

# The Effects of Motivating Operations on the Transfer from Labels to Requests in Children Diagnosed with Autism

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## Introduction

Children with autism have delayed communication skills compared to typically developing children. Teaching communication skills, therefore, is an important part of therapy.

Two communication skills that are important in beginning therapy include learning to label and request items and activities.

Skinner (1957) described the request and the label as being functionally independent responses, suggesting that learning how to label an item may not automatically establish a request for the item.

A recent study was conducted to investigate whether teaching one response (labeling) would result in the acquisition of the other response (requesting) without specifically teaching the requesting response. Wallace, Iwata & Hanley (2006) manipulated preferences of various items to test whether teaching to label a high preferred (HP) item would result in requesting for the item. Results from this study showed that teaching labeling of a HP item transferred to requesting the HP item.

The purpose of this study was to examine another variable under which a label to request transfer would occur. Participant motivation for a HP item was manipulated by conducting deprivation and pre-session exposure conditions.

## Method

### Participants

- > Weston was a 5-year-old boy diagnosed with autism who received in-home applied behavior analysis (ABA) therapy 27 hours a week.
- > Ariel was a 5-year-old girl diagnosed with autism who received in-home ABA therapy 27 hours a week.
- > All participants had some requesting and labeling abilities prior to the study.

### Setting

- > Weston's sessions were conducted in a therapy room in his home and in a classroom at his day care center.
- > Ariel's sessions were conducted in a therapy room in her home.

### Design

- > A multi-element (alternating treatments) single-subject experimental design was used to determine whether differences existed between pre-session exposure and deprivation conditions (Barlow & Hayes, 1979).

### Procedure

- > **Preference Assessment:** A multiple stimulus without replacement preference assessment was conducted to determine relative preference for each item (DeLeon & Iwata, 1996). A minimum of 3 sessions were conducted to establish a high preferred (HP) item.
- > **Baseline and Label Training Condition:** The HP item was held in front of the participant and the instruction "what is it?" was given. If the participant responded with a correct verbal response the experimenter provided praise. If the child did not respond or gave an incorrect response within 5 seconds, the trial ended. Mastery criterion occurred when participants correctly labeled the item on 100% of the trials over two consecutive sessions.
- > **Baseline and Request Test Condition:** A bowl of the HP item was placed in front of the child. If the child correctly requested for the item, a piece of the item was given to the participant. A progressive ratio schedule of reinforcement (PR1) was used to deliver the HP item. Request tests were run under either a deprivation condition, which consisted of at least 24 hours of no access to the HP item, or a pre-session exposure condition, which consisted of providing a pre-determined amount of the item the participant could consume prior to the request test.
- > **Treatment Integrity and Inter-observer Agreement**
- > Treatment Integrity was collected for 70% of the sessions for Weston and 35% of the sessions for Ariel. Treatment integrity was 100%.
- > Inter-observer agreement was collected for 70% of the sessions for Weston and 35% of sessions for Ariel. Inter-observer agreement was 100%.

## Results

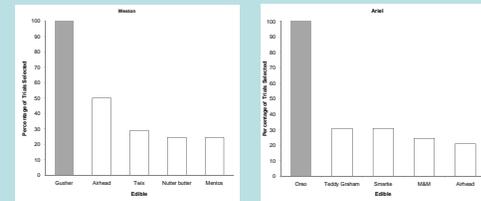


Figure 1 (upper left) and 2 (upper right). Preference assessment (PA) for each participant as determined by the percentage of trials each item was selected. The gray bars correspond to the HP item used during the remainder of the study.

Ariel	Pre-session exposure	Deprivation
Sessions conducted	3	4
Average number of requests	0.33	5.5
Total (from all sessions)	1	22

Weston	Pre-session exposure	Deprivation
Sessions conducted	10	13
Average number of requests	7	16
Total (from all sessions)	71	212

Table 1 (upper) and 2 (lower). Provides numerical data for sessions conducted and responses during the requests test conditions under both pre-session exposure and deprivation.

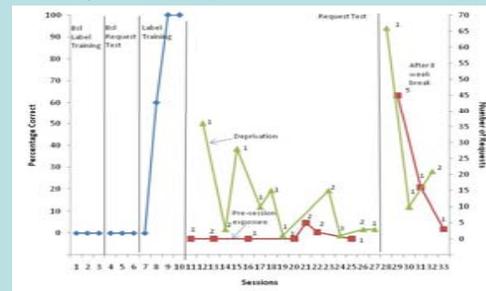


Figure 3. Label training conditions for Weston's HP item as calculated by percentage correct (left scale) and request test conditions for the HP item as calculated by the number of requests (right scale). Small numbers above data points in request test indicated the order in which the HP item was chosen in the PA.

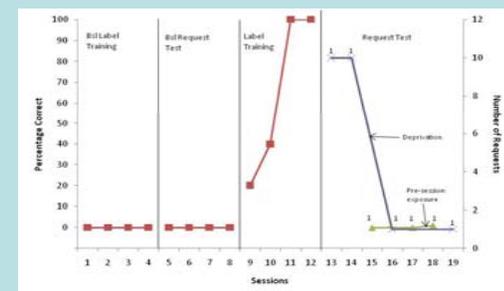


Figure 4. Label training conditions for Ariel's HP item as calculated by percentage correct (left scale) and request test conditions for the HP item as calculated by the number of requests (right scale). Small numbers above data points in request test indicated the order in which the HP item was chosen in the PA.

## Results (cont.)

### > Weston

His HP item was a Gusher®, as indicated by the preference assessment in Figure 1, and was chosen on 100% of the trials. Weston learned to label his HP item in 4 sessions. In the initial request test, which was a pre-session exposure condition, Weston did not request for the HP item, however, he chose the Gusher® first in the preference assessment (indicated by the small number above the data point). The second request test was run under the deprivation condition and Weston requested for a Gusher® 36 times. Weston requested on average 7 times for a Gusher® in a total of 10 pre-session exposure sessions, totaling 71 requests.

### > Ariel

Her HP item was an Oreo®, as indicated by the preference assessment in Figure 2, and was chosen on 100% of the trials. Ariel learned to label her HP item in four sessions, after which request tests were run. In the first two request tests, which were deprivation conditions, Ariel requested for the Oreo® 10 times in each session. In the third request test under the pre-session exposure condition Ariel did not request for the Oreo®. Ariel requested an average of .33 times for an Oreo® in a total of 3 pre-session exposure conditions, totaling 1 request. She requested on average 5.5 times for an Oreo® in a total of 4 deprivation conditions, totaling 22 requests.

## Discussion

> Neither participant was able to emit appropriate responses during baseline label training and the baseline request test. Following label training, both participants emitted a request response for the HP item, which suggests that the transfer from a label to a request did occur. In addition, there was an effect demonstrated by the manipulation of the participants motivation. Weston did not request for the item until a deprivation session occurred; Ariel also requested immediately during the deprivation condition.

- > The results from this study support previous research that has shown a label to request transfer (Wallace, Iwata & Hanley, 2006).
- > The current study has implications for teaching children with autism verbal communication skills. The results demonstrate one condition under which manipulating motivation could result in a label to request transfer.
- > For both participants responding decreased in the deprivation condition, future research should investigate why this decrease occurred.

## Author Note

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