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Use of Reinforcement in Behavior Management Strategies

Behavior management strategies using differential reinforcement are effective *only* if the reinforcement procedures match the individual's unique characteristics and needs. Simply stated, the individual must find the reinforcer reinforcing. Errors in achieving this match frequently sabotage the success of otherwise well-designed intervention plans. The school staff will need to determine appropriate reinforcers for the student as well as the frequency and manner in which they are given. The following material on reinforcement is offered in response to frequently encountered problems that often lead to intervention failures.

Reinforcer versus Reward

One of the most common errors in behavior plan development is the confusion between *reward* and *reinforcement*. Reinforcement occurs when a consequence to a behavior results in that behavior increasing or maintaining its frequency. Thus, the behavior is reinforced; it is made stronger and more resistant to elimination because the individual desires the reinforcer and associates the behavior with desirable outcomes.

A reward, on the other hand, is given by an observer to someone for having met some criterion established by the observer. Frequently, the giver assumes the recipient will like the outcome. The reward may actually be hated by the receiver (e.g., "You did that sheet of problems so beautifully that you get to do another one as a reward"). In other words, a reward is what you think will work, while a reinforcer is what is proven to work.

Resistance to Reinforcement

There are many different reinforcers available to maintain or increase behaviors. Frequently, individuals described as "resistant to reinforcement" are simply not responsive to the selected reinforcer at enough intensity to support change from the behavior of concern, which, of course, has its own reinforcer present. For example, a student may love stickers, especially stickers with unicorns, and express a desire to work to earn them; however, he may find the reinforcer for the problem behavior, such as social attention or release of physical energy, even more enticing. Therefore the school staff needs to understand not only the individual's likes and dislikes, but also the degrees of desirability and the purpose or function of the behavior for that individual. If an individual is noted in previous records to be "reinforcer resistant," a thorough examination of the reinforcers currently observable and potentially available across environments is recommended if direct treatment strategies are desired. Understanding the principles involved in reinforcer selection is as important as knowing what the individual finds reinforcing.

Closure as a Reinforcer

Individuals with severe behavior problems may respond to reinforcers in unique and unpredictable ways. For instance, completing a four-part puzzle may be a powerful reinforcer because the closure element is so desired by the individual. Closure here is defined as finishing the whole, completing a set, or arriving at the end. There can even be a somewhat obsessive quality to this closure, such as a person driven to check off every item on a "to do" list. If an individual has a limited number sense because of his or her developmental level, "When you have five stars you may stop" may not be clear, even if the student's rote counting is much higher. If that same individual has a sheet with five spaces per row, he can clearly see how many squares are left to fill, to "close up."

A form of a closure system can be used during assessment of resistive children. A simple water toy may be employed that releases air when a button is pushed, shooting rings toward pegs. For each ring that lands on a peg, the student gets to answer a comprehension question. As another example, a four-piece inset puzzle may be used with one puzzle piece per question or item. For every completed task (getting a ring on a peg), a result occurs (getting to answer a question). Although answering a comprehension question is definitely not a reinforcer for many children, the element of closure, or completing the entire defined task sequence, has proven irresistible. To make this even more reinforcing, the student can "earn" a play break (time spent with a toy the student selects at the outset) by completing the puzzle or getting all the rings on the pegs. Children who have resisted answering questions vehemently before this procedure often become willing participants after it is implemented.

Determining What Feature or an Occurrence Is the Actual Reinforcer

It is important to determine which elements in each "reinforcement act" are found to be reinforcing. For example, if the student is responsive to stickers or other tangibles given by the teacher, the reinforcer could be successful because of: love of the object itself, the "closure" element of filling every square on the sheet, the student's sense of success and positive feelings about self, following internal self-talk that praises the accomplishment, love of getting something peers are not getting, the desire for touch satisfied when the teacher pats the student on the back when giving the sticker or some other features

If one understands as precisely as possible what element is reinforcing to the individual, effective procedures to increase positive behaviors can be designed more readily. In general, activities and interests actively sought after by the individual are good areas for inquiry. Interviews with the individual and significant others, as well as observation during the functional assessment, will frequently yield important information as to what reinforces behavior for a student. Many published reinforcer surveys can be helpful in this process. If the individual routinely responds to items such as praise from significant others, one will not focus on a lower level reinforcer, such as tangibles, in a direct treatment plan unless the student requests them. Also, verbal praise should be paired with more extrinsic reinforcers so that praise may eventually assume reinforcing properties for the individual.

Alternatively, if the natural reinforcers in the environment work to support maintenance and generalization of the new behavior when environmental change occurs, external and intrusive reinforcement may not be necessary or desirable after natural reinforcers are shown to be effective.

Expanding Activities to Be Potential Reinforcers

There is an interesting and useful reinforcement principle termed "The Tom Sawyer Effect" named after the famous fence-painting scene where Tom convinces his friends that fence painting is the ultimate reinforcing activity. If an adult or peer makes contingent access to an activity or item seem highly valuable, a real privilege, conveying much social status and recognition, the individual may come to seek that experience or item above all else. For example, in Mrs. Jones' class, pounding erasers after school may be deemed extremely desirable by her students, thereby assuming positive reinforcing qualities. In Mr. Wright's adjoining classroom, eraser pounding may be deemed a "punisher" by the class and teacher, thereby assuming aversive stimuli properties.

One extreme example was recently discovered that further illustrates this point. Two students worked very hard to earn the "privilege" of staying in at recess to practice making positive comments to each other, even though they were frequently antagonists. The teacher had billed this activity as one of very high status, and these students were highly responsive to status reinforcers and valued the teacher's opinion.

If the individual is responsive to praise, social status, and recognition and desires privileges, the implementor may be able to develop a vast array of potentially reinforcing activities by using techniques to develop conditioned reinforcers. It must be remembered, however, that not every behavioral intervention plan requires extrinsic reinforcers. Frequently, environmental changes or positive programming changes remove the need to express problem behaviors, or the alternative positive behavior elicits reinforcers natural to the setting that support the behavior.

Using Activities: Premack Principle: First __ ,Then

In programs for individuals who require systematic reinforcement for increasing positive replacement behaviors, one should consider whether or not a highly successful technique known as the Premack Principle may be useful. This entails contingent, conditional access to some activity routinely chosen independently by an individual, to be delivered immediately after a less frequent behavior that has been targeted for increase.

This principle is seen when one rewards oneself with a favorite TV program after completing that report, ice cream after finishing that spinach, Nintendo after finishing that homework, free play after finishing those subtest items, and so forth. Typically, the more complex the reinforcer chosen (activities of interest can have a multitude of potential factors that make them satisfying) the less likely that satiation will occur.

Abstracted from: Wright, D.B. & Gurman, H.G. (1994). [Positive intervention for serious behavior problems: best practices in implementing the Hughes Bill \(A.B. 2586\) and the positive behavior intervention regulations](#). Sacramento, CA: Resources in Special Education.

FACTORS AFFECTING REINFORCER EFFECTIVENESS

After the BICM has identified potential or current reinforcers that are likely to increase or maintain a desired behavior, the scheduling needs of the individual must be considered. Suggested reinforcers to explore for effect on behavior are found in commonly available reinforcer survey forms. Reinforcers must:

- be selected for a behavior that the student can proficiently perform or for which instruction will be provided (often including shaping and modeling instruction techniques)
- have enough power to affect the specific behavior,
- include sufficient variability to maintain effectiveness in the program,
- meet student's immediacy needs and
- meet student's frequency needs

Each of these factors is discussed below:

INSTRUCTION PROVIDED AS NEEDED

Too frequently behavior plans have been designed that expect the student to perform behaviors he/she has not been instructed to perform. If the student does not exhibit the behavior in the required form the implementor will need to provide instruction as well as reinforcement for closer and closer approximations to the goal.

--> *Example* Angie did not apologize for unintentional bumping into others that frequently caused other students to react aggressively. Reinforcement for doing so was unsuccessful until Mrs. Jones specifically taught the skill to Angie using modeling, prompting and reinforcement.

POWER OF THE REINFORCER

There is always an internal cost/benefit analysis going on within the individual to determine, "Is it really worth doing X to get Y?" "Is it worth giving up doing A in order to do X instead, when A always got B, and B was pretty swell?" "Is B greater than Y?"

--> *Example* For David, getting attention from his big sister may be very powerful at times but may not compete with either attention from a returning parent or the reinforcement that occurs when escaping a noxious environmental event, such as a lawnmower suddenly appearing.

--> *Example* Kristina's teachers uses contingent access to free time for on task behavior, which may not compete with other reinforcers available in an environment for the competing undesirable behavior of throwing objects to get recognition.

VARIABILITY OF THE REINFORCER

Some students satiate easily, some do not. Some seek extensive variety, some do not. A multitude of reinforcers should be available so that whatever reinforcers available in the environment, and often uncontrolled by the teacher, do not become more appealing and powerful than the "same old thing" given for desired behavior.

--> *Example* Mrs. Browning has found that her students in a program for SED individuals were initially very enthusiastic about the student store available each day for exhibiting particular behaviors she had targeted for increase. After 2 weeks she noted that students were not as enthusiastic and behaviors were not maintaining. An examination of her reinforcers revealed that all of the available reinforcers were tangibles and edibles, coupled with praise. Mrs. Browning revamped her menu of reinforcers, utilized closure principles on her new charts and made privileges (e.g., going to lunch first, cleaning the rabbit cage), social status (e.g. earning class president status, earning newspaper editor status), and contingent access to activities (e.g. games with a peer, being read to by the teacher) a part of her new variable menu of reinforcers. Mrs. Browning found behaviors increased well beyond the initial change when she had first began her token economy program.

IMMEDIACY OF THE REINFORCER

Frequently the individual's internal cost/benefit analysis tips in favor of other reinforcers more immediately available, even if they are not quite as desirable. Delaying gratification is difficult for individuals with behavior problems, and acceptable wait lengths are self-determined. Individuals at early developmental stages require reinforcers to immediately follow their actions if they are to understand what specific previous behavior resulted in the reinforcer. If there are other behaviors that occur between the behavior targeted for increase and the reinforcer the individual may lose sight of the connection.

--> *Example* Martha has been taught to point to request an item rather than screaming, but the teacher does not immediately acknowledge this behavior either verbally or by giving her the requested item as she is busy with another student. If this is a new skill for Martha she is likely to return to screaming behavior as her current immediacy needs are for very rapid delivery. Response fluency (i.e., Martha points very well and has a long history of immediate reinforcement) will need to be well established before targeting and teaching the toleration of delays. Otherwise, Martha is likely to lose her pointing behavior under these delay conditions.

FREQUENCY OF THE REINFORCER

How many times must the behavior be emitted before a reinforcer is given? This frequency question is closely linked to how rapidly following the emission of the behavior (immediacy element) will the reinforcer follow. Frequency problems can sabotage a program as assuredly as variability, immediacy and power problems can. The token economy and all its variants are attempts to stretch the frequency of reinforcement needs and introduce acceptable delays as individuals bank the tokens for later redemption.

--> *Example* Ms. Maffei decided to use a differential reinforcement system for Nicholas and Angela's recess times when verbal or physical arguments did NOT occur. She decided that at the end of every week she would give them each extra free time that they enjoyed as a consequence of their elimination of fighting behavior. Thus, approximately 15 recess times would need to be altercation free to earn the reinforcer. They were also taught conflict resolution skills and reinforced for their use. Ms. Maffei was unsuccessful with this system, despite both students' desire to earn free time. When she changed her system so that Nicholas and Angela earned free time at the end of each day, the undesirable behavior decreased. Eventually Ms. Maffei was able to reduce the frequency of access to the reinforcing activity to approximately every three days.