

Autism Q&A: Facilitating Skill Acquisition Using Positive Reinforcement

People do things every day in anticipation of the outcomes or benefits that they will receive. A man does yard work on the weekends for the personal satisfaction of seeing his lawn well groomed. A teenager baby-sits in order to earn money for buying concert tickets. A child cleans her room at home, because she knows that her mom will bring her milk and cookies when the chore is completed. A student finishes a math worksheet to get points that he can use during break to play a video game.

These are all examples of how reinforcement can affect a person's behavior. For instance, the child knows that her mother will bring her favorite cookies after she cleans her room. So, the "behavior" is reinforced, and the child is more likely to clean her room in the future.

The purpose of using positive reinforcement in the classroom is to assist students with autism in acquiring new skills and maintaining them over time. The student receives reinforcement contingent on the occurrence of a specific behavior. The anticipated outcome is that his or her skill performance will increase or improve in anticipation of receiving the reinforcer. Positive reinforcement is a key component of Applied Behavior Analysis that can be used to assist students with autism in learning new adaptive behaviors.

Question: What is positive reinforcement?

ANSWER

Positive reinforcement is anything that happens after the behavior that increases the likelihood that the behavior will reoccur. An item or activity is only a reinforcer if it strengthens the behavior. There are two main types of reinforcers, primary and secondary. Primary reinforcers are often naturally reinforcing such as sleep, food or water; secondary reinforcers must be learned. Secondary reinforcers are developed over time and vary from person to person. Examples of secondary reinforcers are praising the student, putting a sticker or a letter grade of "A" on a worksheet. Most people are very influenced by a potent secondary reinforcer, money!

Some students may have limited items or activities that can be identified as positive reinforcers. Exposing the

student to new items and activities may be helpful as well as being observant and noting things that seem to be of interest to a specific student. Also, it is beneficial to pair primary reinforcers with items in an effort to create new secondary reinforcers. An example of this is saying "Good job" while at the same time giving the student a small piece of a chip. Over time, saying "Good job" becomes reinforcing to the student, and the chip is no longer needed as a primary reinforcer.

Question: Can anything be used as a reinforcer?

ANSWER

All kinds of things can be found in a classroom that may be used as reinforcers. However, not just anything can be used as a reinforcer, because each student will respond individually to different things. One student may complete an activity for points on a card to earn time to listen to music, while another student completes the assignment to earn points for taking a break.

Reinforcers can be categorized from least to most intrusive. Social praise is an example of a least intrusive form of reinforcement. Food is the most intrusive. The range of reinforcers from least to most intrusive include self-reinforcement, social praise, an activity, tangible items, tokens/points, and finally food. When considering what to use in the classroom, the teacher may want to try reinforcers that are the least intrusive first before the most intrusive.

If a student with autism only responds to the most intrusive reinforcer such as a specific food, the teacher will want to pair this with other less intrusive items. This is particularly true of edible reinforcement, since students can quickly satiate to the use of food and drink as reinforcers. In other words, if the student is not hungry or thirsty, then food or drink most likely will not increase the student's targeted behavior.

Individuals with autism sometimes have unusual interests. When using unusual interests as positive reinforcers, teachers must be careful that this does not limit inclusion

in regular school environments. Therefore, teachers must weigh the pros and cons of using any unusual item or activity. For instance, toys or activities that are appropriate for very young children may not be appropriate for transition-age youth. If an older student only responds to the use of age-inappropriate items and activities as reinforcers, then the teacher needs to pair these with other items in order to gradually assist the student in responding to more age-appropriate reinforcers.

Question: How do I know if the student is responding to the positive reinforcement?

ANSWER

The teacher should not rely on her intuition or opinion that a reinforcer is successful. Success can only be determined based on data collected related to the student's skill acquisition and successful performance in the classroom. When reviewing the data on the targeted behavior, the teacher should determine if the behavior is increasing over time or is being maintained. If so, the reinforcement is working. On the other hand, if there is no change in the behavior, then the teacher should consider changing the type, amount, and/or the schedule that the reinforcement is being delivered. Graphing this data can provide a visual representation that can show even subtle changes in behavior.

Question: What if a student stops responding to a reinforcer?

ANSWER

There are many reasons that students may stop responding to a reinforcer. The amount of reinforcement and the level of student deprivation can affect the impact on the strength of the reinforcer. If a student has unlimited access to a reinforcer in other settings, the teacher may not be successful using it as a reinforcer at school. For instance, if a student has a large collection of art supplies at home that she can use at any time, gaining access to art supplies at school may not be reinforcing. Or, if the student is given too much of the reinforcer, he or she may stop responding. In addition, a student may simply have "lost interest" in an item or activity that the teacher is using as a reinforcer. Having a variety of reinforcers available from which a student can select is a good strategy to use to prevent this from occurring.

Question: Please provide an example of a student and how to use reinforcement to increase a targeted behavior.

ANSWER

David is a 10 year old boy with autism who has difficulty with greeting others. His goal is that he will say "hello" to one of his classmates after entering the room in the morning. His teacher, Ms. Brown, did a reinforcement assessment and determined that David likes Spider Man, whales, and fist bumps. (Instead of touching hands as in a high five, David likes to bump fists).

Ms. Brown started giving David a fist bump along with saying, "Good job saying Hi David" when he greets a classmate first thing in the morning. After looking at the data on David's greeting behavior, Ms. Brown noticed that he now greets at least one classmate when he arrives in the morning. The fist bump is a positive reinforcer for David's greeting behavior, because it was delivered by Ms. Brown after he preformed the targeted behavior, and it increased the rate of David greeting his classmates.

Summary

The identification and use of reinforcement procedures to facilitate skill acquisition in the classroom requires time and careful consideration. It is important to remember that any reinforcer is only as good as the outcome it is accomplishing. In other words, a reinforcer is only effective if the student's targeted behavior is increasing or is being maintained after skill acquisition. Reinforcement must be individualized for each student, and teachers should have a variety available. In addition, the requirements for gaining access to the reinforcement should be increased over time.

For additional information, the following resources are recommended.

Neitzel, J. (2009). Overview of reinforcement. Chapel Hill, NC: The National Professional Development Center on Autism Spectrum Disorders, Frank Porter Graham Child Development Institute, The University of North Carolina.

Piazza, C.C., Fisher, W.W., Hagopian, L.P., Bowman, L.G., & Toole, L. (1996). Using a choice assessment to predict reinforcer effectiveness. *Journal of Applied Behavior Analysis*, 29, 1-9.

Contributors for this issue include Katherine Inge, Ph.D., O.T.R., Joy Engstrom, M.Ed., and Susan Palko, M.Ed. -- VCU-RRTC

Information for this Frequently Asked Questions (FAQ) is from Virginia Commonwealth University's Autism Center for Excellence (VCU-ACE), which is funded by the Virginia State Department of Education (Grant # 881-61172-H027A100107).

Virginia Commonwealth University is an equal opportunity/affirmative action institution providing access to education and employment without regard to age, race, color, national origin, gender, religion, sexual orientation, veteran's status, political affiliation, or disability. If special accommodations or language translation are needed contact VOICE (804) 828-1851 | TTY (804) 828-2494. For additional information on ACE, contact: autismcenter@vcu.edu.