The focus of treatment for children with autism should include teaching the child to request, teaching receptive and expressive language, and teaching visual performance skills such as matching-to-sample (Sundburg & Partington, 2008).

In order to maintain acquired skills, it is important for children to be able to learn how to generalize skills to novel environments, materials, and teachers (Sundburg & Partington, 2008).

Children with autism have displayed difficulty in generalizing skills (e.g., matching-to-sample, labeling items, and receptive identification) to novel materials (Sundburg & Partington, 2008).

Researchers have published conflicting results as to whether the use of objects (House & Zeaman, 1960) or photographs (Dixon, 1981) as training materials teaches children to generalize matching-to-sample skills to novel materials more effectively.

When typical infants were taught to match-to-sample, the generalization rate of matching-to-sample skills was equivalent across participants when comparing the use pictures and objects as training materials (Daehler, Perlmutter, & Myers, 1976).

The purpose of the current study is to determine whether teaching matching-to-sample skills to children with autism (using objects and pictures) will produce effective generalization skills when using novel objects or pictures, or if generalization will be found in both conditions.

Materials
- Two identical red toy convertibles and one non-identical blue toy convertible were used to teach matching-to-sample skills using objects.
- Two identical photographs of black cats and one photograph of a white cat were used to teach matching-to-sample skills using pictures.
- Object generalization materials included two identical green toy convertibles, two identical green toy buses, and two identical red toy bears.
- Picture generalization materials included two identical photographs of calico cats, two identical photographs of golden retrievers, and two identical photographs of red cars.

Method

Introduction

Participants and Setting
- One child participated in the current study: Mark, 2 years, 7 months old.
- The participant was receiving approximately four hours of intensive-behavioral therapy each week at a university-based program.
- Experimental sessions were conducted at the beginning and end of the child’s 50 minute therapy session Monday through Thursday.
- Sessions were conducted at a table in a therapy room (2.1 m by 4.6 m) located at the university-based program.

Procedure
- The participant was taught to match-to-sample using both pictures and objects.
- The participant was taught to match-to-sample using a shaping procedure (Sundburg & Partington, 2008).
- The participant was seated at a table for all trials, with the target object or photograph and the distracter object or photograph in front of the participant.
- A correct response was defined as the participant placing his object or photograph next to the target object or photograph.
- If the participant competed the task incorrectly, a 2:1 least-to-most prompting procedure was used.
- Mastery criterion was defined as the participant emitting the correct response for five consecutive trials across two days.
- If the participant mastered objects before pictures (or vice-versa) maintenance trials were conducted twice per session until both skills reached mastery.

Results and Discussion

Method

Generalization
- Generalization trials were delivered once the participant reached mastery of the matching-to-sample skill using both objects and pictures.

Generalization of Objects
- Three matching-to-sample generalization trials were delivered using objects.
- The first generalization trial tested to see if the matching-to-sample skill acquired during treatment generalized to another object with novel features.
- The second generalization trial tested to see if the matching-to-sample skill acquired in treatment generalized to objects of the same class, but in a novel form.
- The third generalization trial tested to see if the matching-to-sample skill acquired during treatment generalized to objects of a novel class.

Generalization of Photographs
- Three matching-to-sample generalization trials were delivered using photographs.
- The first generalization trial tested to see if the matching-to-sample skill acquired in treatment generalized to another photograph of an animal with novel features.
- The second generalization trial tested to see if the matching-to-sample skill acquired in treatment generalized to photographs of the same class, but in a novel form.
- The third generalization trial tested to see if the matching-to-sample skill acquired in treatment generalized to photographs of a novel class.

Results
- The participant generalized the matching-to-sample skills to novel objects and photographs.
- During baseline, the participant was unable to match-to-sample.
- The participant achieved mastery criterion using both objects and photographs as materials.
- The participant emitted correct responses for all generalization trials.

Future Research Ideas
- Future studies could use a multiple baseline design across participants to determine if the results of the current study are replicable.
- Future studies could use a multiple baseline design across skills to determine if the results of the current study are replicable for tacting, receptive, and expressive skills.

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