

Module: Pivotal Response Training (PRT)

PROCEDURES FOR IMPLEMENTATION

Responsivity to Multiple Cues

Step 1. Varying Stimuli and Increasing Cues

Two types of approaches have been found to be particularly successful in reducing **stimulus overselectivity** (i.e., learner focuses on only one aspect of an object or environment while ignoring other aspects) and increasing awareness of salient, multiple cues for learners with ASD (L. K. Koegel et al., 1999). Schreibman (1975) found **within-stimulus prompting** to be a more effective initial intervention than **extra-stimulus prompting** (e.g., pointing to prompt the correct response from the learner). Within-stimulus prompting involves exaggerating or overemphasizing the feature that differentiates between two stimuli. For example, “when teaching the difference between the letters ‘p’ and ‘b,’ the stems are elongated to twice the length. Then, as the learner begins to distinguish between the two letters, the stems are gradually shortened to the correct proportion” (Rosenblatt, Bloom, & Koegel, 1995, pp. 39-40). While this is teaching the learner to attend to one specific cue, it has been shown to be successful in teaching learners with ASD to attend to more complex stimuli with multiple cues. For example, Schreibman, Charlop, and Koegel (1982) found that children who had been taught to respond to multiple cues through within-stimulus prompting were able to generalize and learn from extra-stimulus prompting such as pointing.

Module: Pivotal Response Training (PRT)

PROCEDURES FOR IMPLEMENTATION

Another approach that has been successful in reducing stimulus overselectivity is **multiple-cue discrimination training**, which systematically teaches learners to respond to additional cues of a single stimulus. Burke and Cerniglia (1990) determined that a systematic training program to teach each stimulus cue incrementally helped children with ASD increase correct responding as the number of stimulus components increased from one to four. In this study, the authors presented a task involving verbal instructions and requiring visual and motor responses. Four different types of cues were used, each from a different dimension: color (red/blue), size (big/little), type of object (pencil/crayon), and location of object (in the box/in the cup). Initial teaching began with one cue and systematically increased to two, three, and then all four types of cues (e.g., “little blue pencil in the cup”). Not only were the children able to increase their ability to respond to multiple cues in the experimental condition, they also were able to improve their correct responding to more naturalized verbal instructions within more typical social settings (e.g., school, home).

Overselective responding also has been reduced or eliminated by teaching learners to respond to **conditional discriminations**—tasks in which reinforcement is available contingent upon responding to a combination of cues and not available to the individual components. For example, in one study (R. L. Koegel & Schreibman, 1977) children with ASD were presented with three stimuli: light alone, sound alone, and light plus sound. A conditional discrimination was in effect when reinforcement was delivered

Module: Pivotal Response Training (PRT)

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ONLY for responses to the light plus sound and not for either the light only or the sound only. Research has demonstrated that children who are initially overselective can become less overselective if they are trained on a series of conditional discriminations (R. L. Koegel & Schreibman, 1977; Schreibman et al., 1982).

Step 2. Scheduling the Reinforcement

The **schedule of reinforcement** has been shown to be important for developing awareness and responding to multiple cues. For example, R. L. Koegel, Schreibman, Britten, and Laitinen (1979) found that children with ASD overselected less when they moved to a variable ratio (presenting a reinforcer one out of every three responses, on average) schedule of reinforcement from a continuous schedule (presenting a reinforcer after every correct response). For more information on reinforcement as an evidence-based practice, please review the module on reinforcement at www.autisminternetmodules.org developed by The National Professional Development Center on ASD.