The Effects of Preference on the Transfer from Labels to Requests in Children Diagnosed with Autism

Kelly N. Paulson, Elizabeth T. Kooistra, Kristina K. Vargo, Tasha M. Rieck, and Kevin P. Klett
(Psychology Department, University of Wisconsin-Eau Claire)

Introduction

Autism is a developmental disability typically classified by its impairments in verbal behavior, social interaction skills, play skills, and stereotypic or repetitive behaviors (DSM-IV; American Psychiatric Association, 1994). Due to these characteristics, individuals diagnosed with autism often have difficulty with teaching communication skills.

Two important communication skills include being able to label items and activities (e.g., chair, toy, juice) and requesting items and activities that a child wants (e.g., toy, juice, bike). When a child requests an item, the response is controlled by “motivation” or “desire” for the item. When a child labels an item, however, the response is controlled by reinforcers not related to the item, such as praise or access to toys, etc. Skinner (1957) described the request (i.e., ‘want’) and the label (i.e., ‘say’) as functionally independent of one another, with the acquisition of one (a label response) not necessarily producing the establishment of the other (a request).

Previous research supports Skinner’s claim that teaching the name of an item (label) does not mean that someone will request the item. In previous studies, however, investigators did not ensure that there was “motivation” for the item. A request for an item would not be expected if the person did not ‘want’ the item, and therefore they did not ask for it in previous studies. Wallace, Iwata, and Hanley (2006) sought to account for this limitation by experimentally manipulating the preference to test the transfer from labels to requests.

The purpose of this study was to replicate and extend Wallace et al. (2006) to determine the importance of “motivation” on the transfer from a label to a request. The current study included children diagnosed with autism who had a verbal behavior repertoire (Wallace et al. [2006]) included adults diagnosed with severe mental retardation who used sign language. A preference assessment was conducted to identify both high-preferred (HP) and low-preferred (LP) toys. Therefore, in the present study children diagnosed with autism were taught to label both HP and LP toys and then tested whether the label response transferred to a request response.

Method

Participants

Molly was a 4-year-old girl diagnosed with autism who received in-home applied behavior analysis (ABA) therapy for 27 hours a week.

Nicole was a 4-year-old girl diagnosed with autism who received 5 hours of ABA therapy a week on an-campus autism program as well as 4.5 hours of in-home ABA therapy.

Will was a 3-year-old boy diagnosed with autism who received ABA therapy at an on-campus autism program 4 hours a week.

Nick was a 5-year-old boy diagnosed autism who received in-home ABA therapy 27 hours a week. For Nick’s and Molly’s sessions were conducted in a therapy room at an on-campus autism program. Molly’s and Nicky’s sessions were conducted in a room in his and her home.

Procedure

• Preference Assessment: A multiple stimulus without replacement preference assessment was conducted to determine relative preference for each toy (DeLeon & Iwata, 1996). A minimum of four sessions were conducted to establish a HP and LP toy for use in the remainder of the study (Figure 1).

• Baseline and Request Test: Each toy was placed simultaneously in front of the participant. Each session lasted a maximum of 10 minutes, and if the participant emitted the target request, they received 30 seconds of access to the toy if it was either a label or a request response. The instruction “What is it?” was given, and if a correct response was emitted, the participant received social praise and food. If the participant made an error, the next trial was presented by helping the participant with the answer to prevent an error. For example, “What is it? Say bar.” Mastery criterion occurred when participants correctly labeled both toys on 100% of the trials over two consecutive sessions.

• Missing Toy Request Test: Conducted for Nick only and was identical to the request test, only the toys were hidden under a blanket to ensure that the presence of the toy was not acting as a cue to label the toy. This test was conducted to evaluate whether the requesting response would occur under a motivation rather than a labeling condition.

Treatments

For Molly, treatment integrity was calculated on 96% of the sessions and was 99%. For Nick, treatment integrity was calculated on 96% of the sessions and was 99%. For Nic, treatment integrity was calculated on 41% of the sessions and was 100% for Nick.

Interobserver Agreement

To complete interobserver agreement (IOA), a second observer collected data on 38% of the sessions for Molly; 39% of the sessions for Moll, and 41% of the sessions for Nick. For Molly, the mean agreement score was 100%. For Will, the percentage of IOA ranged from 88% to 100%, and the mean agreement score was 99%. For Nicole, the percentage of IOA ranged from 95% to 100%, and the mean agreement score was 99%.

Results

Figure 1. Preference assessment for each participant as determined by the percentage of times each toy was selected. Shaded bars correspond to toys taught during label training and used during the initial request test.

Figure 2. A reassessment of Will’s and Molly’s initial preference assessments. Shaded bars refer to the toys that were taught during initial label training and used during the initial test request.

Figure 3. Label training conditions for the HP and LP toys as calculated by percentage correct (left scale) and request test conditions for both the HP and LP toys as calculated by rate per minute (right scale).

Discussion

The results of the current study suggest that motivation is a critical component in the transfer from a label to a request in children diagnosed with autism. For three participants, Will, Nick, and Nicole, the transfer from a label to a request did occur; however, for Molly, the establishment of a request did not follow the acquisition of a label. These results further support the findings from Wallace et al. (2006) and provide stronger evidence on how to teach a child with autism to request.

Phase 1 of Will’s results suggest that the transfer from a label to a request did occur; however, these rates quickly decreased to zero. One possible explanation for the decline in the request rate was that Will did not have motivation to ask for either of the toys. To test this explanation, an additional request test was conducted following a 26-day deprivation. On the deprivation probe, both Will’s requests were at 0.2 rate per minute higher than or comparable to the rates initially following label training. The deprivation probe helps to support the conclusion that Will had no motivation to ask for the toys, which could explain why both the HP and LP toys declined to rates of zero. Phase 2 of Will’s results suggest that the transfer from a label to a request did occur, however, there needs to be extremely strong motivation present for the request rate to remain above zero.

During the request test, Nick asked for the HP toy, but not for the LP toy. An explanation could be that there was no reason to ask for the LP toy when the HP toy was concurrently available. Therefore, an additional request test was conducted with only the LP toy available, which shows that with the absence of the HP toy, the transfer from a label to a request occurred. The request test with only the LP toy available further suggests that motivation is a necessary component in the transfer from a label to a request. When the HP toy was concurrently available, there was no motivation to ask for the LP toy because there was a stronger reinforcer present. The missing toy test suggests that the presence of the HP toy did not act as a cue to evoke the target response, and that the response was controlled by motivational characteristics.

The variable rates during Nicole’s request test suggests that her high preferred toy lost its reinforcing value. When preference was reassessed, the toys used during label training and the request test were now both LP suggesting that motivation was not as high as immediately following label training. Molly did not emit any requests following label training. To ensure there was no transfer from the label to a request, a reversal to label training was conducted (DeLeon & Iwata, 1996). After Molly demonstrated that she maintained her ability to label the toys, the second request test was run: results were similar to the initial request test, in that the requests remained at zero. The reversal helped to conclude that she could label the toys, but the label did not transfer to a request. In Molly’s second preference assessment, she did not choose either of the toys, but no transfer training and the request test, which suggests she did not have motivation to ask for either toy.

One limitation to the current study is that during the request test, the participant was given 30 second access to the toy when he or she asked for it, which could have facilitated request training. Based on this limitation, future research should evaluate the effects of using a generalized reinforcer (e.g., “good job”) to transfer the label to a request. Future research could also experimentally manipulate the effects of (i.e., deprivation and salience).

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References


