

Natural Environment Teaching

Many people think of ABA as a child and teacher at a table, with instructional materials, a program book, and reinforcers spread out in front of them. In truth, this is more the case with structured teaching (usually DTT). However, ABA is more than DTT, more than structured teaching. Students must learn to learn in all environments, not first in one and then taught to generalize to others. Environmental contingencies (the way in which the environment is arranged, so to speak) has a lot to do with stimulus control. In order to generalize well and easily, generalization must be built into teaching from the beginning, and one way to do this is with Natural Environment Teaching (NET).

NET is not complicated, although those coming from a purely structured teaching model may have difficulty adjusting at first. Luckily, students rarely do. In a nutshell, NET is teaching the student away from the table (the structured teaching setting). Good ABA programs generally involve both NET and structured teaching, since there are certain skills that are difficult to teach first in the natural environment, such as academics. In NET, the teacher has a curriculum in mind (what to teach) and makes it portable. Following the student's MOs/EOs initially, the teacher generates ways to teach the curriculum using those MOs/EOs and the materials in the natural environment. Here, the cliché that "The world is a classroom" really applies; learning is not dependent on a table or particular set of materials.

One important variable in NET is instructional control. It is often easier to maintain instructional control at a table, but that is often accomplished through socially mediated negative reinforcement, or working to escape work. This is the student-teacher dynamic in which the student works for "breaks," or time away from the table. Generally, teachers can only get through 3 or 4 trials before needing to reinforce with a break; any more than that and they may start to "lose" the student. The reason for this is typically that the reinforcement value of learning is fairly low, and that the reinforcement value of escape from learning is much higher. These two factors are in constant flux; a balance of difficult tasks with easier tasks combined with the [teaching procedures mentioned elsewhere on this site](#) will keep the reinforcement value of learning high. Failure to use those teaching procedures will raise the reinforcement value of escape higher than that of learning and will result in the student's attempting to escape work through tantrums, aggression, or other undesired behavior. In this situation, students will tolerate a brief period of instruction that is over just before the value of escape becomes higher than that of learning. This is no way to teach, as it breaks up the rate of instruction and prevents fluency.

A better way to establish instructional control is for teachers to first pair themselves with positive reinforcement (pairing). Pairing begins with noncontingent reinforcement, meaning that the student is first reinforced without having demands placed on him or her. Technically, the reinforcement is still contingent, as there must be an absence of undesired behavior (tantrums, aggression, SIB, etc.) for reinforcement to be delivered. Initially the only requirement for accessing reinforcement (besides the lack of undesirable behavior) is that the student take the reinforcers from the teacher. After this is happening consistently, the teacher must gradually fade in demands, slowly

increasing the response requirement before reinforcement is delivered. Eventually the teacher will be able to present more trials of varied difficulty without lowering the reinforcement value of learning and increasing the value of escape. Pairing is slightly more involved than that, but essentially involves 3 elements which must be in close association with each other: 1) The student; 2) the teacher; and 3) the student's MOs/EOs and reinforcers. The teacher must capture and contrive MOs/EOs and identify strong reinforcers, with which she can pair herself, in order to become a reinforcer herself. Once this happens, everything associated with the teacher, especially learning itself, will become reinforcing. One tip: If the student's situation doesn't change for the worse (read: if the level of reinforcement doesn't decrease) when the teacher leaves the room, the teacher isn't pairing correctly. The teacher must be the conduit directly through which the student gains access to reinforcement. It is not enough to be in the room with the reinforcement while the student is contacting it; the teacher must be an integral part of it.

To describe this in more scientific detail, when you pair yourself with positive reinforcement, what you're technically doing is conditioning yourself as a reinforcer. Some stimuli start out as reinforcers, meaning that they strengthen behavior, even though a person has never had any contact or experience with them before. These stimuli, such as sleep, food, drink, sex, etc., are called unconditioned reinforcers. There are also unconditioned punishers, such as pain, that weaken behavior even without prior contact or experience. When stimuli are unconditioned, we don't have to be taught to "like" or "dislike" them; they're tied to some biological need and are therefore classified right out of the box. While these unconditioned stimuli are very important, most of the reinforcers and punishers we traffic in aren't unconditioned; they are conditioned. This means that the stimuli, through being paired with other reinforcers or punishers, take on some of their reinforcing or punishing properties. We gather conditioned reinforcers and punishers through our experience and history with the environment. Since we all experience the world differently, the complete list of our reinforcers and punishers is sort of our experiential thumbprint, different from everyone else's. In other words, we learn through experience to "like" or "dislike" things, which means that they will either increase or decrease certain behaviors when presented as consequences for those behaviors.

Given all that, when you're attempting to pair yourself with positive reinforcement, or condition yourself as a reinforcer, you're likely going to start by associating yourself with a range of unconditioned and conditioned reinforcers. So you'll identify foods, drinks, toys, games, videos, computer games, physical/social reinforcers, etc., to associate yourself with. The more directly you are involved in providing your child with access to reinforcement, the more you will be paired up with that reinforcement. The child should always have to go through you to get what he wants; otherwise, he's just accessing reinforcement while you're in the room, which isn't enough. You have to be a key part of the reinforcement: Handing the food, drink, or toy to the child, playing the game with him, helping him bounce, pushing him on the swing, turning on the TV or computer, etc. If he doesn't have less fun when you leave the room than he does when you're there, you're not pairing, because the access to reinforcement must not really involve or be dependent on you. You have to make the reinforcement happen, not just be there while

it's happening. It's the difference between chipping in on a lottery ticket with a friend and picking half the winning numbers versus going with your friend when she picks the numbers and buys herself a winning ticket. For more info, see [Yoon, So-Young, and Bennett, Gina M., Effects of a Stimulus-Stimulus Pairing Procedure on Conditioning Vocal Sounds as Reinforcers, Analysis of Verbal Behavior, Vol. 17](#)

Pairing must take place for instructional control to be gained in both natural and structured environments. However, it is especially important in NET because the student is moving from environment to environment with the teacher. If the teacher doesn't have instructional control, it will be very difficult to teach in the natural environment. Once pairing has been done, however, the teaching should start. It's very difficult to give blanket descriptions of NET, since it's so dependent on creativity and motivation, so here are some examples of how to teach in the natural environment:

- ° Manding: The student wants to go on a swing outside. The teacher gets a mand for "Swing" (at whatever level the student can mand) and then begins chaining in mands. The teacher tells the student to get his "socks" and "shoes," each of which he must mand for, as well as perhaps manding for "help" to get them on. Then the teacher can block the door to the backyard, prompting the student to mand, "Move" or "Excuse me." Once she moves, the student can mand to "Open" the door, then again for the "swing," to "get up," get a "push," go "faster," "higher," etc. This will squeeze several mands out of just one. However, be careful not to chain in too many mands too soon, or the student's MO/EO may be lost.

- ° Receptive ID and Tacting Colors: The student enjoys playing with playdoh. The teacher begins to make favorite shapes and then allows the student to mand for what to make. The teacher can ask the student to give her the "yellow" playdoh to make Big Bird, the "blue" playdoh to make Blue from Blue's Clues, the orange playdoh to make Chuckie's hair (from Rugrats), etc. The colors become motivating themselves because they're used to make the characters that the student loves look more accurate and realistic. You can also build in tacts of the colors and characters, echoics of the characters' catchphrases, etc.

- ° Intraverbal Fill-ins: The student loves music, so the teacher sing some songs while playing and leaves out key words from the songs, i.e., "The wheels on the..." or "Head, shoulders, knees, and..." Gross motor imitation of the movements that go with the songs, receptive ID and tacting of body parts in the songs, and echoics can also be worked in.

The important elements of NET are to keep in mind are what you want to teach, to identify MOs/EOs that will create strong reinforcers, to be creative in figuring out how to teach the target skills using those MOs/EOs, and to have fun. When the curricular targets are functional and made to be motivating through good teaching, much can be accomplished in the natural environment.