's attention. The problems this generates will be discussed later in more detail.

Finally, it is very hard to do something in a "natural" manner just because somebody has told you that it is a good thing to do. It may seem funny to suddenly start praising, complimenting and attending to children at a much higher rate than previously. Many teachers feel like they are role-playing when they first do this. There is nothing wrong with this feeling; it is to be expected and is only temporary.

When you start using more social reinforcement, if it is done precisely and is made contingent on specific children's behaviors, the children will start performing better. When this occurs, you, the teacher, are reinforced for being a dispenser of social reinforcement. When this has occurred over a period of time, you will find that this behavior on your part becomes natural and spontaneous. It seems awkward and strange only until the results have made themselves felt, then it becomes the most obvious and natural way in the world to act.

The hardest part is getting started for the first week or two. And, before starting, it is important to have clear target behaviors, or clear acceptable approximations, in mind for the children.

Cards. One way to increase your use of social reinforcement is to make cards with each child's name on a card. After the child's name, list several target behaviors or approximations you would like to strengthen. Carry your cards with you, and as you teach, turn the cards over several times a minute. If the child whose card comes up is engaging in the desired listed behavior (s), reinforce him! Say something like, "I like the way you are working," or "That's really getting at it." Comment on his work itself, or make some other remark. Or, if you are near the child, just pat him or touch his shoulder.

Signs. Posting signs to remind you to reinforce frequently is another help in getting started. These can be on the board or elsewhere, and can merely say "Reinforce," or they can have something else on them, such as smiley face, to remind you to reinforce.

Count and graph. An excellent procedure is to count your rate of delivering social reinforcement each day, and to graph it. On each subsequent day, try to improve over your prior performance. Grocery store counters available in the dime store, or golf score counters available in sporting goods stores and department stores are an inexpensive and convenient method for counting. Another counting method is to put a small piece of masking tape on your wrist, and make tallies

on it with a pencil or pen. An alternative approach is to assign the recording to children; ask several children to keep a tally of the "nice" or "complimentary" things you say about others. Obviously, counting and graphing can be combined with cards or signs. Remember, however, to reinforce the target behavior you have identified. Don't reinforce randomly.

Place a check beside the number of each item which is an accurate statement about the use of social reinforcement.

1. There is evidence to indicate that many teachers use too little social reinforcement.
2. The important thing is to increase the use of social reinforcement and not worry about what behaviors you are reinforcing.
3. The disruptive child or poor worker often gets the majority of the teacher's attention while the good student or the child who works well and steadily is ignored.
4. If you haven't learned to use social reinforcement effectively by now, you probably never will learn.

Items 1 and 3 are accurate statements. Item 2 is inaccurate because the careful selection of target behaviors must accompany the attempt to increase the use of social reinforcement. We hope that item four is untrue for you. There are ways you can help yourself to use more social reinforcement. These include the use of cards and signs and the counting and graphing of your own behavior.

Exercise. Use one of the "count and graph" procedures to measure how many social reinforcers you deliver for three one hour (or shorter) periods on each of three

days. Use the same time periods each day. Graph the nine different counts you get, adding each to the graph as you finish recording for that period. Then add signs or cards to your program, and continue for three more days (nine more periods). Graph these also, and see if your performance has improved. Save your graphs, cards or signs to show others in the program.

Reinforcing Approximations

Continually remind yourself and your teaching associates to watch for children whose work or behavior is improving so that you can attend to and praise them. "Spend" a large proportion of your reinforcers on children who are steadily improving, but whose behavior and performance are still below par. These children probably do not get as much reinforcement from things intrinsic to the materials, or from peers or parents, as more competent children do, and thus "need" more reinforcement from you if they are to continue to improve. All children, even the most disruptive or deviant, have some behaviors which are better than others and can be reinforced. Don't wait weeks to reinforce a problem child because his undesirable behavior has not decreased yet to a satisfactory level, or because his desirable performances are still below average. Such a child will make the most progress if he is reinforced at least several times at per hour. Find some behaviors which can be reinforced, hence, accelerated. These desirable behaviors will be gradually strengthened thus, less time will be allowed for the disruptive behaviors.

Once again, the necessity for objectively pinpointing target behaviors and current approximations becomes clear. How can one tell what is "better" and should be attended to without some objective standard?

Place a check beside the number of the item which best describes how a teacher should reinforce approximations.

- _____1. Mrs. Jones has decided to use social reinforcement to increase the number of arithmetic problems which Johnny answers correctly on a daily assignment of 20 problems. Johnny usually answers no more than 3 problems correctly while the rest of the class typically scores between 15-20 correct. Mrs. Jones decided that Johnny should complete at least 15 correct problems before she will praise him.
- _____2. While the rest of the class is reading, Patty usually hides in the cloakroom or crawls under a desk. Mr. Barry, Patty's teacher, wants to begin to reinforce her for reading, but Patty never engages in any reading behavior. Mr. Barry decides to reinforce Patty first for sitting in her seat rather than going in the cloakroom or under the desk. After he has increased her "sitting" behavior gradually over a period of time, he will then begin to reinforce her for having a book in front of her and then for looking at the book. Finally, when these prior behaviors have been strengthened, Mr. Barry will begin to reinforce reading behaviors directly.
- _____3. Lou is constantly fighting and otherwise disturbing the class. Lou's teacher has promised Lou that as soon as he is able to behave better, he can expect a more positive reaction from the teacher. Until that time, however, the lectures and spankings will continue.

Item 2 is the best example of reinforcing approximations to a final target behavior. In item 1, Mrs. Jones is probably requiring too much at first. If Johnny is currently doing 3 problems correctly each day, the teacher could require 4 or 5 correct problems before praising him. In item 3 there is no attempt to reinforce approximations. The teacher is requiring a total change all at once rather than gradual improvement over a period of time. In addition, the target behavior is too general to help Lou or the teacher. The prescription to "behave better" does

not tell Johnny what behaviors he should try to develop nor does it help the teacher in deciding what behavior to reinforce.

Exercise. On a card, list the names of your five "worst" students, taking both comportment and academics into account. Using procedures similar to those used in the previous exercise, try to increase the number of social reinforcements you deliver to these problem children. Remember, if the social consequences you provide are to be reinforcements, they must be consequences of specific (and, hopefully, desirable) behaviors. Thus, you might also list some approximations which these children occasionally emit. For instance, one may sometimes do his work for a minute steadily, another may once in a while raise his hand rather than shout out, and so forth. Your chore is to watch the problem child and catch him being good, and then . . . jump in and reinforce. The results may surprise you! (Save your cards to show others.)

Reinforcing Undesirable Behavior

Unfortunately, a lot of social reinforcers are made contingent upon behavior which is undesirable in class, thus, tend to make disruptive behavior or bad work habits more frequent. Many of us have learned to attend to negative rather than positive behaviors over a period of years. It often appears very hard to break the habit without having a coach or observer to warn you when you slip back into the old pattern. It does seem natural to ask the non-working child "what the matter is" or to try and calm down or reprimand the disruptive student or the trouble-maker. However, there is much evidence to suggest that such attention to unproductive behavior accelerates it--that attention, often even reprimands, is a reinforcer in such situations.

Exercise. Observe yourself or another teacher for 30 minutes. Every time the teacher (or you) talk to a student, regardless of whether it is to criticize, praise or instruct, or every time you point at, gesture at, touch or move to within two feet of a student, record the interaction. Record a "plus" mark, or a check in the "plus" column, if in the five seconds before you acted the student was doing something you would like to see more of in the classroom. Record it as a "minus" if in this five second period the student was doing something you would like to see less of in the classroom. Record a zero if it is absolutely impossible to say either way. Probably the easiest recording method for this is with a small piece of masking tape on the wrist. How much undesirable behavior is being reinforced? How much desirable behavior is being reinforced? Do you feel that these ratios should be changed? Save your record!

The Criticism Trap

You may say it should be easy to establish a more positive relationship between teachers and students. All we have to do is give more praise and attention to behaviors we want to build and pay less attention to the unwanted behaviors. Well, it usually isn't quite that simple! As mentioned, one reason that makes it hard to change is that most of us have learned to attend to negative rather than positive behaviors over a period of many years. A second reason is that a teacher may be receiving immediate reinforcement for attending to undesirable behavior. Yes, you may be reinforced for attending to behavior that you want to weaken, even though the major result is the opposite of what you desire.

It is often difficult for a teacher to recognize the long-term, undesired effects of a particular pattern of interaction with children. Teachers are often reinforced by an immediate decrease in disruptive behaviors when they direct their attention (warnings, scoldings, lectures, whippings) at offending children. At that moment, the children quickly return to the disruptive behavior. The teacher

then reapplies her attention, only to produce another temporary suppression, but long-term increase in the bothersome behavior.

Some investigators have referred to this unproductive procedure as the "criticism trap." Negative attention produces a *temporary* positive change in children, but *in the long run*, the unwanted behavior is strengthened by the teacher's attention to it. This delayed increase in disruptive behavior is often overshadowed, however, by the immediate reinforcement which a teacher receives from the quick but temporary reduction in the disruptive behavior following criticism or punishment.

If the following item is an example of the "criticism trap," write "yes" next to the item. If it illustrates some other procedure instead, write "no."

_____ Johnny gets out of his seat about 5 times each day during the reading period. He generally walks to the pencil sharpener, stops to talk with a friend, or goes to the bathroom. Mrs. Allen, Johnny's teacher, would like to reduce the number of times Johnny leaves his seat each day during this period. Mrs. Allen decides to remind Johnny about leaving his seat, and to mildly scold him each time he gets up. After several days, Mrs. Allen judges her procedure to be a success. Each time she reminds Johnny, he sits down immediately. However, Mrs. Allen has a check on her impression because she has asked a student to keep track of the number of times Johnny actually gets out of his seat. The student reports that Johnny is now getting up about 12 times during each reading period.

This is indeed an example of the criticism trap. The answer is yes.

Reinforcing Alternative Behaviors

One way to escape the "criticism trap" is to make each inappropriate act a cue to look for desirable behavior worth of your praise. Ignore the child who is playing with trading cards at his desk rather than working, but watch him closely for the first sign of working. Then, the moment he looks at his work, jump in with a positive remark.

It is hard for most teachers to realize that attention in the form of warnings, lectures, scoldings, and even whippings can be reinforcing unwanted behaviors in their children. Yet our experiences and those of many other investigators have shown that when this attention is withdrawn from deviant classroom behaviors, these behaviors are gradually extinguished, *particularly if positive attention and praise are used simultaneously to reinforce alternate desirable behaviors.*

Another very good technique is to reinforce another child who is behaving desirably when you note one who is performing inappropriately. This has the advantage of giving you something concrete to do as an alternative to criticizing the minute you note something disruptive or unproductive. Instead of scolding or criticizing a child who is annoying you, use this unwanted behavior to remind you to praise children who are following directions and are busy at their assigned work. Instead of criticizing the bad actors, praise the good actors. If Mary is talking to her neighbor when she should be working quietly, look for a quiet worker. Then say, "Jane is really working hard and quietly today," in a voice Mary is sure to hear.

This procedure supplements reinforcement of each individual's good behavior by having each child observe an exemplary child being reinforced for a desirable performance. In this manner, by reinforcing one child, you produce positive effects in the behavior of other children through their modeling of the exemplary child. When praise and attention is given in a loud and obvious way to one

child, this reinforcement acts as a signal to others that they too can earn reinforcement if they behave in similar ways. Of course, some reinforcement must later be forthcoming to the children who have modeled if they are to continue to model the behavior of other children.

Check the items which describe procedures which a teacher can use to avoid the "criticism trap" and to reinforce appropriate alternative behaviors.

- ___ 1. Ignore the child when he is not behaving appropriately, but watch closely for appropriate behaviors and then reinforce them quickly.
- ___ 2. Be careful not to reinforce unwanted behaviors.
- ___ 3. Instead of criticizing the bad actors, find children who are behaving properly and reinforce them as good models.
- ___ 4. Use an inappropriate behavior as a clue to look for good behavior to reinforce.
- ___ 5. Don't let kids get away with bad behavior. When they misbehave, call their attention to the bad behavior and make it clear that you will not tolerate it.

Checks should appear beside items 1, 3, and 4. Item 2 is incomplete because it does not mention the very important point of simultaneously reinforcing alternative desirable behaviors as you attempt to extinguish undesirable behaviors. Item 5 describes a procedure which is clearly contrary to the recommendations we have been making because it directs the teacher to attend to unwanted behavior.

E) BEHAVIOR MODIFICATION IN THE CLASSROOM: HOW TO USE CONTINGENCY CONTRACTS

What is Contingency Contracting?

As previous units have made clear, some major aspects of behavior analysis as applied to the classroom consists of careful specification of desired behavior, the provision of particular consequences following behavior, and the implementation of some system for maintaining the contingency between behavior and its consequences. One procedure for doing this in a formal and explicit manner is contingency contracting. A contingency contract is a written document in which a teacher and student agree that when the student satisfactorily completes a stated amount of an objectively defined academic or social behavior, he will be able to engage in a stated amount of some privilege or preferred activity (or other reinforcer).

A Sample Contract

Konio was a 14-year-old junior high school student. Each day, at the start of class, his history teacher handed out small contingency contracts, called "task cards," to each class member. On a Tuesday morning, Konio's contract read as follows:

Read Unit Eight (pp. 123-146 of history text).

Take the dittoes Unit Eight progress check.

If passed (8 or more correct), take 5 minutes free time in back of room, then get new task card.

If failed (7 or less correct), see teacher for remedial unit.

From the progress checks handed in, the teacher made out new task cards, either for use that day or in the next class the student attended.

Objectives

On completing this unit, a teacher should be able to:

Determine when to use contingency contracts.

Write technically correct contingency contracts for classwork, homework, study skills, and social behavior.

Plan appropriate sequences of contingency contracts.

Train students to write their own contingency contracts.

When Is Contracting Useful?

Most teachers have found that formal contingency contracting is most useful with junior high school and high school-age students. There are a number of reasons for this. Students of this age are old enough to provide reasonable inputs into their own school program, and contracting allows this. Because students receive contracts *before* they start to work, they can negotiate changes with the teacher if they feel that the contract is not appropriate. Similarly, the teacher has a chance to explain to the student in advance what work is required, what the reinforcement will be, what the standards are, and why the work and the specific contingencies have been prescribed. This advance notification of what is required combined with the opportunity to negotiate changes appears to produce a high degree of cooperation from students. The contracting procedure seems to students to be an "adult" procedure, compared with more traditional classroom approaches where they often feel that they are treated as "children." These considerations suggest that contracting be considered whenever greater motivation is desired from older students, particularly if the students tend to be uncooperative, rebellious, or antagonistic.

An example of the use of contingency contracting with an extremely hostile group of junior high and high school aged students who were very uninterested in

academics has been reported by Sloane, et al., (1970). In a pilot program for institutionalized male juvenile delinquents, contingency contracting was used to increase academic performances in programmed reading in a pilot demonstration classroom in the institution. The class average increased from two pages per day before contracting to six pages per day during contracting. The number of frames of programmed material completed per day doubled in six weeks to the maximum allowed by the teacher before switching to other academic subjects. The contracts used points, exchangeable in a dormitory store for various goods, as reinforcers. J. Moffat (1972) obtained similar results for increases in time spent studying with college students, using money as a reinforcer and S. Moffat (1972) had corresponding success with college students using daily life activities as reinforcers. Cantrell (1969) and Bristol (1972) have also reported favorable outcomes using contracting procedures with public school and university students.

Place a check beside the number of each item that describes a reason for using contingency contracts.

1. A contract is negotiated before work is begun. Students can then suggest changes in the contract if they feel that the contract is not appropriate.
 2. The teacher must decide in advance what work is required, what reinforcement will be used, what criteria will be used to judge the work, and what specific contingencies to suggest to the children.
 3. Contingency often works best with junior and senior high students.
 4. Contingency contracting can provide children with more personal participation in their work and more control over themselves and their environment.
-

Items 1 and 2 describe reasons given in the text for using contingency contracting. Item 4 describes an outcome we hope would result from the use of contracts. You decide if it should be checked. Item 3 describes the age range of children who probably benefit most from contingency contracts, but the item does not provide a reason for using contracts. It should not be checked.

Technical Requirements

A contingency contract must meet the same technical requirements as any behavior modification procedure.

1. Specify behavior and contingency. The behavior which the student must perform has to be precisely and fully specified. The behavior must be specified in language that is clear to the student, as well as the teacher. In addition, the amount and quality of this specified behavior, that must be completed to satisfy the contract, must be indicated. In the list which follows, indicate which items meet this requirement, and which do not.
 - a. Read Unit Eight, take the dittoed progress check, and pass eight or more of the items.
 - b. Stay in your seat during history lesson.
 - c. Complete Chapter 10 in your text.
 - d. Read and fill in 10 frames of programmed math.
 - e. Behave yourself for 15 minutes without a single exception.
 - f. Do not speak more than three times between 2:00 P.M. and 2:30 P.M. unless you have first raised your hand and been given permission to speak by the teacher. Any vocal or verbal noise or word counts as speaking. Any time you make noise it will be counted as speaking again.

Let's see how you did on this exercise.

- a. The adequacy of this specification will depend upon the progress check.
If it has questions which have definite correct and incorrect answers listed on a score sheet, this is adequate; that is, the description is adequate if there will be no question as to whether an answer is correct or incorrect. However, if the questions are items such as "discuss the role of such-and-such," a more precise specification would be needed.
 - b. How is staying in your seat defined? Is turning around in it but remaining with the buttocks in contact, staying in your seat? Is standing on your chair acceptable? Until the required behavior is more clearly specified, this contract will not be adequate. In addition, is getting out once for one second, or once for 10 minutes, etc., sufficient to mean that the student has not met the contract? That is, how much seat-sitting is required?
 - c. How does one tell if Chapter 10 is "completed" and at what level. This is definitely no good.
 - d. Will any fill-in be satisfactory? Suppose the student wrote "the teacher is an idiot" in each frame. Would this be sufficient? Again, . . . no good!
 - e. If you said this was okay, do not pass go, do not collect \$200, and reread everything on specifying behavior in Units One and Two.
 - f. Wordy, but satisfactory.
2. Identify appropriate reinforcers and amounts. In contingency contracting, activities, privileges, and home-based reinforcers are often extremely practical to use, as is time in a reinforcement area. Tokens (points) may be given for completion of specific contracts, and accumulated for a reinforcer. See Units Three, Six and Seven if you have questions about any of this. Of course, we hope you do not by now!

3. Establish a written contract by negotiation. In the beginning of contracting, you will probably specify fairly easy contracts to which the student will agree. You should get explicit agreement from the student before finalizing a contract, and you and the student should sign or initial the contract or task card. A sample task card without provision for initialing) is illustrated in the beginning of this unit. In a later section, procedures are described for teaching students to write their own contracts.

Practical Contracting Rules

Homme, et. al., (1969) have formulated 10 rules to serve as a practical guide to contingency contracting. These are summarized below.

1. Immediacy. The reinforcement provided in the contract should be immediate, especially when the procedure is first being used. The importance of immediate reinforcement was discussed in Unit Two.
2. Small approximations. Single contracts should require small approximations to the desired goal behaviors. Early contracts should require *extremely* small approximations. It is important that beginning contracts do not require large "chunks" of behavior, but small amounts of behavior which can be performed easily. Large academic units, chapters, or assignments might best be broken up into several small contracts.
3. Frequent reinforcers. This rule really follows the first two. Contracts should be written so the student receives frequent small reinforcers, rather than infrequent large reinforcers. Casella (1971) showed that even college students will increase their study time if reinforced with frequent visits to an activity area.
4. Accomplishment, not obedience. If you wish students to learn actual skills which will serve them in school and afterwards, your contracts should reinforce accomplishment, not obedience. Thus, do not write a contract that specifies

that the student will do what he is told within 20 seconds, eight out of the next ten times. Anticipate *what* he will be required to do, and contract for the actual performances. Thus, this contract might specify that a student will get his materials out on time, start on time, and so forth, rather than "do what he is told."

5. Reinforcement follows behavior. This seems obvious, but many teachers do just the opposite. For example, if a student requests to speak to another student, he should be told, "Finish your spelling and then you can talk to Bart if you will go right back to your spelling when you are through." Contracts should follow similar form.
6. Fair. A contract should be fair, in that the amount of reinforcement provided should be appropriate for the amount of performance required. If it is too small, the student's behavior will extinguish; if it is too large, the student will not learn anything compared to what he could in that amount of time.
7. Clear. There should not be any ambiguity as to what behavior is required, how much of what quality of it is required, what the reinforcer is, how much of it will be earned, and how this will be judged.
8. Honest. An honest contract is one which is carried out as it is written. Do not contract with students if you do not plan to fulfill the contracts.
9. Positive. Contract for desirable behavior, rather than to get rid of undesirable behavior. A contract requiring that the student stay in his seat and complete a certain amount of work is preferable to one which specifies that he will not wander around and bother people. Your goal is to teach the child something, not merely to extinguish or suppress some of the child's behavior.
10. Systematic. To be effective, contracts must be used in a systematic and ongoing manner. Sporadically using one or two contracts during a week, in which you have trouble, is unlikely to have much effect; a planned series of

contracts over a term based upon considerations of shaping and progressions (see Unit Two) may have a very large effect.

Transitions to Student Written Contracts

Students can learn to write their own contracts. When a student completes his own contract, he presents it to the teacher for review and possible negotiation, and then they both sign. This usually saves the teacher time, and allows the student to develop a self-control skill he can use in other classes or work situations.

Before a student can write his own contracts, two things must happen. First, the teacher (possibly with the cooperation of the children) must make a list of all the tasks and assignments which the student is to complete in the next 3-4 weeks in a given subject area. The list must be complete, and must include an accurate and precise description of everything that needs to be done. Given this list, the student can divide his chores for the next 3-4 weeks into a series of small tasks, budget his time, and then plan a sequence of contracts to accomplish these objectives.

Second, the teacher must train the student to write satisfactory contracts. This procedure can only occur after the student has had some experience with teacher written contracts. Teacher written contracts are the first step in a series of transitions to student written contracts.

Before a student can write his own contracts, two things must happen. Place a check beside the two items which describe each one of these requirements.

1. The teacher does not receive cooperation from the student or teacher written contracts so the teacher allows the student to write his own.
2. Teachers and students should agree on more general questions concerning classroom order, discipline, and respect before highly specific behaviors are spelled-out in a written contract.

- _____ 3. Teachers must select excellent students or subject areas where students excel for the use of contracting procedures. The students who are doing well are the ones who deserve to write their own contracts.
- _____ 4. The teacher, possibly with the help of the children, must make a list of all tasks and assignments which the students are to complete in the next 3-4 weeks. The student can then divide his chores into a series of small tasks and budget his time wisely in order to complete a sequence of contracts.
- _____ 5. The teacher must train students to write satisfactory contracts.

Items 4 and 5 describe the two things that must happen before students can write their own contracts. Item 1 is not one of the two requirements because students who cannot succeed with properly written teacher contracts probably would also fail with contracts that they initiate. Contracting must begin with a clear specification of desired behaviors. Vague concepts such as respect and discipline only detract from the utility of a contract. Item 2 should not be checked. Item 3 describes a misuse of contracting. Remember, unless a teacher feels that performance can be significantly improved, there is generally no need to add reinforcement procedures to situations where children are already performing satisfactorily.

-
1. Teacher written contracts. For at least two weeks the teacher should write the contracts, as has been described. If the student is having trouble fulfilling the contracts, this period should be longer.

2. Student approval of reinforcement. This phase is the same as phase one, except that when the teacher shows the student the contract, the student is explicitly asked if the reinforcement seems too large or too small. This should be continued until the student specifies that the reinforcement is appropriate for at least four to five days in a row.
3. Teacher suggestion of reinforcement. The teacher writes the part of the contract specifying the behavior, but leaves blank the reinforcement part. The teacher suggests a reinforcer and amount, and then asks the student to write down what the student feels is appropriate. If the student specification is about the same as the teacher's, the teacher says something like, "That looks fair." If what the student writes disagrees with the teacher's specification by a substantial amount in either direction, the teacher should say something such as, "That does not seem fair to me" and negotiates until a fair amount of a reinforcer is agreed upon. When the student specifies an amount which is in substantial agreement with the teacher's suggestions for four to five days, go on to the next step.
4. Student specification of reinforcement. The teacher merely asks the student to write in the kind and amount of reinforcer. If this seems substantially appropriate, merely say "good" or something equivalent. If it seems unfair, negotiate! When the student specified reinforcement seems appropriate for four to five days in a row, go on to the next step.
5. Student approval of amount of work. In this step, the teacher again writes the *whole* contract, but has the student approve the amount of *work* required, in the same way that the student approved the amount of reinforcement in step 2.

6. Teacher suggests amount of work. In this step, the teacher writes in the reinforcement, but suggests the amount of work to the student; and asks him to write in the work. The same procedures are used for amount of work as were used for amount of reinforcement in step 3.
7. Student specifies work. The teacher writes in the amount of reinforcement, but asks the student to write in the amount of work. The same procedures are used for amount of work as were used for amount of reinforcement in step 4.
8. Student written contract. In this step, the student writes the entire contract. If the teacher approves, the teacher signs it. Otherwise, negotiations are required. If the contracts written by the student are way out of line, backtracking may be needed. If the amount of work is appropriate but the amount of reinforcement is not, repeat steps 1 to 4, and then come back to this step. If the amount of reinforcement is usually appropriate, but the amount of work is not, go back to step 5. If both are poor, repeat the entire sequence.

Order the steps from teacher written to student written contracts by placing a 1 next to the item which describes the first step, a 2 next to the item which describes the second step, etc.

- ___ 1. teacher suggestion of reinforcement, student writes reinforcement
- ___ 2. student approval of amount of work in contract written by teacher
- ___ 3. teacher suggests amount of work, student writes amount of work
- ___ 4. student writes contract

- ___ 5. teacher writes contract with no help from student
 - ___ 6. student approves reinforcement in contract written by teacher
 - ___ 7. student specifies amount of work
 - ___ 8. student specification of reinforcement
-

1,3; 2,5; 3,6; 4,8; 5,1; 6,2; 7,7; 8,4

Contracting for Schoolwork

Most uses of contingency contracting in the classroom will have to do with academic work done in school, as has been illustrated by the examples given so far. Several strategies are available to guide the teacher in determining how a sequence of contracts should be formulated.

1. For a student whose major problem is that he does little work, each contract might require a slightly greater amount of work than the last one.
2. For a slow student who does work regularly, each contract might require that a set amount of work be done in a smaller amount of time than the last contract required.
3. For a sloppy or inaccurate student, each contract might require a slightly higher degree of accuracy, a higher grade, or less errors than the previous one.

The overall success of contracting in producing any real change in student performances will be determined by the total sequence of contracts. Planning the strategy to be used in this sequence is as important as planning the technical requirements of an individual contract.

Contracting for Homework

Teachers can contract with students for performances related to homework, as well as for school work. Some have suggested that homebased reinforcement is especially appropriate when contracting for homework.

1. For a student whose main problem is that he does little homework, each contract can require a slightly larger amount to be done than the last contract did.
2. For a student who does not get his homework in on time, each contract can specify a deadline, and the deadlines can be made shorter and shorter in successive contracts until they are the same as the deadlines given students who perform well.
3. For a student who puts things off to the last minute, and then does a sloppy rush job, contracts can break the work down into smaller amounts with a due date for each portion of the project or assignment. Each later contract can then break the work down a little less finely.
4. Again, for sloppy or inaccurate students, each contract can require a slightly more accurate paper, a lower error rate, or a higher grade than previous contracts.

Contracting for Study Skills

1. For the procrastinator, contracts can be written for starting classwork within a certain amount of time. Each contract can require a faster start.
2. For the poor scheduler as far as homework, contracts can be written to start homework at a set time and place at home each day. Successive contracts can require that this be met more and more strictly.

3. For the student who "forgets" books, materials or supplies, contracts can be written to require that these be in the correct place at the correct time. In each successive contract more and more items can be included.

Contracting for Social Skills

A sequence of contracts for social skills require expert use of shaping procedures and of correct progressions. Some general strategies are listed below, but must be considered only suggestive.

1. Each contract can require a slightly better approximation than the previous one. For instance, one contract might require an isolate student's quiz, while the next contract might also require him to go over the scoring with the other student.
2. Each successive contract can require a slightly higher or lower frequency of some behavior. For instance, if a student has excessive "talk-outs" at inappropriate times, each contract might require a slightly smaller number of such behaviors than the last. (*Note: A "negative" contract is not ideal in terms of rule #9 of contingency contracting.*)
3. Each new contract can require some desired behavior to occur in more situations than the last one did, or require that an undesired behavior occur in less situations. For instance, one contract might require a student to help another student in some way during reading, a second might require that he do this at least once during both reading and math.

4. Each contract can require some desired behavior to last for a greater length of time than did the previous contract. For instance, one contract might require a student to remain seated for 10 minutes, the next might require 12 minutes.

Match the letter of each sample contract with the number of the item which best describes the problem for which the contract was written.

NOTE: A sample contract represents only one step in a planned sequence of contracts for a child.

____ 1. John works too quickly. He rushes to get finished and generally scores below 50% on his assignments.

- a. Your goal for today is to work at least six problems in 10 minutes.

Turn to page 15 in your arithmetic book.

Work problems 1,3,6,7,9, and 11.

When you finish, show your work to the teacher.

If you have attempted at least six problems in 10 minutes, take six minutes free time in the reinforcement area, and then return to your seat and correct any problems you missed.

If you fail to work six problems, return to your seat and continue working on the problems.

____ 2. Mary rarely completes 20% of an assignment. She generally starts working quickly, but then quits after a minute or two.

- b. Return to the classroom quickly after the lunch period;

If you are in your seat three minutes after the bell rings and have your spelling book open to page 30, give yourself 10 points.

If you have not returned to your seat in three minutes or do not have your spelling book open to page 30, award yourself zero points.

3. Jimmy is an able student, but other activities compete successfully with his working behavior. He typically doesn't begin an assignment until the period is almost over.

c. Read the six paragraphs on page 30-31.

Answer the questions on page 32.

Ask the assistant teacher to check your answers.

If you have correctly answered at least seven of the 10 questions, you may help the assistant teacher check papers.

If you have not answered at least seven questions correctly, re-read the paragraphs and answer the questions again.

1,c; 2,a; 3,b

Problems With Contracting

1. One problem that can arise with contracting has to do with its obviousness and explicitness. Students may learn, under certain conditions, to perform only those desirable behaviors for which a contract exists. This tends to occur when, as a general rule, the teacher gives little reinforcement for behavior. With a teacher who never praises, gives privileges, or otherwise encourages good work or behavior, students merely learn what is appropriate; they learn that, in fact, the only performances reinforced are those under contract, and behave accordingly. The solution to this is obvious--have a class which is generally reinforcing, and use contracts only for problems, or to accelerate things.

2. Some students may "test" any system, and teachers, as well as students can flunk tests. If students who are contracting for math state that they will not do social studies unless there is also a contract, this behavior should not be reinforced by then contracting for social studies. First, it should be pointed out that math has been a problem, and that social studies has not, and for this reason contracting is being used with one and not the other. It should then be pointed out that contracting will *not* be used with social studies, and if math contracting disrupts the class rather than improves it, contracting will be discontinued. If the problem continues, discontinue math contracting. Tell the students that when they feel that they can contract for math and still do social studies without griping, contracting will be started again.
3. For similar reasons, problems may develop when contracting is discontinued. One way to minimize these is to use rather long-term contracts in the final weeks. Another way is to go to self-contracting, and let the students provide their own reinforcement. For example, a student can be encouraged to write a contract for himself which specified that when he completes such-and-such, he will go bowling after school. In addition, many of the procedures mentioned for fading tokens in the end of Unit Six are applicable.

Exercise

1. Write four sample contracts, one for school work, one for homework, one for study skills, and one for work skills.
2. Check each contract against each of the ten "rules" given earlier in this unit. Revise any which are inadequate.

3. *Explain contracting, and the rules of contracting, to one of your classes. Go over the four contracts with your students. Have them discuss how well each contract meets each of the ten rules. Revise the contracts again if necessary.*
4. *Keep a copy of each revision, including the original version, for your information and to discuss with the coordinator.*

F) BUILDING ACCEPTANCE OF SPECIAL STUDENTS IN THE REGULAR CLASSROOM

One aspect of classroom management that is perhaps even more important than the management of behavior is the management of attitudes. Yet research has shown repeatedly that attitudes can be changed by changing behavior in just some of the ways you have been learning. This is a particularly important point for teaching special students as attitudes toward special children in the regular classroom pose a particular problem. The sensitive teacher realizes that the many problems of a child with a learning disability are frequently compounded by attitudes that make him feel inferior and disliked. Thus doubly handicapped by low achievement and low status, the special student, fully aware of attitudes toward him often loses the last bit of motivation and interest in school that have kept him learning even at a slowed pace. How to break this defeating pattern?

The first place to begin is with the teacher's own attitudes toward the special child. Research studies have shown that when a student is perceived by his teacher as inferior to normal students, no matter how well he behaves, both his social adjustment and his academic accomplishments tend to decline even further. Most teachers tell us that they rarely actually feel negative toward a special child but often resent the extra time and energy that integrating his lower ability levels into their curriculum demands. Thus, a main starting point for the teacher in developing positive attitudes in her classroom toward the special child might be her own efforts to seek out materials and methods that will allow her both to teach the special child at his level and also let him work on his own a maximum amount.

Several techniques have been developed in this regard. First, as mentioned repeatedly in Module 4, there is a multiplicity of available bisensory media materials for all subject matters at all skill levels, and these may be explored through the regional education service centers. These materials allow the student to work on his own at listening and viewing posts with a regular schedule for large blocks of the day, with only intermittent checks by the teacher.

Another technique is the use of interstudent tutoring so that the teacher will not be overwhelmed by the variety of children, curricula and materials, and so that children will have 1-to-1 relationships in learning experiences. Additionally, these tutorial arrangements foster cooperative attitudes, and mutual and self respect between special and normal students-- a major educational goal. Tutoring may be used in various ways, and the teacher should experiment to find the best combinations. She is also responsible for keeping records of each child's progress so that appropriate assignments of tutor-tutee relationships may be made.

As mentioned in Module 4, record keeping and task analysis are essential techniques for keeping up with various ability levels. The techniques you have just learned in the behavior modification materials on Contingency Contracting lend themselves particularly well to keeping track of a child's academic and social behaviors through charts or graphs, usually kept by the child and checked by the teacher. This insures a highly accurate record of information at all times available both to the child and the teacher about the child's progress and his present level of performance. Record keeping devices also mesh well with tutoring. For example, the number of correct answers during interstudent drills and tutoring sessions may be graphed, and after a stipulated number of perfect drills have been recorded by one student

for another, the Teacher would be asked to do final skill testing and advancement.

A fourth step in developing management techniques to help the teacher move toward a positive attitude toward special children in her regular classroom, after multisensory materials, interstudent tutoring, and student-monitored contingency contracting, is the teacher's own request for inservice training on teaching the special child in the regular classroom. Requests from teachers will help keep this topic in high priority focus for funding and program development.

The other half of attitude-building in working with special children in the regular classroom is, of course, the attitudes of the other children toward the special child. One method already mentioned is the creation of an interstudent tutorial program in which a child who is strong in a skill or subject area is allowed, under the teacher's assignment and supervision, to tutor and drill a child with disabilities in the subject. If handled properly and treated as a privilege both children will benefit: the stronger student with an increased sense of self-esteem which tends to be passed on to the weaker student as encouragement and enthusiasm in his progress, and the weaker student with increased motivation, interest and pride in his work as the result of the 1-to-1 attention.

Such tutorial relationships also tend to have contagious results: when other students see a strong student being kind, helpful and encouraging to a weaker student and know that it is a privilege for him to be a tutor, their own helpful, kind and encouraging behavior is reinforced and tends to increase.

This basic principle of learning--that a desired behavior may be modeled and rewarded in order to develop and encourage it in others--is basic to the behavior modification techniques you have been learning in this chapter. It is then only a short step from the reinforcing of such cooperative, helpful behavior to the development of cooperative, helpful attitudes. Research has shown that negative attitudes toward special students change and become increasingly positive after behavior toward them has been changed by behavior modification in a positive direction. It seems to be a principle of human nature, even among young school children, that once you come in close, cooperative contact with someone you thought you disliked, you usually find you like them after all. Children show these very changes in attitude quickly when given the "privilege" of "helping" a special student in a structured, supervised tutorial program. The initial reward of the privilege of being a tutor is soon compounded by the rewards of the relationships that are formed and by the increased sense of competence, respect and pleasure developed between the special and normal students.

Using the principles and techniques you have learned in this module on behavior modification, try to think of creative ways in which you might foster the reinforce cooperative, positive attitudes in normal students toward special students by reinforcing cooperative and positive behavior. Be sure to "catch your students" being cooperative and helpful and to reinforce them for it with compliments and encouragement, instead of taking such behavior for granted. Watch for these moments and capitalize on them for they will be the jewels in your crown as an expert behavior modifier.

4) BIBLIOGRAPHY
(BEHAVIOR MODIFICATION)

BOOKS:

- Buckley, N.K. and Walker, H.M., Modifying Classroom Behavior, Champaign: Research Press, 1970
- Carter, R.D., Help! These kids Are Driving Me Crazy, Champaign: Research Press, 1972.
- Diebert A.N. and Harmon, A.J., New Tools for Changing Behavior, Champaign: Research Press, 1970.
- Homme, L., How to Use Contingency Contracting in the Classroom, Champaign: Research Press, 1970.
- Patterson, G.R. and Gullion, M.E., Living with Children, Champaign: Research Press, 1968.
- Sheppard, W.C., Shank, S.B. and Wilson, D.; How to be a Good Teacher, Champaign: Research Press, 1972.

ARTICLES:

- Bradfield, R.H., Brown, J., Kaplan, P., Rickert, E., and Stannard, R.; The special child in the regular classroom; Exceptional Children, February, 1973, 384-390.
- Becker, W. C., Madsen, C.H., Arnold, C.R. and Thomas, D.R.; The contingent use of teacher attention and praise in reducing classroom behavior problems; The Journal of Special Education, 1, No. 3, 287-307.
- Cantrell, R.P., Cantrell, M.L., Huddleston, C.M. and Wooldridge, R.L.; Contingency contracting with school problems; Journal of Applied Behavior Analysis; 1969, 2, 215-220.
- Dee, V.D., Contingency management in a crisis class; Exceptional Children; April, 1972, 631-634.
- Fine, M.J., Nesbitt, J.A. and Tyler, M.M., Analysis of a failing attempt at behavior modification; Journal of Learning Disabilities, 1974, 7, No. 2, 12-17.
- Forness, S.R. and MacMillan, D.L., The origins of behavior modification with exceptional children; Exceptional Children, 1970, 37, 93-100.
- Glavin, J.P., Quay, H.C., Annesley, F.R. and Werry, J.S., An experimental resource room for behavior problem children; Exceptional Children, 1971, 38, 131-137.

Kaplan, B.L., Classroom discipline is more than technique; Elementary School Journal, 1973, 245-250.

Kuypers, D.S., Becker, W.C. and O'Leary, K.D., How to make a token system fail; Exceptional Children, 1968, 35, 101-109.

Lovitt, T., Behavior modification: The current scene; Exceptional Children, 1970; 37, 85-91.

Lovitt, T., Behavior modification: Where do we go from here?; Exceptional Children, 1970, 37; 157-167.

O'Leary, M.P., Behavior modification as an approach to eliminating the inattentive behaviors of a slow reading group in a regular classroom; SALT, December, 1969.

Thomas, D.R. Becker, W.C. and Armstrong, M., Production and elimination of disruptive classroom behavior by systematically varying teacher's behavior; Journal of Applied Behavior Analysis, 1968, 1, 35-45.

1. In addition to the fact that most of us have learned to attend to negative rather than positive behaviors, another reason that makes it hard to change is:
 - (a) that most of us are used to negative behaviors
 - (b) that a teacher may receive no reinforcement
 - (c) that a teacher may be receiving immediate reinforcement for attending to undesirable behavior
 - (d) none of the above

2. Negative attention which produces a temporary positive change and an increase in long-term bothersome behavior is referred to as:
 - (a) "criticism trap"
 - (b) current ration
 - (c) shaping
 - (d) modeling

3. The science of behavior analysis depends heavily upon:
 - (a) The specification of observable, measurable behaviors
 - (b) The theories of Freud
 - (c) A complete psychological profile of the individual under consideration
 - (d) None of the above

4. Determining a student's on task behavior during each thirty seconds of a thirty minute period is an example of the _____ method of recording behavior.
 - (a) interval
 - (b) frequency
 - (c) duration
 - (d) intensity

5. Check the student behaviors which can be recorded accurately. The student
 - (a) is insolent

- (b) throws paper at other students
- (c) waits his turn in line to leave the room
- (d) disrupts the class
- (e) is tolerant of other students' opinions

MODULE 7

POST TEST

KEY

1. C
2. A
3. A
4. A
5. B, C

CHANGE AGENTS

Change agents are specific behavior modification reinforcement and/or extinction strategies that are particularly appropriate for use in public education. The following discussion presents many different kinds of Change Agents, all of which can be applied to the operation of the Education Intervention and Management Model, for the purpose of increasing the likelihood of intervention success and presenting problem resolution.

A. Contingency Management: "Contingency Management" is often used as an umbrella term to express the general concept of behavior management. However, the authors regard "Contingency Management" in a more restricted fashion, and limit the concept application to: 1. Contract Learning; 2. the use of Free Time; 3. the Daily Class Schedule; and 4. the use of High-Interest materials. The common denominator of our use of Contingency Management is the Premack Principle (Premack, 1965), which we consider to mean; a High-Probability (high-interest) task which is available immediately following a Low-Probability (low-interest) task will increase subject motivation to complete the low-prob task in order to gain the high-prob task. Thus, the discussion which follows applies the Premack Principle and Contingency Management concepts to the four above-described Change Agents.

1. Contract Learning

Contract Learning involves the drawing up of a written or oral behavior contract, by a teacher and student, in which the student contracts to engage in a particular low-prob task, at the successful completion of which the teacher contracts to provide the student with a high-prob task. Thus, the teacher could contract with Jeff to correctly solve fifteen arithmetic tasks on five successive days, at the successful completion of which the teacher would treat Jeff to a movie. Although the contracting can be oral in nature, the authors prefer a very simple written contract. As the reader may recall, Contract Learning is important to the operation of the Learning Menu Classroom.

2. Free Time

The Free Time concept operates as a Change Agent by means of permitting a subject to engage in a limited amount of free time activity as a high-prob task after having engaged in a low-prob task. Free time can be used in conjunction with Contract Learning and/or a free time classroom area, or can exist by itself as a form of positive reinforcement. The use of free time is an effective and appropriate secondary student payoff, particularly in terms of accumulating sufficient free time to earn a school sponsored dance, auto show, movie, etc. The Interest Center, Learning Center, and Learning Menu Classrooms use free time as a major source of reinforcement. However, in order to be reinforcing, the use of free time must be need-satisfying to the individual involved.

3. The Daily Class Schedule

The authors recommend the use of Contingency Management with respect to the daily class schedule. This can easily be arranged by means of following each low-prob task with a high-prob task. Thus, with respect to the Daily Class Schedule presented in Chapter 1 of Part V, the reader will note that a high-prob task begins and ends the day, and follows each low-prob task. This represents an attempt to increase subject motivation to attend school, as well as to complete the various low-prob tasks, by means of the contingent high-prob tasks. In other words, by interspersing high-prob with low-prob tasks, the student has something positive to anticipate throughout the school day.

4. High-interest materials

The last Contingency Management concept involves increasing the stimulus value of a learning experience by means of using high-interest (and in some cases low-vocabulary) educational materials. The use of high-interest materials is designed to increase student motivation relative to performing what normally is a low-prob tool-subject task for that student, but what is upgraded to a high-prob task by means of the use of high-interest materials. The regional IMC represents a good source of high-interest materials, as does the publication by Marshall Hiskey, to which reference is made in Chapter 3 of Part V.

B. Token Economy: Token economy is a self-contained and classroom-wide behavior modification strategy which has the power and versatility to be effective in and by itself. Token Economy operates by means of the use of poker-chip size tokens, which simulate currency by means of having one-cent, five-cent, ten-cent, twenty-five cent, or fifty-cent values stamped on them. All of the previously discussed behavior modification precepts pertain to the administration of the tokens. However, there are some procedures that are unique to the Token Economy system which need to be discussed: The system can function on a classroom-wide basis, or on an individual student basis. Relative to the former situation, four or five classroom-wide desirable target-behaviors should be clearly and simply identified on large posters. Each behavior should be associated with a certain token value. The posters should be prominently displayed in the classroom. Whenever a student engages in desirable target-behavior, the appropriately priced token should be awarded that individual. At regularly scheduled times (e.g., once a day for young and/or disturbing students, much longer intervals for older and/or more adaptive students), a classroom-based "store" with a student storekeeper should open for business, at which time students may surrender the total value of their tokens for appropriately priced high-probability objects.

If the system operates on an individual student basis, then each involved student should have a small card taped to his desk on which is identified three or four desirable target behaviors, each of which should be associated with a certain token value. Whenever the student engages in that desirable target-behavior, the appropriately priced token should be awarded. At regularly scheduled times, involved students should be permitted to purchase high value objects at the classroom "store."

Some important components of the Token Economy system need expression. As with any positive reinforcement technique, the appropriate token should be administered immediately after the earning behavior. Also, the administration of the token should be paired with a social reinforcer (verbal praise in particular). In addition to the tokens having store-purchase value, the tokens could be used to buy free time, food, trips, movies, etc. It is in this total-purchase capacity that the Token Economy system can operate as a self-contained and independent behavior modification procedure.

The authors have found the Token Economy system to be very effective. We have also found that the effectiveness of the system is increased if a real store front, built by the students, is used; if the student storekeeper dispenses the purchased objects in conjunction with the (reinforcing) teacher; if actual token change is made; and, if the teacher wears a multi-pocket apron, one pocket for each token denomination.

Although the Token Economy system could be used in conjunction with the Check-mark system the rationale for so doing would have to be very persuasive, in terms of avoiding reinforcer "over-kill."

C. Body Image: Body Image is defined as "the adequacy with which one regards one's physical appearance, physical structure, and physical ability." The authors contend that because of perceptual problems, actual physical incapacity, poor reality testing, etc., most special education students have body image problems. For this reason, the authors strongly endorse a physical classroom design which makes use of the Body Image Center concept and activities. As suggested by the sample Daily Class schedule which is presented in Chapter 1 of Part V, the body image activities should be scheduled for 10 or 15 minutes each, two or three times a day. The body image activities should be regarded as a high-prob task, and should thus follow low-prob tasks.

It is important that Body Image Center and activities be seriously regarded as one means of resolving body image problems. As such, the body image activities should not be an unorganized expression of physical education exercises, but rather a coordinated effort to build body image adequacy by means of, for example, relating the body image activities to each other, having body image goals for each subject.

The authors regard Body Image development as an essential part of Diagnostic-Prescriptive Teaching and Programming classroom, and strongly urge an understanding of the theoretical and practical concepts involved.

D. Tally System: The Tally (Point) system can operate in three different ways, all of which employ a small spiral-bound notebook and the recordation of tallies on both the left and right pages.

1. The first Tally System use is for the purpose of identifying and recording the frequency with which specific desirable and undesirable behavior occurs. Thus, one tally (pencil mark) is made on the left page of the notebook for each time a specific desirable behavior occurs, and one tally made on the right page of the notebook each time a specific undesirable behavior occurs. This tally use is effective for parents and teachers relative to objectively demonstrating to them the frequency during a day, week, or month with which specific desirable or undesirable behavior occurs. It is often reality-awakening to parents who protest that their child never does anything wrong to realize the tally buildup on the "undesirable" page.

2. The second Tally System use is for the purpose of recording the frequency with which a reinforcer or an aversive stimulus is administered. Again, one tally on the appropriate notebook page for each kind of behavior. This Tally System use is also effective for parents and teachers, in terms of objectively demonstrating the frequency with which they administer praise and punishment. Relative to (1) and (2) above, it is most important, especially for parents, that the Tally System be objectified in the following fashion: specific "desirable" and "undesirable" behavior should be identified, in list form, in order to standardize the Tally administration procedure, as well as to avoid administrator misinterpretation and confusion. Similarly, the specific kinds of behavior that may be reinforced or receive an aversive stimulus should be identified in list form, for the same reason.

3. The third Tally System use is for the purpose of actually serving as a positive reinforcer or aversive stimulus, where each tally is regarded as a reinforcer or aversive stimulus. This tally use is effective as a home or classroom behavior modification strategy, but only in relation to certain administrative precepts, which follow. First, desirable and undesirable behavior must clearly be identified, so that the subject can anticipate earning a Tally by means of engaging in known desirable behavior. Second, in order to have any value, the subject must be aware that a "reinforcer" or "aversive" Tally has been administered, at the time of that administration. Third, to increase the impact of the meaning, the administration of the Tally should be paired with a social reinforcer,

usually of a verbal-praise nature. Gradually, the social reinforcer should assume the same reinforcement-power initially associated with the Tally. Fourth, a Tally which is used as a positive reinforcer must be administered immediately after the desired response. Fifth, the subject should be permitted to surrender the Tally total at the end of a given time period for objects which have pre-established surrender value. In this context, the Tally System is similar to the Checkmark System. Sixth, it is possible to use the Tally System as an extinction technique, by means of identifying specific undesirable behavior, and, at the end of the particular time period adding the "undesirable" tally points to the point value of the surrender objects, thus making it more difficult to earn those objects by the degree to which "undesirable" tally points were administered. And seventh, most of the positive reinforcement principles which are discussed in the Positive Reinforcement Chapter apply to the administration of the Tally System.

E. Time-Out: The Time-Out strategy is a powerful extinction technique. Optimally, the time-out area is a small room that is external to, but contiguous with, the classroom. In order to reduce the possibility of the time-out area being reinforcing, the area must be bare, except for a chair. However, if there is no external room, a time-out area can be made within the classroom by means of plyboard, heavy duty screen, or even by means of a very large moving box. As has been previously pointed out, sending a subject out of the room to, for example, the lobby of the main office, or sending a subject at home to his room, is an inappropriate application of the time-out concept, due to the substantial reinforcement that is available from peers in the lobby, and toys in the room. We would thus expect those subjects to engage again in the undesirable behavior in order to be sent to the lobby or to the room.

Some important time-out mechanics need identification.

1. In order to be effective, the time-out concept must be aversive. Thus, it probably would not be an aversive experience for a social isolate to be sent to the time-out area, and as such, the desired behavior modification would likely not occur.

2. Because of the physical isolation involved, the time-out strategy should be regarded as a last resort extinction technique.

3. The offending student should be placed in the time-out area with as little moralizing and communication as possible, in order to avoid fortuitous reinforcement by means of the attention. Nonetheless, the practitioner should indicate to the subject that the subject has behaved in an "unacceptable" way, very briefly explain the specific nature of that unacceptable behavior, and then indicate that the subject must spend 10 minutes in the time-out area, after which he may rejoin the group.

4. The time-out length of placement should never be more than 10 minutes.

5. If a student is so unadaptive that the undesirable behavior is still operative after three time-out strategies in a given day, that student should be suspended from school for the rest of that day.

It is possible to use the time-out strategy as a means of Negative Reinforcement. Assuming that placement in the time-out area is aversive, the subject may be placed in the time-out area with instructions to come out only when he is capable of "desirable" behavior. When the subject removes the aversive situation by means of the desirable behavior, that desirable behavior will be "negatively reinforced." If this application of the time-out strategy is used, the specific nature of the

"desirable" behavior in which the subject must engage in order to leave the time-out area must be fully identified to the subject.

The authors have found the time-out strategy to be very effective. However, within public education, it is an unconventional classroom technique, and the operator should be prepared to defend its use.

F. Modeling: the Modeling concept (Bandura, 1960) operates on the assumption that behavior is learned by means of imitation. As such, if Lamar's hero can be identified (through, for example, a sociometric device), and if Lamar models his hero's behavior, then Lamar's behavior can be modified by means of shaping the behavior of the hero through positive reinforcement and/or extinction techniques. Thus, the Modeling strategy is a once removed behavior modification tactic, and is to be guided by all of the previously discussed Behavior Modification precepts.

The authors have found the Modeling strategy to be quite effective, especially by means of using older students as models for younger students. In addition, the authors have found that four different kinds of people employed in public education are very effective models; those people are the janitor, the building principal, the coach, and the cafeteria worker.

G. Medication: Behavior Modification techniques are not as effective with behavior problems that are due to a central nervous system dysfunction. Thus, the authors contend that lawful medication is the best way to bring organically-based behavior problems under initial control, after which behavior modification strategies are likely to be much more effective. As such, it is incumbent upon educators to be knowledgeable about the various kinds of medication, as well as the medical practitioners in the community who are helpful with school-based learning and behavior problems. However, the reader must be cautioned that it is never acceptable behavior to refer a minor subject directly to a physician. Any concern of that nature must be expressed through the school chain of command, to the parents, and then by them to the practitioner of choice.

The following information relates to various medicines which are often prescribed for the control of the associated symptoms:

1. Dilantin: seizure control.
2. Phenobarbital: seizure control, and, a slow-acting sedative for children.
3. The combination of Dilantin and Phenobarbital is often used for seizure control.
4. Stelazine, and Thorazine: anti-psychotic medicine.
5. Librium, and Valium: mild tranquilizers.
6. Dexedrine, and Benzedrine: anti-depressant medication (stimulants).
7. Nembutal, and Seconal: rapid acting sedatives.

H. Crisis Intervention: Crisis Intervention is a short term change agent which is applicable to a moderate to large size school. Crisis Intervention operates by means of:

1. Assigning a "crisis teacher" full time to a classroom which is engineered in terms of interest centers.
2. Having regular teachers contact the crisis teacher by phone relative to acute student behavior crisis.
3. Having the crisis teacher take the offending student to the crisis classroom, and by means of isolation, structured environment, and order-tasks which are designed to promote success, assist the offending student to regain control.
4. As soon as possible rearticulate the student with the regular class.

The Crisis Intervention concept works best: on a period to period, or day to day, basis; if no more than 10 students are in the classroom at one time; if the orientation of the classroom is nonpunitive, but rather an attempt to help the subject regain control of his emotions; and, if the crisis teacher has no educational responsibility except to return the student to the regular classroom as soon as possible.

I. Limited Day: Every state has a compulsory school attendance law. This means that students between certain ages are compelled to attend school. However, the authors argue that a teacher has the right not to have a disturbing subject in class after all remedial possibilities have been exhausted, and after all have been found ineffective. However, after all those possibilities have been exhausted, but prior to exempting the student from the compulsory attendance law, one last resort strategy that can be employed is the "Limited Day." This strategy operates by means of exposing the particular student to only that part of the school day to which a successful adjustment can be made. Gradually the length of successful adjustment time is increased, according to the coping limits of the subject. As such, a subject may come to school for only 15 minutes per day for the first three weeks; then 30 minutes; 60 minutes; 90 minutes; etc.

During the time the student is in attendance, it is very important to make use of appropriately powerful positive reinforcement techniques. However, it is equally important for the educator not to feel guilty about the inability to effectively manage the behavior of this kind of student. For, whatever classroom management strategies are employed, there will always be some subjects who are simply unable to take advantage of the instructional program. Their problems long precede school attendance, and although teacher concern is commendable, painful guilt feelings relative to the inability to cope with this kind of subject represent incorrect blame.

J. Student Group-Dynamics: The concept of Student Group-Dynamics operates in three different ways, all for the purpose of helping subjects understand themselves in relation to others. The three ways are Role Playing, Psychodrama, and Counseling. The counselor attempts to help the subject understand himself by means of interpreting to the subject the meaning of the verbal, motor, written, etc., symbols used by the subject. This is not a technique that the casually trained counselor should enjoy.

1. Role Playing: Role playing typically involves two individuals acting out opposing social-personal roles, for the purpose of gaining greater understanding regarding the feelings toward attitudes involved with those roles. Role playing is a tool of understanding, and is most effective with respect to issues, as opposed to "problems," that deal with social-personal inter-relations. Role playing is a very flexible tool, and can be used spontaneously to examine interpersonal issues of recent onset. Usually, the teacher assigns students to act out roles on the basis of the needs of students in relation to the nature of the particular interpersonal issue. The role playing actors should feel free to be spontaneous in their expression of the roles and usually two opposing roles encourages such spontaneity.

The self-understanding rationale of role playing can be facilitated by means of conducting a group discussion subsequent to the role playing regarding the nature of the feelings expressed, the way the role-played issue was resolved, etc. Unlike Counseling or even Psychodrama, role playing is not a tool of choice for "chronic problem" understanding, but rather, effective for the shallow working through of interpersonal issues that need to be experienced in order to be understood. For example, role playing is most helpful to mental retardates in terms of appropriate behavior relative to name-calling ("Weirdo," "Retardo," etc.).

2. **Psychodrama:** Psychodrama involves subjects acting out various assigned social-personal roles, in the form of commercial or teacher-written skit-scripts, for the purpose of achieving understanding of the feelings and attitudes involved with those roles. The scope of psychodrama as a tool of understanding should be limited, in the classroom, to acute and transient social-personal problems. Nonetheless, the effectiveness of the psychodrama tool is enhanced if the actors and student-audience have the opportunity to formally discuss the psychodrama-revealed feelings and problem resolution subsequent to the skit. Teacher-written scripts can be very effective, where the script deals with particular student problems, and where students are assigned roles that are based on their relationship to those problems. The psychodrama skit can be either closed-ended or open-ended. The former means that the script directs an ending. The latter, which is a more powerful "understanding" tool, involves the script ending at a crucial mid-point, with the actors projecting themselves into the way in which the problem is resolved.

3. **Counseling:** Counseling is designed to help individuals understand themselves in relation to others. The counseling process operates by means of providing an accepting atmosphere of empathy and genuineness for the purpose of facilitating that understanding. The counseling process can be of an individual or group nature, and can involve at least three major and different counselor techniques and strategies: (a) Reflection of Feeling; (b) Clarification, Support, and Advice; and (c) Interpretation of Symbolism.

a. **Reflection of Feeling:** This counseling technique involves the sensitive understanding of a subject's "internal frame of reference," and the consequent reflection by the counselor to the subject of how the subject really feels, or what the subject really meant to say. In a non-threatening atmosphere, reflection of feeling permits the subject to "experience" himself in an accepted way, which gradually permits the ego to master those feelings that have previously been disguised due to their inherent threat. However, it is absolutely essential to the welfare of the counseling client, as well as the effectiveness of this kind (or any kind) of counseling process, that the content and depth of the feeling which is "reflected" never be more than that which the subject can understand and for which he is emotionally ready. Thus, it is professionally and humanly wrong to blast a subject with a full emotional exposure to himself when that subject is not able to cope with the power or nature of the information. Reflection of feeling is not as easy as it may seem, as a great deal of perceptiveness, empathy, and the personal security necessary to understand and "give" to others, is involved.

b. **Clarification, Support, and Advice:** This counseling technique involves engaging in objective problem-solving activity with the subject on a clarification and advice basis. This is much more directive than the reflection of feeling technique, as the latter involves the delicate and subjective attempt to focus on, and then reflect, the inner dynamics of the subject.

c. **Interpretation of Symbolism:** This counseling technique is very sophisticated, and should not be conducted by counselors not trained to the psychology of symbols.

K. **Counseling Mechanics:** The authors recommend that teachers of self-contained special education classes conduct, or cause to be conducted, student group-counseling, for the purpose of increasing subject self-understanding, understanding of others, and general coping skills. The mechanics of the counseling process should operate in the following fashion:

1. The authors recommend a group co-counselor whenever possible. This could involve the school counselor, a teacher who has the necessary training, etc.

2. Optimally, no more than eight subjects should be included in a counseling group.

3. The physical group-counseling arrangement should involve chairs in a circle.

4. Once the counseling group begins, it should be closed to additional subjects, regarded as confidential, and operate without visitors.

5. The group counseling session should be conducted once (no more than twice) a week, for 30 to 45 minutes in length, depending on the age of the subjects. Normally, the younger the subjects, the shorter the session length. Also, for subjects younger than seven or eight years, play activities are a better way of conducting counseling than by means of verbal discussion.

6. The authors recommend that the counseling session be conducted during the next to last period of the school day, and that the subjects be provided with a controlled and brief activity period subsequent to the counseling session for the purpose of draining residual feelings prior to leaving school.

7. The counseling sessions should be offered on a scheduled basis, and that schedule should be conscientiously maintained.

8. In order to foster a non-threatening group counseling atmosphere, identified behavior controls should be minimal. However, some guidelines must be established, such as, no personal or property damage, no obscene language, no out-of-seat physical activity, etc.

9. No one should operate as a counselor without the necessary training, experience, and philosophical understanding of Man.

L. Parent Group-Dynamics: The authors recommend that special education teachers conduct, or arrange to have conducted, class-related parent group-counseling. This change agent technique operates in a way similar to that of student group-counseling. The authors recommend: a trained co-leader (counselor, nurse, etc.); no more than 15 people in the group, which optimally should involve both parents; and, that the group meet once a month, at the home of the various parents, on a rotating parent-responsibility basis. As indicated previously, the authors recommend giving priority special education class placement consideration to those special education students whose parents are willing to cooperate with and involve themselves in the behavior modification and counseling remediation program.

Parent groups can be conducted by means of at least three different counselor techniques and strategies: 1. Reflection of feeling; 2. Clarification, Support, and Advice; and 3. Instruction in Behavior Modification techniques. Numbers one and two above represent the same concepts as discussed in the preceding Counseling section. Number three, "instruction in behavior modification techniques," literally involves training the parents in formal behavior modification strategy, so that the parents may continue the school-based behavior management program at home. The authors recommend actually loaning or giving the parents a good but simple book on behavior modification, asking the parent to read and digest the book, and then teaching behavior modification concepts from the book. In conjunction with behavior modification techniques, the parents might also be taught the concepts of Behavior-Instructional Objectives, Task Analysis, and Baseline Measurement.

It is important to conduct parent groups for three reasons:

1. To offer support and advice to parents relative to effective ways of coping with their special education child, and to offer advice relative to effective ways of helping the child cope with the reality demands of the environment.

2. The authors contend that parents of exceptional children are no different from parents of regular children, except, that the former must cope with the additional stress incurred by the exceptionality of the child, as well as the stress incurred by the guilt-based assumption of the responsibility for their child's exceptionality. Parent group-counseling presents an excellent opportunity to help parents work through those guilt feelings, for the purpose of making the relationship with their exceptional child healthy, genuine, and emotionally honest.

3. Lastly, many parents of exceptional children cope with the stress of the child's exceptionality by means of suppression, a situation which eventually manifests itself in parental irritability, perhaps body complaints, decreasing efficiency, etc. Parent groups are a good way to provide a controlled and safe opportunity for the ventilation or expression of suppression-related bottled-up feelings of frustration, anger, and even helplessness.

For the reasons stated above, the authors recommend the routine classroom conduction of student and parent group-counseling. However: a. The practitioner should never operate the groups at a level above that person's professional competence. b. The groups should be conducted on a routine and scheduled basis, and should not be sacrificed for activities of lesser importance. And c. It is very important for the reader to understand that the progress of individual or group counseling is a function of not only the people involved, but also time. Thus, immediate counseling progress is totally unrealistic, and if individual or group progress can be identified within four or five months, the practitioner should feel successful.

M. Teacher Aids: The operation of a prescriptive teaching classroom is measurably facilitated by means of the use of Teacher Aides. There are three basic kinds of aides: 1. Paid adult aides; 2. Volunteer adult aides; and 3. Student aides.

1. It is most desirable to have a full time, adult, salaried aide. In such a case, it is important to provide thorough teacher-based in-service training for the aide, with respect to educational philosophy, distinction fo teacher and teacher-aide duties, behavior modification techniques, and instructional methodology. As has been indicated, Wyoming Education Code Section 232e provides the possibility of reimbursing a school district for a certain percentage of the salary of a special education teacher-aide.

2. In the event that a full time salaried adult aide is fiscally impossible, it is desirable to use volunteer adult aides. The use of such parents is desirable in terms of exposing the parents to their child's school behavior, and exposing the parents to the school-based remediation program, a situation which makes easier the parental continuation of that program at home. When using special education parents as aides, however, it is important to avoid having parents work with their own children. Again, the parent aides should receive thorough in-service training.

3. With or without the use of paid or volunteer adult aides, the use of student aides can be quite effective. The concept of student aides has a variety of applications: older students with younger students; brighter students with duller students; tough older students with tough younger students (for control purposes); good readers with poor readers, shy older students with normal younger students (for the purpose of social-personal confidence); etc.

The authors contend that a special education teacher should never operate without an aide, and by means of at least one of the aide-variations discussed above, the acquisition of an aide should not be difficult.

N. The Deductive Strategy: The Deductive Strategy is not so much a behavior modification technique as it is a behavior modification "systems approach" to the logical resolution of a presenting problem. The strategy operates by means of the practitioner performing three procedural steps: 1. Defining the presenting problem. 2. Determining the environmental events which reinforce and maintain the target-behavior. And, 3. Manipulating the environment in order to eliminate the reinforcement of that target-behavior. Thus, it is necessary to identify who, or what, reinforces the target-behavior, when the reinforcement occurs, and then identify and execute the behavior modification procedures which will extinguish the undesirable behavior and/or strengthen competing desirable behavior. The Deductive Strategy is an excellent behavior modification plan of action whenever it is possible to precisely determine the environmental events which reinforce and maintain the presenting problem.

O. Kitchen Timer: The Kitchen Timer Change Agent technique is an excellent positive reinforcement strategy, particularly when using a "variable interval" intermittent reinforcement schedule. The Timer technique involves the use of a one-hour kitchen timer, randomly setting it, and then rewarding those subjects who are engaged in specific desirable behavior when the timer rings. In order for this technique to be effective, the "desirable" behavior must be identified prior to the use of the Timer.

P. Feedback: As has previously been discussed, feedback of behavior-change progress is reinforcing and necessary. Thus, the authors recommend one of two feedback techniques; one, taping a feedback chart or baseline-type grid to the desk of each subject; or two, taping to the classroom wall a wide strip of paper, on which is drawn one feedback grid for each subject. By means of using the major Behavioral or Instructional Objectives for each subject, then averaging the baselined progress with respect to those Objectives, and then converting that sum into a percent figure, it is possible to plot one figure on the feedback grid per day or per week for the purpose of serving as feedback information. The decision as to the frequency of plotting (daily, weekly, etc.) should be made on the basis of the maturity and the delay of gratification capacity of the particular subjects. Although it is usually the province of the teacher to compute and plot the figures, it is quite acceptable (and possible) to teach the subjects to so compute and plot.

Q. Guidance Room: The Guidance Room is a last resort Change Agent strategy for disturbed and disturbing students, and is particularly applicable to moderate to large size schools. The Guidance Room functions by means of assigning a full-time male and female teacher-counselor to a classroom, which is operated on the basis of a "therapeutic milieu." The male and female teacher-counselors are symbolic of an intact family, with the male serving as the major disciplinarian, and the female serving as the receptive mother-figure. The purpose of the Guidance Room is to assist students who are on the verge of being exempted from school to learn coping and adaptive skills in a self-contained therapeutic atmosphere. As such, the Guidance Room teachers have full, exclusive, and long-term (school-year, or years) responsibility for the students assigned to them. The necessary academic studies are conducted within the Guidance Room, although the students should be merged with mainstream education whenever possible.

The Guidance Room should be physically arranged in terms of three rooms: a main room, serving as an Interest Center-based problem-solving area; an activity room

contiguous to the problem-solving area; and a conference-counseling room contiguous to the other side of the problem-solving area. The operating mechanics involve assigning not more than 10 disturbed or disturbing students to the Guidance Room on a full-time basis, and, through the vehicles of behavior modification, counseling, and appropriate and success-oriented educational tasks, helping the students to develop appropriate social-personal coping skills.

The authors regard the Guidance Room as an excellent behavior modification strategy, if the various resources can be funded. The authors have experienced a number of students who were maintained in school (and society) by means of the Guidance Room strategy, and who subsequently became constructive citizens.

R. Subject Involvement: A simple but often overlooked Change Agent strategy is that of developing prescriptive intervention Objectives and Task Analyses in conjunction with the involved subjects. Objectives and Task Analyses which are developed with the subject have a much greater High-Probability factor than do Objectives and Task Analyses which are developed by the teacher only.

S. Ingenuity: As has been stressed, effective reinforcers must be need-satisfying to the particular subject. As such, behavior modification should represent an unlimited and creative opportunity to devise ways of shaping behavior. Thus, ingenuity and flexibility are an asset. As an example, the authors remember a scientifically oriented teacher and equally scientifically oriented emotionally disturbed student who devised a very clever remote-controlled behavior modification system. The system operated by means of the teacher pushing one button on a small control panel immediately after "desirable" behavior, and pushing another button immediately after "undesirable" behavior. The first button activated a reinforcing green light and sweet tone in a receiver box carried by the subject, whereas the second button activated an aversive red light and unpleasant tone.

T. The Structured Classroom: The Structured Classroom is one of the best classroom oriented Change Agent strategies, particularly with respect to hyperactive, distractible, and disturbing students. The basic operational philosophy of the Structured Classroom is the provision of as much classroom structure and control as possible so as to help students gain internal control of their feelings by means of the external control of the classroom. The Structured Classroom has many components, which are subsequently discussed.

1. The classroom should operate by means of a definite and scheduled routine. This means a dependable daily schedule which does not arbitrarily vary; the use of carefully controlled interest centers; and, the use of pass-keys, which physically represent the permission that subjects must obtain in order to move within or without the class.

2. The teacher should expect student production that is compatible with student ability; and, the teacher should be consistent, follow through, not accept substandard work, and not permit a subject to avoid a task by means of a temper tantrum.

3. The Structured Classroom should operate on the basis of Contingency Management, particularly regarding High-prob tasks that follow Low-prob tasks; Contract Learning; and the use of high-interest materials. In addition, the physical classroom arrangement should avoid excess space, and should definitely include carrels or study booths.

4. Lastly, the Structured Classroom should be specifically designed to reduce extraneous environmental stimuli. Thus, and optimally, the floor should be carpeted; the overhead lights should be muted; the windows should be curtained; the classroom should be located away from distracting environmental sounds; the furniture should be fixed; the classroom color scheme should be bland and constant throughout; the carrels should be enclosed; the teacher's clothing should be conservative and without noisy jewelry and/or distracting colors; and, problem-solving tasks should be color-coded and very structured in order to focus the attention of the subject on the task-figure as opposed to task-ground.

The authors regard the Structured Classroom as an excellent behavior modification and change agent strategy, particularly with respect to the hyperactive and distractible emotionally disturbed as well as learning disabled student.

U. Clinical Teaching: Clinical Teaching is a form of bibliotherapy. It operates by means of inducing behavioral change through the use of educational materials. Specifically, Clinical Teaching assists students with the understanding and resolution of social-personal problems by providing reading assignments the content of which deals with the subject's problem. Thus, for example, a withdrawing student could be assigned to read a book the hero of which is similar in age and sex to the student and who successfully overcomes withdrawing and shyness problems. Subsequent to having read the book, the student and the particular target-issue or problem should be worked into a continuing psychodrama attempt to help the student gain further understanding of the issue or problem. Although it is not possible for a particular teacher to keep current with the vast amount of bibliotherapy materials, it is the province of the Instructional Materials Centers to provide just that information. As discussed previously, the likelihood of a successful IMC request for information is measurably enhanced if the request is precise and specific, and relative to the subject, the presenting problem, and the need of the person making the request.

V. Immediate Feedback Interview: The Immediate Feedback Interview permits an on-the-spot resolution of minor classroom conflicts. In a fashion similar to Redl's Life-Space Interview (Redl, 1969), the teacher, without moralizing: 1. Isolates the offending student; 2. Determines the student's perception of the conflict situation; 3. Expresses the teacher's perception of the conflict-situation; 4. Mutually determines what must occur in order to correct the conflict-situation; and 5. Contracts with the subject for success by means of Contingency Management and positive reinforcement techniques. In essence, a "behavior contract" is drawn up which specifies what the subject will do, what the teacher will do, and what specific reinforcement (free time, a certain number of tokens, etc.) will be used to assure that the contract terms will be met.

W. Group Negative Reinforcement: Group Negative Reinforcement is a very powerful but risky behavior modification technique. The concept operates by means of exerting group pressure on a subject in order to effect subject change. For example: the teacher could refuse to permit the class to go out for recess until Judy is quiet. When the desired behavior occurs, the teacher would immediately excuse the entire class.

In order for Group Negative Reinforcement to be effective, certain conditions must prevail:

1. The prospect of group pressure must be aversive to the subject.

2. The teacher must structure the situation so that the behavior which removes the aversive situation is desirable behavior, for, as discussed in the Negative Reinforcement section, whatever kind of behavior (desirable or undesirable) serves to remove or avoid an aversive situation will be reinforced and thus strengthened. Thus, the teacher must structure the situation so that the subject's group pressure removing behavior is "desirable," so that it is desirable behavior that is reinforced and

3. Group Negative Reinforcement is much more risky than individual Negative Reinforcement irrespective of whether the Negative Reinforcement is group or individual in kind, the practitioner must be willing to accept the behavioral consequences of the subject not removing the aversive stimulus. Thus, if Judy's teacher elected to use Group Negative Reinforcement, the teacher must be willing to accept the possibility of, for example, Judy choosing not to "be quiet," in which case the teacher would be confronted with a class of smoldering students who are impatient to go to recess. As such, the increased risk and even danger associated with the use of Group Negative Reinforcement results from behavior modification strategy that backfires, and the subsequent possibility of group resentment and frustration, as well as difficulty in regaining teacher-class rapport.

The authors do not recommend this technique unless there is good reason to believe that the subject regards group pressure as sufficiently aversive to quickly yield, and, unless there is good reason to believe that there will be no group reprisal for the inconvenience suffered by means of the offending student.

X. Chaining, and Reverse Chaining: The concepts of Chaining and Reverse Chaining represent more of a change agent plan-of-action, or a logical approach to presenting problem resolution, than a technique of behavior modification. The concepts are very similar to the Diagnostic-Prescriptive Teaching and Programming concept of Task Analysis. Thus, any and all behavior can be broken down into the component parts of that behavior. Chaining, as well as Task Analysis, simply involves the identification of the component parts of a given behavior, ranking those parts in sequential order, and then mastering the particular behavior by means of mastering, in sequenced order, the various component parts of that behavior. For example: if the Behavioral Objective were for Chris to tie his shoelaces, the Chaining Concept would operate by means of identifying the component parts of shoelace tying, sequencing those parts (from holding a lace in each hand, to pulling the bows), and then mastering shoelace tying by means of mastering each component part in its sequenced order. Thus, Chris would begin with holding a lace in each hand, then crossing hands, then tucking one lace under the other, etc. These sequential steps are not only called Task Analysis and Chaining, but also Successive Approximations, and Shaping. Thus, by means of Chaining (or Task Analysis), Chris's behavior would gradually be "shaped" into shoelace tying.

Reverse Chaining operates in the same fashion as Chaining, except the sequential order of the component parts is reversed, and the subject begins with the last sequential step and works backwards to the first sequential step. Thus, and with respect to shoelace typing, Chris would begin with the last step; i.e., pulling the shoelace bow tight. After mastering that step, Chris would learn the preceding step, and then combine, and then master, both steps. And similarly with the remaining steps. The advantage of the Reverse Chaining concept is that it permits the subject to experience the complete behavior first, from which the subject works backward to the initial step.

The authors advocate the application of the conceptual implications of Chaining (Task Analysis) to all systematic intervention with learning and behavior problems. Reverse Chaining does not have the variety of application that Chaining does, although, because of the direct exposure to completed tasks, it is often quite appropriate relative to the education of mental retardates.

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N O T . . .

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Behavior modification has received considerable attention in special education. Vigorous attempts have been made to teach behavior modification techniques to teachers through demonstrations, workshops, and newly introduced courses in undergraduate and graduate training programs. Although these activities have enabled many teachers to utilize basic behavior modification techniques in their classrooms, it has rarely been possible to provide extensive supervision to insure that the technology is implemented in a precise and efficient manner. Consequently, teachers have labeled practices behavior modification which are not; they have made minor procedural errors which decrease the effectiveness of their efforts, and they may not implement their techniques because of the misconceptions they hold.

Behavior modification techniques have been presented to classroom teachers from a variety of perspectives. Lindsley (1971), for example, has described a precision teaching environment which focuses on the careful arrangement of antecedent and subsequent stimulus events. Homme (1969) has developed a contingency contracting system which structures a learner's activities so that highly preferred reinforcing events are available contingent upon completion of less preferred events. Token economies have been described by several authors; Neisworth, Deno, and Jenkins' (1969) text represents a practical approach to the arrangement of a token economy classroom environment.

These approaches involve different intervention strategies. However, they represent a common set of principles and requisite teacher behaviors. The principle that behaviors which are followed immediately by positive reinforcing events will increase in frequency underlies these approaches. Teachers who use behavior modification techniques are taught to specify behaviors in observable terms, to identify events which are highly reinforcing to their students, and to arrange their environment so that positive consequences can immediately and consistently follow appropriate behaviors.

Teachers are taught to deliver positive consequences for appropriate behaviors and to ignore (extinguish) inappropriate behaviors. They are encouraged to break students' academic assignments into small tasks to increase the probability that success will occur. Through these practices, it is possible to arrange highly individualized, highly reinforcing environments. When teachers try to implement these techniques but are not completely successful, the reason is often found in minor procedural errors or in certain misconceptions. By helping teachers identify some common misconceptions and by suggesting to them some strategies regarding behavior modification techniques, they can utilize behavior modification more effectively.

Certain persistent difficulties have been pinpointed based on the observations of teachers who had received instruction in behavior modification and who were attempting to implement this information in their classrooms. These problem areas are common to student teachers in their first "classroom" experience as well as to experienced teachers. The following illustrative examples describe what behavior modification is *not*, and suggest strategies to increase the effectiveness of the classroom teacher.

BEHAVIOR

MODIFICATION

IS

n o t . . .

...noncontingent

Problem: The teacher dispenses reinforcement long after the behavior occurs.

Example: Irving brings his paper to the teacher's desk for correction. The teacher marks the paper as correct and says "OK" in an unenthusiastic tone. Irving goes back to his seat while teacher walks to the board to record 5 points by his name.

Strategy: Reinforce immediately!

1. Go to Irving when he signals that his paper is completed.
2. Reinforce enthusiastically while you dispense a token, mark, "happy face," or whatever.
3. Allow Irving, or a peer, to dispense his own reinforcement (assuming the class is honest).

n o t . . .

...M & M's for everyone

Problem: The teacher assumes one type of reinforcer works for everyone.

Example: The teacher distributes M & M's to each student who completes an assignment.

Strategy:

1. Make a variety of reinforcers available to the children, and change the selection frequently.
2. Observe each child to determine the things he prefers to do, and use those activities as backup reinforcers in the token economy.
3. Ask the child to list the items or activities he prefers to work for.
4. If the child is unable to communicate, ask his parents for a list of activities he prefers.

n o t . . .

...punishment

Problem: The teacher uses the term behavior modification indiscriminately.

Example: The principal walks in while the teacher is spanking Irving for hitting Amazing Grace. The teacher says, "I'm modifying Irving's behavior."

Strategy: The teacher may or may not be modifying behavior, of course, but a major attribute of behavior modification is its emphasis on the *positive*. Look for appropriate behaviors, and positively reinforce those. Behavior modification generally refers to the presentation of positive consequences for appropriate behaviors. If you reinforce Irving for instances of on task behavior and he engages in that behavior more frequently, you have reduced the likelihood that he will engage in inappropriate (hitting) behavior, since hitting is incompatible with on task behavior.

n o t . . .

...expensive

Problem: The teacher assumes that she must offer candies, trinkets, or toys as reinforcers.

Example: The teacher never implements a reinforcement system because her environment does not contain the necessary dollars for the expensive reinforcers she thinks she must buy.

Strategy:

1. Look for free or inexpensive items which are available in your community. Some teachers have found that merchants will donate items which can be used as reinforcers.
2. Use highly preferred activities as reinforcing events. Painting, free time, and the opportunity to use classroom equipment such as a Language Master, tape recorder, or record player are examples of activities which children may find reinforcing.
3. Structure your classroom around privileges. Trips to the bathroom or water fountain, an opportunity to be classroom monitor, wastebasket helper, or lunch leader are privileges which children can work for. The use of such privileges may be quite effective with children from affluent environments, where parents lavish toys on them.

n o t . . .

...inconsistent

Problem: The teacher sets up a program but does not follow a correct response with a reinforcer every time that reinforcement is scheduled to occur.

Example: The teacher establishes a "rule" that all students who are quiet during a 10 minute work period will receive 2 additional minutes of recess time. Irving talks out, but is allowed his 2 minutes.

Strategy:

1. Do what you say you will do! Stick to your rules!
2. You may find it helpful to develop a check list which you can attach to a clipboard or to your desk.
3. Check (✓) instances of behavior which are to be reinforced, then mark (x) when you have dispensed the reinforcement. This will serve as a prompt to increase your consistent behavior.

n o t . . .

...partial change of a teacher's behavior

Problem: The teacher changes one of her behaviors, but does not attend to other behavior which equally affects children.

Example: The teacher is informed that she gives many negative comments when children behave inappropriately, e.g., "Irving, sit down," "Stop talking, Amazing Grace." She then attempts to make positive comments for appropriate behavior. When she is observed at a later date, a high rate of positive comments for appropriate behavior is noted. However, it is also noted that her high rate of negative comments has not decelerated.

Strategy: Pay careful attention to what you do!

1. Ask another teacher to record your behavior when she has a free period (and return the favor for her).
2. If observation reveals that you really haven't attacked the problem, you might purchase an inexpensive wrist counter and use this to count instances of inappropriate behavior. If you can find a teacher to record your behavior on occasion, you will have reached your goal when your record matches hers.

n o t . . .

...a dependency producing technology

Problem: The teacher decides to discontinue behavior modification techniques in her classroom "because children come to expect a tangible payoff for their work."

Example: The teacher dispenses a set amount of candy for a specified amount of work. She does not change her expectations or vary reinforcers. After a period of time, the amount of work fails to increase in quantity and quality. This common misconception reflects a lack of understanding of the steps required to shape a behavior, to pair different types of reinforcers, and to fade out reinforcers.

Strategy: An ultimate goal of any behavior modification project is to reach a point where natural consequences will maintain a behavior. To arrive at that goal it may be necessary to program a sequence of events in the following manner:

1. Follow each behavior with an immediate primary reinforcer.
2. Pair primary and social reinforcers.
3. Provide an immediate, tangible reinforcer which may be paired with social reinforcement and which may be traded for an array of highly desired backup reinforcers.
4. Fade out the tangible reinforcers:
(a) increase the amount of behavior (work requirements) necessary to obtain backup reinforcers, and (b) dispense reinforcers on a more infrequent and more uncertain schedule. When these steps have been completed, the behavior should be maintained at a steady rate without continued intervention.

n o t . . .

...restricted to the deceleration of inappropriate behaviors

Problem: The teacher tends to focus on the elimination of inappropriate child behaviors rather than on the acceleration of desirable behaviors.

Example: The teacher develops an individual program to extinguish Irving's kicking behavior by timing him out. Then she develops a program to decelerate his hitting behavior with the same procedure.

Strategy:

1. Observe and list Irving's desirable or appropriate behaviors. Look hard; you are sure to find some.
2. Build your program around the presentation of positive consequences for good behaviors.
3. Reinforce Irving when he is playing cooperatively with other children.

n o t . . .

...undocumented testimony

Problem: The teacher fails to document the consequence of her intervention.

Example: The teacher says, "I think my project to accelerate Irving's on task behavior is working." Her principal says, "He is as rotten as he always was," and she is unable to document Irving's change in behavior.

Strategy: Keep graphs of your projects. A loose-leaf notebook of a standard size may be a useful device for keeping records of individual social behavior change projects. Constructing and keeping simple graphs is less time consuming than most teachers think.

n o t . . .

...a one shot endeavor

Problem: The teacher successfully completes an individual project, but observes that her class still does not run as smoothly as she would like. She concludes her efforts have not been effective.

Example: The teacher successfully accelerates Irving's task on behavior by ignoring his off task behavior and simultaneously reinforcing Amazing Grace for on task behavior. She then immediately reinforces Irving when he imitates Amazing Grace by engaging in on task behavior. Despite all this, Irving still engages in name calling.

Strategy: Be prepared to implement a variety of projects. Irving is obviously ready for a new project to decelerate name calling.

1. His teacher may reinforce him and his classmates for their positive comments to each other.
2. When that project is completed, there is likely to be something else to work on.

n o t . . .

...a teacher dominated activity

Problem: The teacher maintains all student records and controls all reinforcers.

Example: The teacher contracts with Irving. She specifies how much work he is to do for his reinforcers, but does not allow him a voice in the decision making process. She ignores his comments, such as, "I can do more work than that for 3 minutes of time in the activity area."

Strategy: Allow students to record their own behavior. Irving's on task behavior may accelerate at a faster rate if he can see the daily increase in "appropriate" behavior. The opportunity to arrange his own consequences should further illustrate the functional relationship between appropriate responses and subsequent positive consequences.

n o t . . .

...always what you think you're doing

Problem: The teacher identifies one target behavior and inadvertently reinforces another.

Example: The teacher decides to reinforce Irving for working quietly. She is momentarily distracted, however, and says, "Good, Irving," just as Irving begins whispering to Amazing Grace. The teacher has reinforced a behavior that she really wanted to extinguish.

Strategy: Reinforce immediately!

1. Observe carefully before you reinforce a behavior.
2. Ask another teacher to observe you for a short period to see if you do what you think you do.

When a child is engaging in appropriate behavior simultaneously, e.g., Irving is quiet but is poking Amazing Grace with his pencil, it is especially critical that the inappropriate behavior not be reinforced. You may have to redefine your target behavior, e.g., on task equals quiet work, hands on desk.

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...restricted to one type of classroom environment

Problem: The teacher's classroom techniques seem restricted to one type of classroom setting.

Example: The teacher observes a contingency managed, self-contained class of children who exhibit high rates of disruptive behavior and who function at a low level of academic competence. She determines that, although the techniques seem to be working in this class, the techniques probably would not work in her team taught class.

Strategy: Analyze your teaching environment to determine what unique strategies you may have to employ.

1. If you teach in a situation where you have different students each hour, you may have to coordinate an individual behavior change project with each of a student's teachers.
2. If you team teach in a somewhat open classroom environment, you may have to coordinate only with your teammates. It is important that each teacher have the same definition of a target behavior, and that each teacher dispenses the same reinforcement, e.g., "Good, you're working quietly, Irving. You get one token."

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...restricted to social behavior change

Problem: The teacher assumes behavior modification is applicable only to social behavior problems in the classroom.

Example: The teacher has appropriately modified much of the acting out behavior of children. She observes that while the children are better behaved, in many instances academic achievement is below expectancy.

Strategy: Use reinforcement to increase academic achievement. Reinforcing on task behavior can increase the amount of time the children attend to studying. Or, children can earn reinforcers by correctly completing individually specified amounts of work (math problems, reading pages, study questions). Both rate and level of output can be increased. Individual academic assessment is a prerequisite here.

n o t . . .

...a highly complex procedure

Problem: A teacher learns to conduct individual behavior modification projects in a "laboratory setting." She does not implement any of these skills in her own classroom, however.

Example: The teacher's principal says, "Why are you sending Irving to my office because he disrupts your class? I thought you learned some techniques to change that behavior." The teacher replies that it's very easy to do a simple project but that she "just doesn't have time to do it with an entire class of kids."

Strategy:

1. List appropriate behavior change projects (target behaviors).
2. Develop a simple method to graph behaviors.
3. Collect baseline data.
4. Select appropriate consequences, as described earlier.
5. Implement your program.
6. Graph your results.
7. Modify the program as needed.

BEHAVIOR

MODIFICATION

IS . . .

Behavior modification has proven to be an efficient technology for improving children's social and academic behavior. Consequently, many teachers have been taught behavior modification principles and techniques. The strategies and viewpoints described here are intended to modify misconceptions or procedural errors which often occur as teachers attempt to carry out the techniques which they have learned. Hopefully, these suggestions will serve as prompts for teachers to modify their own behavior and to improve their classroom effectiveness.

REFERENCES

- Homme, L. *How to use contingency contracting in the classroom*. Champaign, Ill.: Research Press, 1969.
- Lindsley, O. Precision teaching in perspective. *TEACHING Exceptional Children*, 1971, 3, 114-119.
- Neisworth, J., Deno, S., & Jenkins, J. *Student motivation and classroom management*. Newark: Behavior Technics, Inc., 1969.

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Reality Therapy allows no comforting glances over the shoulder at the past. In uncritical conversation with a therapist who is also a friend, the patient comes to see that the choice to be unhappy is personal.

The Responsible World of Reality Therapy

by Norman I. Barr

REALITY THERAPY IS TWO PEOPLE sitting in a room talking to each other. No couches, no encounter groups. It is an approach that disregards traditional concepts of mental health and mental illness. For the Reality therapist, the mentally ill person is the person who behaves irresponsibly. Excuses such as, "My father beat me with a rubber hose when I was a child," or "My boss is persecuting me," fall on deaf ears. A man is accountable for his own behavior, Reality therapists believe. He is happy or unhappy much more because of his own decisions than because of the conditions in which he finds himself. While this may not be true in all instances, it is almost always true for people who seek psychiatric help.

Responsible behavior is the root, not the result of, happiness. Responsible behavior means fulfilling one's needs for love and worth without hurting others in the process. It is the primary goal of Reality Therapy. It sounds like the goal of all therapy. We differ from other therapies in that we assume our clients can be responsible, rather than attempt to elicit why they are irresponsible through analysis or other techniques.

"I can't help it," says a client. "My life is too miserable." These comments are unacceptable to the Reality therapist, who focuses on present behavior. The client is a 40-year-old man who smokes two packs of cigarettes a day. He sincerely wants to give up smoking, but, he says, "I get too nervous when I stop smoking." Or, he says, "I start eating excessively and gain weight," or "I am OK until I'm around someone else who's smoking."

"Of course it's hard, but will you stop smoking, or won't you?" asks the Reality

therapist. If the answer is "no," the discussion is over for the moment. There is no sense in belaboring the whys; we talk about what he can do, not what he can't. To a "yes" answer the therapist responds, "Great. When do we start? Let's make a plan."

The Reality therapist deliberately gets involved with his lonely clients. The need for involvement with other people is biological, nearly as basic as the need to eat, and the therapist's involvement with his client is the keystone to progress. To achieve this involvement the therapist is warm and personal. He does not hide behind the mantle of doctor or healer.

From the need to be involved with other people stems the need for an individual to identify with success. The therapist helps his client make this identification using a direct approach based on five principles: 1) He encourages the client to make a value judgment about his own behavior. 2) He encourages the client to make a plan aimed at some desired goal. 3) He asks the client to commit himself to that plan. 4) He asks him to make no excuses if he fails to keep that commitment. 5) For his part, the therapist makes it clear he will inflict no punishment on his client, that is, he will never reject him.

The following case history shows how Reality Therapy works in practice: Eric was a 19-year-old college sophomore who had recently received his draft notice and was considering fleeing to Canada to avoid induction. Eric lived with his parents. His father disagreed with his politics but was personally supportive of him. His mother fought with him over his irregular hours, his girl friend, and her suspicion that he was smoking marijuana. Eric had a

history of minor disciplinary problems in junior high and high school. He was a loner. Eric had one idiosyncrasy. He carried a rabbit's foot on his key chain, and refused to set foot outside his house without it. During previous crises in his life, he had experienced severe, incapacitating anxiety. Because of this, his father recommended he seek professional help in deciding what to do about the draft.

During Eric's initial visits, the Reality therapist concentrated on getting involved with him. Talk centered on areas where Eric was successful: his relationship with his father, his good grades in school. This discussion built up Eric's self-esteem and communicated the therapist's awareness that he had strengths and capabilities, as well as problems.

The therapist then found out as much as he could about Eric's current activities. He increasingly reminded the young man of the alternatives open to him, and of his responsibility for choosing among them. People in crises are often unaware of other possible courses of action and feel as though they have no choice in what they are doing. When this feeling eclipses rational calculation, the result is irresponsible behavior, and, often, unhappiness.

Never Ask Why. Together the therapist and Eric carefully went over all Eric's possible responses to the draft notice. They looked for new, previously unconsidered options. How would Eric feel as a soldier, what would be his reaction to life in Canada, when would he finish his education, where would he see his girl friend, his family? How, what, when, where. The Reality therapist never asks why. He makes no attempt to provide insight, but focuses entirely on behavior. The therapist's
(Continued on page 67.)

Psychotherapy, like everything else valuable in the U.S., has been packaged and repackaged so many times, old theories warmed over and trussed up so repetitiously, new ideas mixed with ancient homilies in such unending variations, the marketers of any and all ideas exhausting us with such tireless ingenuity that anyone who tries to make sense of the field as a whole is soon battered senseless. We hear such cunning permutations of honesty and cynicism, the quacks and the saints, the thieves and the visionaries step on each other's toes in such sheer numbers that we eventually settle for what is closest at hand.

In the midst of all this confusion, the appeal of William Glasser, founder of Reality Therapy, is that he steadfastly works from personal experience. He trusts his own experience.

Glasser's originality is marginal. His work echoes Alfred Adler, B. F. Skinner, Norman Vincent Peale, Mary Baker Eddy, Thomas Szasz, the dictums of Horatio Alger. Yet Glasser's ideas are his own in the sense that he personally discovered them. And because he has put them together on his own, his theories have force behind them.

In *Reality Therapy*, published in 1965, Glasser describes his first break with orthodox psychotherapy. As a psychiatric resident at UCLA he met Aaron, a smart, tough 11-year-old who had already run through several therapists. Glasser decided that traditional psychiatry, "interpreting Aaron's anal retention and oral aggression," was only contributing to the boy's desperation. Fumbling for a better approach, he sat Aaron down and told him to start behaving or else. "When I told him frankly that he was the most miserable and obnoxious child I had ever met, he was surprised," Glasser says. "He had thought all therapists must automatically love their patients. I informed him that if he stayed in therapy he was going to have to change because neither I nor anyone else could possibly care for him the way he was now."

Glasser and Aaron became friends. The boy's behavior changed quickly and drastically. Three months later, Aaron

was discharged from therapy. His grades in school and his friendships there improved, and his relations with his mother and stepfather normalized.

As an undergraduate, Glasser studied chemical engineering at Case Institute of Technology in Cleveland, where he grew up. At Western Reserve University he studied three years toward a Ph.D. in clinical psychology, but his advisors rejected his dissertation. They were soured, Glasser suggests, by his decision to go on and become a psychiatrist. He got his M.D. from Western Reserve in 1953 at the age of 28. He finished his psychiatric residency at UCLA in 1957.

He opened a private practice in Brentwood, not far from UCLA, and waited for the patients, referrals from his alma mater, to flock in. But he had not bought psychiatry's Freudian party line at UCLA, and no referrals appeared. When the California Youth Authority offered him a position as head psychiatrist at the Ventura School for Girls, he grabbed it.

Working with juvenile delinquents at Ventura, Glasser perfected his straightforward approach. His candor disarmed the young offenders, cynical from past run-ins with clinicians. Glasser tells the

Glasser The Logician:

"Face it, when a patient pays a therapist, all he's doing is buying a friend."



story of his confrontation with a girl transferred to Ventura after she started a riot at another reform school. "Dr. Glasser," she drawled, "I'm here because I'm a very emotionally disturbed girl." "I can't understand that," replied Glasser. "Our girls aren't here because they are emotionally disturbed, only because they have broken the law." Then he asked the girl if she was going to start a riot at Ventura. She said probably not, and didn't.

By 1962, Glasser was working to formulate the basic theory of Reality Therapy. Word of his effectiveness spread along the California human services grapevine. In 1965 he and state educators began experimenting with the Reality Therapy approach in Watts public schools. His work in Watts led to *Schools Without Failure*, published in 1969. The same year Glasser stopped working at Ventura, opened the Institute for Reality Therapy in Brentwood, and began exerting a strong influence nationally on educational policy at the primary school level.

His message to educators is a characteristic blend of time-honored ideas and fresh logic. Schools teach failure to too many kids, Glasser says, so do away with failure. Do away with the grading system, the track system, the arrangements that encourage regimented learning. Use an old-fashioned curriculum. Root out institutional anomie. Children and teachers should be involved with each other. Schools should stimulate kids to solve problems, both academic and social. "My ideas are simple," says Glasser. "It's the implementation that's hard."

Vehemently antihistorical ("History'll kill you," he says), Glasser nevertheless makes the historical judgment that in 1950, give or take a year, we moved from a goal-oriented society to a role-oriented society. "The struggle for a goal—a profession, a diploma, a home, a family—has been superseded by the struggle to find oneself as a human being," he writes in his 1972 book, *The Identity Society*. The main motivation of the old goal-oriented society was power, he says. The guiding motivation of the new role-

oriented society is involvement and cooperation. "The need for role to precede goal must be new," Glasser insists, "or we would never have evolved our present institutions . . . The world is not that irrational a place."

Where some of his colleagues have relied on insight, and others on experimental data, Glasser has always relied on logic. This, and a dogged concern about the mess the country is in, has led to an interest in large-scale human engineering. "I've all but given up my private practice," he says. "I'm an institutional change person now."

Royalties from his books bring in \$5,000 to \$6,000 a month. His standard speaking fee is \$500. This income allows Glasser to live with his wife and three children in Brentwood at a level he finds comfortable. It also allows him to pursue his enthusiasms where they take him. While the Institute for Reality Therapy carries his message to professional therapists, and the connected Educator Training Center carries his message to the schools, Glasser's personal interest has moved on to crime, drugs in particular. He is currently developing a crime-prevention program for the state of Missouri.

Drugs, says Glasser, include anything that kills pain. Alcohol and heroin are logical antidotes to pain, he says, but if the country is to do anything about its problems, it must collectively confront its pain. Citizens individually must come to terms with the pain of loneliness and failure. Psychotherapy can help a person do this whatever the orientation, be it Albert Ellis' Rational-Emotive Therapy, which his own approach resembles, or classic Freudian analysis. The key is the therapist's competence. "Face it," says Glasser, "when a patient pays a therapist, all he's doing is buying a friend."

Of the confusing world of psychotherapy from which he emerged, Glasser says the whole show could disappear tomorrow without a ripple. "Every therapist in the country could stop practicing and nothing would happen. The patients would find someone else to talk to."

by Peter Koenig

It is *logical* for a person who painfully sees himself as a failure to deny his responsibility for his situation. Life is more comfortable that way.

Continued from page 64.

underlying assumption, which he communicated intentionally, was that Eric was fully capable of responsible action.

In effect, the therapist asked Eric, "Is what you are doing in this particular situation getting you what you want? If not, let's discuss what you can do differently in order to achieve a more satisfying result." The therapist ignored the rabbit's foot. He stayed clear of any discussion of symbolism. That would only have opened the door to meaningless talk, bypassing the goal of therapy. It would have allowed Eric to take his symptoms too seriously. The therapist simply assumed that Eric's idiosyncrasy would disappear as he gained increasing control over his life.

The therapist got Eric to make a value judgment on his present behavior, and assisted him in mapping out his new plan of behavior. After the plan was written down and Xeroxed, the therapist and Eric signed both copies, each keeping one. It became their contract.

Firm Commitment. "Now," asked the therapist, "are you going to follow through on this? Are you willing to tolerate the difficulties we both anticipate this plan will cause?" Eric's agreement here was crucial. A plan that does not have the client's firm commitment is likely to fail, and failure not only encourages a self-defeating identity, but interferes with the therapeutic process. The commitment to the plan is separately written, Xeroxed and signed. It's a second contract.

Eric asked his Reality therapist if he would write a psychiatric report saying Eric was emotionally unfit for military duty. The therapist refused the request on the grounds that it was untrue. So Eric chose his next plan, to respond to his draft notice, report for induction, and serve his two years. He was surprised that he felt a sense of relief when he made this decision. Unfortunately, he stopped seeing his therapist when he went into the Army. After he completed basic training he changed his commitment to his plan and chose to go AWOL on two separate occasions. Since his second return to duty he

has been hospitalized for evaluation in a military hospital's psychiatric ward.

If Eric had failed to keep his original commitment to accept induction, the therapist would not have searched for the reasons why the plan failed. To do so would have encouraged Eric to find excuses for his failure, and inhibited the development of a success identity. If the plan had failed, the therapist would simply have fallen back on the first axiom of Reality Therapy, that a man is capable of making conscious decisions regarding his behavior, and started over again. If the therapist had treated Eric in the military hospital, he would begin with the premise that both AWOLs were conscious decisions to change his commitment.

Swiss physician Paul DuBois, with his "common sense" approach to patients, is Reality Therapy's earliest precursor. DuBois recommended in the early 1900s that the physician treat his patient as though he were his friend. Joseph Pratt, the father of group psychotherapy in America, developed his concepts from DuBois and viewed himself as a "friendly counselor" to his patients.

Alfred Adler, with his Individual Psychology, and Adolf Meyer, with his empirical approach to therapy, were precursors to Reality Therapy in the period prior to World War I. The period between world wars was dominated by Freudian thinking. Then came the 1950s and the blooming of therapeutic approaches in all directions. Abraham Maslow's self-actualization concepts developed during the '50s and Allen Wheelis' focus on individual behavior both presaged the development of Reality Therapy a decade later.

Hellmuth Kaiser, working at the Menninger Clinic in the 1950s, emphasized the importance of personal contact between two people in the therapeutic process. Kaiser believed that diagnostic labels such as doctor, patient and paraprofessional were irrelevant. His student, G.L. Harrington, became William Glasser's most influential teacher. Glasser, the founder of

They focus sharply on the present. Not the past. The past is considered over, unchangeable. It has no direct bearing on the therapeutic process.

Reality Therapy, wrote the first of three books developing his theories in 1965, and four years later founded the Institute for Reality Therapy in Los Angeles.

Pain in Noninvolvement. If a person is not involved with at least one other human being, he experiences pain akin to that from hunger and thirst. The most common symptoms of lack of involvement are feelings of sadness (depressive reactions, in the standard diagnostic nomenclature), skewed perceptions that come from denying reality (psychosis), ignoring it (psychosomatic symptoms), or distorting it (sociopathic behavior, and anxiety reactions). Reality Therapy derives its name from the insistence on dealing with behavior in the real world rather than a client's subjective interpretation of his feelings and his thoughts.

If a person is involved with other people but at the same time regards himself a failure, he also experiences unbearable pain. It is logical for a person who sees himself as a failure to deny his responsibility for his situation. Life is more comfortable that way. The individual's private version of reality shields him from the need to confront his pain. But he is in therapy because this strategy has not succeeded. The Reality therapist sets out first to get involved and from this involvement to help his client gain an accurate perception of what is going on. Then he helps his client plan and work out new responsible behavior leading to a success identity.

For the therapist, being involved means spelling out to each client exactly what responsibilities he, the therapist, is willing to assume. If a therapist only has one hour a week for a client, fine, so long as the client understands that. If the therapist permits two or three phone calls between visits, he has to assume responsibility for those calls. He cannot in fairness turn around and be abrupt on the phone. It is important that the therapist define the limitations of the personal involvement early in the relationship. No one can lead a responsible personal life and become deeply involved with every one of his

patients. Few clients will demand more than a therapist can give. When the Reality therapist and client have grown to know one another, they focus sharply on the present. Not the past. The past is considered over, unchangeable. It has no direct bearing on the therapeutic process. Clients who begin Reality Therapy after going through some traditional form of therapy are often disconcerted by the Reality therapist's avoidance of past history. But belaboring the past can be harmful. To dwell on past failures, "My mother never loved me," "I grew up in a slum," "I didn't have any friends at school," encourages failure identity.

When the past is discussed, it is examined solely for lessons pertaining to the present. Why didn't the client's irresponsible behavior in the past lead to worse problems? What behaviors had he used that helped solve problems? For example, a client tells his therapist, "They want to fire me. My boss says I have a lousy attitude. It's the same as high school. My teachers marked me down because they said I had a lousy attitude."

"You graduated from high school, didn't you?" responds the therapist. "What did you do that got you by the teachers who didn't like you? What did you learn then that you can apply to your job situation now?" All past behavior in Reality Therapy is related to present behavior and either compared or contrasted.

In focusing on the present, the therapist focuses on his client's behavior. A person may complain of disturbing thoughts or unpleasant feelings, but from a practical standpoint, such thoughts and feelings are harder to control than behavior. The therapist urges his client to make a distinction between what he can't and won't do.

Once a client judges that his present behavior is unacceptable, change becomes the easy, natural pathway. The therapist works for the day when his client will feel ready to change, but he resists the temptation to impose his own values. The therapist can discuss his personal opinions with his client, but he should explain what he

is doing. "My value judgments need not be similar to yours," he emphasizes. The therapist makes it clear he will not be offended if his client disagrees with him on an important subject or issue, say smoking marijuana, or presidential politics. Bouncing opinions back and forth is a good way to cement a relationship, and it is the relationship, not the client's point of view, that is central to therapeutic progress.

No Punishment. Making plans is often the most time-consuming part of Reality Therapy. This stage usually does not begin until client and therapist know each other well. The therapist helps his client make plans that will succeed. To the man trying to give up smoking, for instance, the therapist would not recommend total withdrawal immediately. Such a contract would encourage failure. Instead, the therapist might recommend that his patient stop smoking between one and four in the afternoon. This limitation would allow the man to suffer the consequences of his plan, but would also allow him to experience the rewards that come from fulfilling his contract. Experienced therapists rarely agree with unrealistic plans, even though a client frequently wants to solve all his problems within two weeks.

When a plan works, the result is a change in behavior, which is apparent to the client. When a plan fails, the client should draw up a new one as quickly as possible. The therapist never punishes his client. Punishment encourages a failure identity, and it disrupts the relationship between the two. The therapist is always understanding, warm, human and concerned. A successful course of Reality Therapy can last one session or six months. Rarely does it last longer than a year.

Constant striving for responsible behavior while one develops a success identity is the mainspring of Reality Therapy. It can also be a way of life. Happiness and self-fulfillment are not the prerequisites for responsible behavior; they are its natural consequences. 

To obtain reprints of this article, see page 104.