

Module: Pivotal Response Training (PRT)

PROCEDURES FOR IMPLEMENTATION

Motivation

Strategies to increase motivation can be incorporated into a home setting or general education classroom quite easily and can have positive benefits for typically developing siblings and peers as well as learners with ASD. Several procedures have been identified to increase motivation. These include (a) establishing learner attention, (b) using shared control, (c) using learner choice, (d) varying tasks, (e) interspersing acquisition and maintenance tasks, (f) reinforcing response attempts, and (g) using reinforcers that are directly linked to the learner's goals (R. L. Koegel et al., 2001). These procedures and how they can be used to increase motivation are discussed in the following section.

Step 1. Establishing Learner Attention

When implementing PRT, learners first must pay attention to the task before team members can present them with (a) a question, (b) instruction, or (c) opportunity to respond. Once the learner attends, the parent and/or team member gives brief and clear instructions that are appropriate to what the learner is doing at the time. For example, a parent could tap a learner on the shoulder or gain eye contact before providing instructions. Once learner attention has been established, team members can work on other skills.

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Step 2. Using Shared Control and Turn Taking

Shared control refers to a balanced interaction in which each partner has some control or choice over the activity. For example, the learner may select the material or activity, but the team member may require a communicative behavior before handing the object to the learner or continuing the interaction. The learner may be able to play with the material or engage in the activity for 30 seconds or so, but the adult may also take turns with the object or decide when to momentarily stop the activity to elicit a response from the learner. This is in contrast to adult control, in which the adult is making all the decisions about what the learner has to do and what rewards they receive. In shared control, the adult follows the learner's lead to insert teaching opportunities within the child's selection of preferred materials and activities and does not place demands on the child.

Shared control is important for several reasons.

- (1) Play that involves shared control gives the learner experience in the typical give-and-take of social and communicative interactions.
- (2) The adult's "turn" provides the adult with an opportunity to model the desired behavior (e.g., a targeted communication, a play skill) for the learner.
- (3) The adult's turn gives the adult an opportunity to capture the learner's attention prior to modeling a behavior, giving an instruction, or prompting a targeted behavior.

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In a shared control interaction, both adults and learners participate in a shared activity. In the beginning stages of learning, adults may **scaffold** the bulk of the routine. But as learners become more familiar with the routine and begin to anticipate the reward, adults can require more and more participation from the learner. For example, for a learner whose current targeted objective is learning to produce and imitate the consonant-vowel combination “ba-ba,” the adult may use bubbles. At the beginning, the adult may offer the bubble container while saying, “Bubbles ... want bubbles?” and when the learner reaches for the container, the adult blows lots of bubbles. The adult pauses, waiting for a learner response (which, at this initial stage, may simply be the learner looking toward the adult). Then the adult says, “More bubbles” and blows many more. After a few weeks, the interaction grows more complex. The adult gives the learner a choice of a bubble jar or pencils, and the learner reaches for the bubbles. The adult holds the bubbles closer to the learner and says “Bubbles ... bubbles,” and waits. The learner now says, “Ba-ba” and the adult blows a few bubbles. The learner is delighted and reaches for more. The adult says, “Bubbles ... more bubbles?” and waits for the learner to imitate “ba” or “ba-ba.” The learner says, “Ba,” and the adult blows a few more at the learner’s shoes while saying, “Bubbles on shoes” as the learner smiles and laughs. The adult then puts the top on the bubbles container, hands it to the learner, and waits. The learner tries to open the container, cannot, and hands it back to the adult. Before taking the container, the adult asks, “More bubbles?” The learner says, “Ba.” The adult takes the bubbles and models “ba-ba” slowly and clearly to the

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expectant learner. When the learner says, “Ba-ba,” the team member opens and blows a stream of bubbles. At this point, the team member is making many requests of the learner, and the learner is also making requests of the team member. The two are sharing control of the interaction and the activity.

During teaching episodes, parents and/or team members also maintain a balance between adult- and learner-selected materials, topics, activities, and toys. Sharing control of the activity and material selection increases learners’ motivation to participate and thereby allows the adult to create more teaching opportunities for the learner to practice and acquire the target behaviors and skills.

Step 3. Using Learner Choice

Learner choice has been defined as “using child preferred or child selected materials, topics, and toys and following the child’s lead” (R. L. Koegel et al., 2001, p. 22). With this procedure, parents and/or team members set up an environment rich in preferred, age-appropriate objects and activities for the learner (R. L. Koegel & Koegel, 2006). Objects and activities are arranged so that the learner must communicate in some way (e.g., pointing to the object, verbally labeling it) in order to obtain them. This allows for multiple, natural opportunities to work on target behaviors within daily routines and activities, especially those related to language development, while maintaining the learner’s interest (R. L. Koegel, O’Dell, & Koegel, 1987).

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For example, a ball, a clear box of blocks, a shape sorter, and a bottle of bubbles can all be placed on a shelf in the child's room. When the learner points to the bottle of bubbles and says "bubbles," the parent says "Bubbles!" while taking the bottle down and starting to open it with the learner. The learner had the choice of several objects, each providing an equal opportunity to practice requesting and communication. Parents and team members should provide a variety of activities and items for learners to choose from throughout the day to increase their motivation to participate in numerous learning activities.

Allowing learners to choose preferred objects or activities is particularly important when teaching new skills. Using toys, items, and activities that individual learners with ASD prefer increases their motivation to participate, and thus the likelihood that they will acquire target skills. To assess learner choice, team members should look at the interests of individual learners as well as the items, activities, and toys with which they engage most often when they have free access to a variety of toys and activities. For example, a team member may notice that a young child with ASD in her class plays with dinosaurs for most of free play. Or a middle school team member may observe a learner with ASD in her class who is particularly interested in race cars. When implementing learning activities, team members should include these preferred materials and activities in learning tasks and activities. Team members also should

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consider that the interests of individual learners may change from day to day as well as hour to hour, or even minute to minute. Therefore, it is extremely important to follow the lead of learners to capitalize on their motivation to participate during teaching episodes. Because learners are not interested in the same activities and objects all the time, team members should consider what learners are most interested in at the moment and thus what will motivate them to participate each time a learning activity is arranged (R. L. Koegel, Sze, Mossman, Koegel, & Brookman-Frazee, 2006).

Step 4. Varying Tasks and Responses

Variation is essential for (a) building a wide rather than an overly narrow behavioral repertoire and (b) maintaining a learner's interest and engagement. Parents and team members need to vary their language so that learners are not just hearing one word over and over, but are hearing a variety of ways used to mean the same thing. A child who has just learned "all done" should be prompted to say "finished," "clean up," "no more" as well as "all done" to request the end of an activity. When playing with cars, a parent could model several different multiword constructions – *yellow car, big car, noisy car, slow car*, rather than repetitively commenting on only one aspect of the car.

This variation aids in generalization in that specific responses are not tied to specific stimuli. Rather, the individual learns that a number of responses may be associated with a particular stimulus and vice versa. In addition, team members should be alert to

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learner's behavioral cues (e.g., lack of attention, attempts to change activities) that signal that they are becoming bored and that it is time to change to a new item or activity. Researchers have noted that increased responding occurs when stimuli (e.g., tasks, materials, activities) are varied, rather than when a single stimulus is repeatedly presented (Dunlap & Koegel, 1980).

Step 5. Interspersing Acquisition and Maintenance Tasks

Motivation also can be maximized by **interspersing maintenance trials with acquisition trials**. This means making sure that acquisition trials (tasks that are new or currently being learned) are combined with maintenance tasks (previously mastered items). When using this procedure, team members identify skills that are easy for individual learners as well as skills that are more difficult. By providing a mixture of easy and more difficult tasks, learners are able to feel successful, increasing their motivation to participate in the activity.

Behavioral momentum is often used to facilitate learners' maintenance of newly acquired skills (Davis, Brady, Williams, & Hamilton, 1992; Nevin, Mandell, & Atak, 1983). With this strategy, three rapid, short requests that are easy for the individual learner to follow (**high-probability requests**) are delivered before a request that the learner has historically had more difficulty following (**low-probability requests**). An example of this strategy is to give learners several opportunities to use a word they

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have mastered and that is easy for them, such as the word *ball*, then provide an opportunity to use a new, acquisition word, such as “cookie” (R. L. Koegel & Koegel, 2006).

Research suggests that learners are able to learn much more efficiently when acquisition and maintenance tasks are variably presented than when acquisition tasks are repeatedly presented (Dunlap, 1984). Furthermore, learners are much more likely to stay focused and engaged in tasks and activities where they experience high rates of success and reinforcement (R. L. Koegel, Carter et al., 1998; Davis et al., 1992).

Step 6. Reinforcing Response Attempts

Reinforcement of response attempts is a **consequence-based strategy** in which all attempts that are clear approximations of the targeted response are rewarded. This procedure is in contrast to a more rigid shaping procedure in which only approximations that are as good as or better than previously demonstrated approximations are rewarded (L. K. Koegel, Koegel, Harrower et al., 1999). It is particularly effective in helping children with severe communication delays develop more language and demonstrate more positive affect (R. L. Koegel et al., 1988). Reinforcing attempts not only directly reinforces the attempted behavior but increases the probability that learners will engage in future attempts and interactions as they experience more success and positive reinforcement. Take for example, a nonverbal child who is starting

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to make goal-directed vocalizations and reaches for a book and says, “Oh.” Although this is not the targeted response (i.e., “book”), the adult immediately reinforces the attempt by saying “Book!” while handing the book to the child. In this manner, the adult reinforces the attempted vocalization and models the word for the child.

The above example also illustrates how team members should provide reinforcement immediately following communication attempts, even if the response is not correct. The team member hands the book to the learner as soon as he makes a vocalization. Although this is not the target response, the child’s attempts at communication are being reinforced and he is beginning to understand that there is a direct relationship between his vocalizations and getting something in return.

Step 7. Using Natural and Direct Reinforcers

Providing natural, contingent reinforcement is one of the most powerful ways to teach learners that there is a direct link between their behavior and access to rewards (R. L. Koegel et al., 2006). A natural reinforcer is defined as “one that is directly and functionally related to the task (i.e., one that is within the chain of behaviors required to produce the reinforcer) so that when children emit the target response, they will naturally obtain the reward” (L. K. Koegel et al., 1999, p. 178).

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Research has shown that learners with ASD are much more likely to acquire skills rapidly when reinforcers are directly related to a given task or activity (R. L. Koegel & Williams, 1980). For example, a team member could present a learner with a clear, lidded jar that contains a highly motivating object (e.g., bubbles or raisins). The learner will most likely try to open the jar and then look to the team member for help. After the learner uses the target phrase (e.g., “Help, please.”), the team member provides access to the reinforcer inside the jar. This might be contrasted with an indirect reinforcer wherein the team member says “good talking” instead of providing access to the motivating object. Another example of a direct and natural reinforcer is a learner who appears to want a break and is prompted to request it, makes the request, and gets the break. If the learner has to do something else, such as complete something to get the break, this would not be an example of a directly related reinforcer. As a final example, an adolescent wants to purchase a drink from a machine, and so calculates the correct combination of coins needed to operate the drink machine (a math objective for him), and then operates it.

The importance of successfully motivating learners cannot be overemphasized.

Research has shown that not only does motivation have a dramatic effect on increasing learners’ language and social learning (L. K. Koegel et al., 1998; R. L. Koegel et al. 1988; R. L. Koegel & Egel, 1979), it also decreases interfering behaviors (Dunlap, Kern-Dunlap, Clarke, & Robbins, 1991).

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