

An Analysis of Error Correction Procedures during Discrimination Training.

Rodgers, T.A., & Iwata, B.A. (1991) Journal of Applied Behavior Analysis 24, 4, 775-781

Background: A widely used technique in early intensive behavioural intervention is known as discrete-trials teaching, which has been used effectively to teach a variety of academic, vocational, and daily living skills to individuals with developmental disabilities, including autism. An essential behavioural technique implemented in discrete-trials teaching is the presentation of an immediate consequence following a response. Correct responses are often followed by the presentation of rewards (edibles, praise, etc.), while there is a great deal of variation with respect to the consequences provided for incorrect responses. One type of procedure involves the use of a correction technique used to reduce the frequency of errors. Rodgers and Iwata list four potential strategies that may be used following an incorrect response: the absence of rewards (equivalent to an extinction component), implementing a delay or time out, demonstration of the correct response or modeling, and the presentation of remedial trials. Rodgers and Iwata's research focused on the presentation of remedial trials as an error correction technique.

Purpose: Do error correction trials improve performance during discrimination training and if so, why? Do they increase performance through exposure and practice or do they set up an avoidance contingency for the correct response?

Subjects: 7 adults with developmental disabilities, including autism, participated in the study.

Method: A multi-element design was used to evaluate 3 error-correction procedures. During one-to-one sessions, participants were engaged in matching tasks and required to make an observing response. Consequences for correct responses were identical across conditions and included praise and edible item. During baseline, differential reinforcement was implemented and errors were ignored. During the practice condition, errors were followed by the presentation of remedial trials which continued until a correct response occurred. The avoidance condition was identical to the practice condition except that the subjects were presented with novel stimuli during the practice trials as opposed to the training stimuli (stimuli on which they made an error).

Results: Performance improved for all subjects following the introduction of error correction techniques. Three subjects performed best in the avoidance condition while two performed best in the practice condition.

Conclusion: Negative reinforcement (escape conditioning) was common to both the practice and avoidance conditions, in the sense that correct responses allowed subjects to avoid remedial trials. The results indicate that error-correction procedures improve performance through negative reinforcement.