

(DRO) Differential Reinforcement of Other Behavior

A. Description and Purpose:

One technique of applied behavior analysis that has proven to be useful in decreasing frequent, severe, or repetitive behaviors is known as **differential reinforcement of other behaviors (DRO)**. DRO is a technique that involves reinforcing (rewarding) a student if an undesired behavior is NOT displayed during a designated time period. You will differentially reinforce (reward under certain conditions) the absence of the behavior for a certain time period. The approach is positive in nature in that the student's behavior is either reinforced or ignored. No punishment is involved. Although the traditional form of DRO requires a one-to-one teacher-student ratio with independent observers to record data, modifications can easily be made to allow for its use in the classroom, workshop, or home environment.

B. Equipment Needed:

A supply of reinforcers may be needed, such as edibles, activities, or favored objects or materials. In addition, a timing device, such as a clock, stopwatch, or wristwatch, may be needed to time intervals.

C. Setting it Up:

1. Define the behavior of concern in very specific, observable terms. Be sure that your definition is so precise that others, after reading your definition, will be observing the exact same behavior.
2. Conduct a frequency count. Figure out how often the behavior occurs on the average per minute/hour/class period?
3. Determine an interval to use for reinforcement. This interval (see step 2) is how long the student must withhold the undesirable behavior in order to be reinforced. During this time, the student is engaged in normal, everyday tasks. If a reward other than verbal praise is involved, be sure to tell the student why he is being rewarded each time you do so.

$$\frac{\text{\# of time intervals}}{\text{\# of times the behavior happened}} = \text{The time interval to use for reinforcement}$$

Example: If Carmen cursed **6 times** in **30** minutes, we divide the number of behavior occurrences (**6**) into the number of time intervals (**30**).

$$\frac{30}{6} = \text{The behavior happens about once every } 5 \text{ minutes (on the average).}$$

4. A criterion for increasing the DRO interval should be established. Suggestions include:

- Start at a small enough interval so that the student can earn more reinforcement for not engaging in the target behavior than for displaying it. Typically, this interval should be one half as short as the average baseline level.
- Lengthen the interval over time. This decision should be based upon the data being collected indicating the success the student is having at each interval length.

D. Implementation:

1. Once the time interval to use for reinforcement has been established (i.e. average of every 5 minutes), set a timer for a time period below the average (the interval for reinforcement would begin at 50% of this measure).

2. If the student reaches the desired interval, reinforce him/her with the predetermined reward and reset the timer.

3. If the behavior does occur during the designated time period, reset the timer. Do not discuss the behavior, rather reset the timer and continue activity/instruction.

4. Increase the time interval as appropriate (determined upon the data being collected indicating success).

E. Evaluation:

The following are possible reasons why the differential reinforcement system may not be working. Check these items before and during your intervention.

1. The target behavior has not been specified or assessed well. Pick one behavior at first and count it. Also, analyze it for communicative intent.
2. The reinforcers are not as rewarding to the student and or are less powerful than the reinforcers the student is receiving for the inappropriate behavior.

3. The reinforcers are not delivered enough for the student to recognize the value of exhibiting the desired behavior or they are delivered so often that they cause satiation.
4. The reinforcers are not delivered consistently and contingently. If the strategy is working do not stop until the success criterion is met.
5. The reinforcement schedule is thinned too slowly. Fade prompts and thin the reinforcement schedule as the student is successful at each stage. The goal is to eventually get to the point where an intermittent schedule of naturally occurring reinforcers will maintain unprompted behavior.
7. Generalization of the behavior in other settings has not been specifically addressed. Generalization should be taught before instruction is stopped.

F. Teaching Tips:

1. The behavior of concern may occur more frequently for the first day or two. The rate will then usually drop drastically if the DRO is implemented consistently. On the average, intervals will double in length each day.
2. You may have to decrease instructional time at the beginning of the program in order to deal with the behavior of concern, but you will gain instructional time as the program progresses.
3. Practice ignoring skills, such as breaking eye contact, looking away, not talking to the student, or walking away. Ignoring is a difficult skill.

G. References/Resources

Alberto, P. A., & Troutman, A. C. (1999). *Applied behavior analysis for teachers* (5th ed.). Upper Saddle River, NJ: Prentice Hall

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McIntyre, Thomas (1989) *THE BEHAVIOR MANAGEMENT HANDBOOK. Setting Up Effective Behavior Management Systems*. Boston: Allyn and Bacon.

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