WC Journal Club Article Options
January 2016 - ASD and Teaching

Please read the following abstracts then vote using the online form your preference for each article. The top two will be selected for discussion for the month.

A COMPARISON OF ERROR-CORRECTION PROCEDURES ON SKILL ACQUISITION DURING DISCRETE-TRIAL INSTRUCTION
Carroll et al., 2015
JOURNAL OF APPLIED BEHAVIOR ANALYSIS 2015, 48, 257–273 NUMBER 2 (SUMMER)

Previous research supports the use of a variety of error-correction procedures to facilitate skill acquisition during discrete-trial instruction. We used an adapted alternating treatments design to compare the effects of 4 commonly used error-correction procedures on skill acquisition for 2 children with attention deficit hyperactivity disorder and 3 children with autism spectrum disorder. For all participants, multiple error-correction procedures were effective; however, 1 or 2 specific error-correction procedures led to more efficient skill acquisition for each individual. These results highlight the importance of evaluating the effectiveness and efficiency of error-correction procedures for individual learners during discrete-trial instruction. We discuss the use of discrete-trial instruction with different populations, implications for using multiple measures of procedural efficiency, and several areas for future research.

TEACHING CHILDREN WITH AUTISM TO DISCRIMINATE THE REINFORCED AND NONREINFORCED RESPONSES OF OTHERS: IMPLICATIONS FOR OBSERVATIONAL LEARNING
Dequinzio & Taylor, 2015
JOURNAL OF APPLIED BEHAVIOR ANALYSIS 2015, 48, 38–51 NUMBER 1 (SPRING)

We taught 4 participants with autism to discriminate between the reinforced and nonreinforced responses of an adult model and evaluated the effectiveness of this intervention using a multiple baseline design. During baseline, participants were simply exposed to adult models' correct and incorrect responses and the respective consequences of each. During discrimination training, in the presence of target pictures, we taught participants to imitate the reinforced responses of an adult model and to say "I don't know" when an adult model's response was not reinforced. Test sessions were conducted after baseline, discrimination training, and generalization sessions to measure responding to target pictures in the absence of the model, prompts, and reinforcement. All 4 participants showed acquisition in the discrimination of reinforced and nonreinforced responses of the adult model during test sessions. Generalization to stimuli not associated with training was variable across the 4 participants. Implications for teaching observational learning responses to children with autism are discussed.

Two experiments evaluated the effects of the simple-to-complex and simultaneous training protocols on the formation of academically relevant equivalence classes. The simple-to-complex protocol intersperses derived relations probes with training baseline relations. The simultaneous protocol conducts all training trials and test trials in separate portions of the protocol. In Experiments 1 and 2, participants formed 4 3- and 4-member neuroanatomy classes, spectively. When trained with the simple-to-complex protocol, 100% of participants immediately formed the 3- or 4-member classes. When trained with the simultaneous protocol, the 3- and 4-member classes were formed immediately by 75% and 42% of participants, respectively. Thus, the immediate emergence of equivalence classes was an interactive function of training protocol and class size. The remaining participants eventually formed classes after a few cycles of retraining. The incorporation of these training and testing parameters could optimize the use of equivalence-based instruction for teaching college-level course content.

Some children with autism spectrum disorders (ASD) display persistent errors that are not responsive to commonly used prompting or error-correction strategies; one possible reason for this is that the behavior–consequence relations are not readily discriminable (Davison & Nevin, 1999). In this study, we increased the discriminability of the behavior–consequence relations in conditional-discrimination acquisition tasks for 3 children with ASD using schedule manipulations in concert with a unique visual display designed to increase the saliency of the differences between consequences in effect for correct responding and for errors. A multiple baseline design across participants was used to show that correct responding increased for all participants, and, after 1 or more exposures to the intervention, correct responding persisted to varying degrees across participants when the differential reinforcement baseline was reintroduced to assess maintenance. These findings suggest that increasing the saliency of behavior–consequence relations may help to increase correct responding in children with ASD who exhibit persistent errors.

USING AUDIO SCRIPT FADING AND MULTIPLE-EXEMPLAR TRAINING TO INCREASE VOCAL INTERACTIONS IN CHILDREN WITH AUTISM

Garcia-Albea et al., 2014

Script-fading procedures have been shown to be effective for teaching children with autism to initiate and participate in social interactions without vocal prompts from adults. In previous script and script-fading research, however, there has been no demonstration of a generalized repertoire of vocal interactions under the control of naturally occurring relevant stimuli. In this study, 4 boys with autism were taught to initiate a conversation in the presence of toys through the use of a script and script-fading procedure. Training with multiple categories and exemplars of toys was used to increase the likelihood of generalization of vocal interactions across novel toys. A multiple-probe design across participants was used to assess the effects of these procedures. The intervention successfully brought interactions by children with autism under the control of relevant stimuli in the environment. Future research pertaining to the specific implementation of these procedures (e.g.,fading, script placement, participant characteristics) is discussed.

A COMPARISON OF METHODS FOR TEACHING RECEPTIVE LABELING TO CHILDREN WITH AUTISM SPECTRUM DISORDERS: A SYSTEMATIC REPLICATION

Grow et al., 2014

Previous research has demonstrated that the conditional-only method (starting with a multiple-stimulus array) is more efficient than the simple-conditional method (progressive incorporation of more stimuli into the array) for teaching receptive labeling to children with autism spectrum disorders (Grow, Carr, Kodak, Jostad, & Kisamore, 2011). The current study systematically replicated the earlier study by comparing the 2 approaches using progressive prompting with 2 boys with autism. The results showed that the conditional-only method was a more efficient and reliable teaching procedure than the simple-conditional method. The results further call into question the practice of teaching simple discriminations to facilitate acquisition of conditional discriminations.

EXAMINATION OF THE RELATION BETWEEN AN ASSESSMENT OF SKILLS AND PERFORMANCE ON AUDITORY–VISUAL CONDITIONAL DISCRIMINATIONS FOR CHILDREN WITH AUTISM SPECTRUM DISORDER

Kodak et al., 2015

The current investigation evaluated repertoires that may be related to performance on auditory-to-visual conditional discrimination training with 9 students who had been diagnosed with autism spectrum disorder. The skills included in the assessment were matching, imitation, scanning, an auditory discrimination, and a visual discrimination. The results of the skills assessment showed that 4 participants failed to demonstrate mastery of at least 1 of the skills. We compared the outcomes of the assessment to the results of auditory–visual conditional discrimination training and found that training outcomes were related to the assessment outcomes for 7 of the 9 participants. One participant who did not demonstrate mastery of all assessment skills subsequently learned several conditional discriminations when blocked training trials were conducted. Another participant who did not demonstrate mastery of the auditory discrimination skill subsequently acquired conditional discriminations in 1 of the training conditions. We discuss the implications of the assessment for practice and suggest additional areas of research on this topic.

USING INSTRUCTIVE FEEDBACK TO TEACH CATEGORY NAMES TO CHILDREN WITH AUTISM
Loughrey et al., 2014

We evaluated the effects of instructive feedback (IF) on the emergence of spoken category names with 2 children who had been diagnosed with autism. IF stimuli were presented during listener discrimination training and consisted of presenting the category name associated with each target stimulus. Results suggest that participants acquired the speaker relations in the absence of prompting and reinforcement. Clinical implications and future research on the use of IF as a teaching procedure for children with autism are discussed.

COMPARING MASSED-TRIAL INSTRUCTION, DISTRIBUTED-TRIAL INSTRUCTION, AND TASK INTERSPERSAL TO TEACH TACTS TO CHILDREN WITH AUTISM SPECTRUM DISORDERS
Majdalany et al., 2014

Although massed-trial instruction, distributed-trial instruction, and task interspersal have been shown to be effective methods of teaching skills to children with autism spectrum disorders, they have not been directly compared. In the current study, we taught 6 children to tact shapes of countries using these methods to determine which would

result in the quickest acquisition. Five of the 6 participants acquired the targets in the massed-trial condition before the other 2 conditions.

INCORPORATING ADDITIONAL TARGETS INTO LEARNING TRIALS FOR INDIVIDUALS WITH AUTISM SPECTRUM DISORDER
Nottingham et al., 2015
JOURNAL OF APPLIED BEHAVIOR ANALYSIS 2015, 48, 227–232 NUMBER 1 (SPRING)

Recently, researchers have investigated the effectiveness and efficiency of presenting secondary targets during learning trials for individuals with autism spectrum disorder (ASD). This instructional method may be more efficient than typical methods used with learners with ASD, because learners may acquire secondary targets without additional instruction. This review will discuss the recent literature on providing secondary targets during teaching trials for individuals with ASD, identify common aspects and results among these studies, and identify areas for future research.

TEACHING CHILDREN WITH AUTISM TO RESPOND TO CONVERSATION PARTNERS' INTEREST
Peters & Thompson, 2015
JOURNAL OF APPLIED BEHAVIOR ANALYSIS 2015, 48, 544–562 NUMBER 3 (FALL)

Successful conversation requires that the speaker's behavior is sensitive to nonvocal listener responses. We observed children with autism spectrum disorder during conversation probes in which a listener periodically displayed nonvocal cues that she was uninterested in the conversation.

We used behavioral skills training to teach conversation skills. First, we taught participants to tact nonvocal listener behavior (interested or uninterested), but this was insufficient to improve responding aimed at regaining listener interest. Participants were then taught to ask a question

(Experiments 1 and 2) or change the topic (Experiment 2) when the listener was uninterested. Responding persisted over time and with changes in the stimulus conditions. The behavior range was also deemed socially valid by blind observers. In Experiment 3, participants learned to shift to the other trained response when exposed to extinction. This study illustrates a set of procedures for bringing speaker behavior under control of nonvocal listener cues.

AN EVALUATION OF RESPONSE PROMPTS FOR TEACHING BEHAVIOR CHAINS

Individuals who have been diagnosed with autism spectrum disorders can have difficulty acquiring new skills, and teaching procedures found to be efficient with 1 individual may not be efficient with others. However, relatively little research has evaluated methods to identify efficient, individualized response-prompt and prompt-fading procedures. We evaluated an assessment of multiple response prompts and prompt-fading procedures with 10 individuals with an autism spectrum disorder. The prompt types assessed were verbal and gestural, model, and physical. Prompt-fading procedures assessed were least to most, most to least, and a progressive delay. Each assessment was conducted at least twice, and the findings of both prompt-type and prompt-fading assessments were generally reliable. A final validity test showed the assessment outcomes to have generality that may extend to other clinically significant responses.

USING CLASS-SPECIFIC COMPOUND CONSEQUENCES TO TEACH DICTATED AND PRINTED LETTER RELATIONS TO A CHILD WITH AUTISM

The effects of class-specific compound consequences embedded in an identity-matching task to establish arbitrary emergent relations were evaluated. A 3-year-old child with autism was taught identity relations between lowercase letters (Set 1) and uppercase letters (Set 2). A compound stimulus that consisted of an auditory component (dictated letter name) and a visual component (an uppercase letter for Set 1 or lowercase letter for Set 2) followed correct responses. All targeted arbitrary relations emerged (uppercase–lowercase, lowercase–uppercase, dictated name/uppercase, and dictated name/lowercase), suggesting that this procedure may be useful for teaching.

EFFECTS OF SERIAL AND CONCURRENT TRAINING ON ACQUISITION AND GENERALIZATION

Despite a large body of research demonstrating that generalization to novel stimuli can be produced by training sufficient exemplars, the methods by which exemplars can be trained remain unclear. The purpose of the current study was to evaluate 2 methods, serial and concurrent presentation of stimuli, to train sufficient exemplars. Five preschool children with developmental delays were taught to identify letters or letter sounds using serial and concurrent

presentation. Generalization to untrained exemplars was evaluated for targets trained using each method. Participants reached the mastery criterion in fewer training sessions, on average, using the concurrent method of presentation than the serial method, and the concurrent method also resulted in greater generalization to untrained exemplars.