

Teaching a Child with Autism to Respond to  
Unfamiliar Stimuli by Asking for  
Additional Information

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Teaching children with autism to label items in their environment is often a daunting task. However, even more daunting is teaching them to identify when they do not know something and then ask for additional information. Many intervention programs for children with autism do not teach this critical skill, resulting in child responding that is heavily reliant on prompting. The same difficulties arise when teaching children to answer unfamiliar questions. Unless the answer to the question has been specifically taught in the past, many children will either not respond or attempt to answer by guessing when a speaker asks them an unfamiliar question. The chart we present here displays teaching a child with autism to respond to unfamiliar stimuli (items and questions) and ask for additional information through the See/Say and Hear/Say learning channels.

When the chart began, Jonathan was three years and three months old. He had a diagnosis of mild autism, and received in-home behavior analytic intervention for 15 hours per week. He was a fluent reader and imitator, and an avid labeler, but did not respond in the presence of unfamiliar stimuli. When presented with an item that he had not previously been taught explicitly, rather than ask what the item was, he simply did not respond at all.

We began this chart on November 4, 2003. The learning channel and pinpoint during the first slice was "See known or unknown item/Say item, 'I don't know, or 'What is it?'" The dot in the upper cycles of the Chart represent the frequencies of either correctly saying the names of items he knew or correctly saying "I don't know" or "What is it?" when his therapist showed him an item that he did not know. An "X" on the Standard Celera- tion Chart represents the frequency of Jonathan

incorrectly labeling a known item, or saying, "I don't know" or "What is it?" when he did know the item. The dots in the lower cycle of the Chart show the number of timings per day Jonathan completed.

We mixed the items (pictures) so that about half of them would be 'known' and half would be 'unknown' items. We tested responses to items by probing them before each teaching session. During these probes, Jonathan's therapist (the third author) asked Jonathan to label each item; if he responded correctly, that item went into the 'known' pile. If he did not label them correctly, that item went into the 'unknown' pile. During each ten-second timing, the therapist asked Jonathan to say the names of the items he saw. Upon seeing each picture, Jonathan either said the name of the item or said "I don't know" or "What is it?" The items used changed for each session because once Jonathan asked for more information about an unknown item, he learned that item's label. This rapid learning of new labels, while certainly advantageous for Jonathan in his daily life meant that the picture was no longer unknown, and needed to be replaced for the purposes of this chart so that he could encounter an appropriate mix of known and unknown pictures.

Jonathan's performance grew rapidly, reaching the frequency aim of 50 correct responses per minute within only six days of practice. We therefore changed the task to make the program more difficult. The next phase was "Hear item/Say category." In this learning channel, the therapist asked Jonathan to name the categories to which known and unknown items belonged. We categorized 'known' and 'unknown' items just as we had in the previous phase. During this phase and from this point forward, the movement cycle changed such that a dot on the Standard Celera- tion Chart represents a correct category name or a response of "I don't know" or "What is it?" while an "X" represents either an incorrect category name, or a response of "I don't know" or "What is it?" when the response was known. Jonathan's answer phrases such as "I don't know" or "What is it?" all counted as one correct movement rather than as three correct movements.

It only took two days of practice for Jonathan to reach the Hear/Say frequency aim of 20 correct responses per minute and to generalize

this skill from the See/Say to the Hear/Say learning channels, so we then moved to the next phase: "Hear item/Say features." In this phase, the therapist asked Jonathan to label features of known items and say "I don't know" or "What is it?" if his therapist said the name of an unknown item. He reached the frequency aim within three days of practice.

The next phase ("Hear item/Say function") involved the therapist asking Jonathan to label functions of known and unknown items. Although he did not reach the frequency aim during this particular phase, his errors remained low, so we moved on to a cumulative review phase. This cumulative review phase involved Jonathan saying items' features, functions, and classes upon hearing a series of items. After two days of practice with low error frequencies, we lengthened the timing to 20 seconds to allow Jonathan to respond to a wider range of examples during each timing. Within two days, his performance matched that of the previous two phases.

The next phase was "Hear personal question/Say answer." In this phase, the therapist asked Jonathan personal questions—some of which he knew the answer to and some which he had not been taught. Jonathan either said the correct answer, or said "I don't know" when he heard an unknown question. This phase proved more difficult for him as witnessed by the slower acceleration of correct frequencies and the higher number of timings needed to reach his daily improvement goals. However, he did attain a frequency of 30 correct responses per minute after seven days of practice. The week-long period of time in the middle of this slice containing no data denotes Jonathan's holiday break from therapy.

After working on personal questions with Jonathan, he moved on to "Hear general information question/Say answer" as the next phase. Jonathan's performance grew to 27 correct responses per minute after five days of practice. The next phase involved cumulative questions from all previous phases on the Chart: items' names, features, functions, classes, personal questions, and general information questions. Jonathan matched his performance from the previous slice of 27 correct responses per minute within two days of timed practice.

Next, we evaluated the outcomes

associated with fluent performance (stability, endurance, and retention) following procedures described by Fabrizio & Moors (2003). We did not conduct an application check for this particular chart because stimuli used in all previous slices changed daily, thereby providing application checks throughout the program. We tested skill retention, stability, and endurance in the Hear/Say learning channel. For the stability check, Jonathan needed to match his performance in the previous slice within one timing in the presence of significant distraction. After passing this outcome check, we moved to evaluation of endurance. To test Jonathan's performance for endurance, we tripled the last timing interval of 20 seconds and presented the same questions used during timed practice. Jonathan's performance passed the endurance check as well, and so we proceeded with the retention check where we stopped all timed practice on this skill for four weeks. After four weeks, we presented the same questions to Jonathan as in the previous slices, but at the original timing interval of 20 seconds. During the retention check, his performance actually improved from the previous outcome checks. Having thus demonstrated that Jonathan's performance showed the features of fluency, we discontinued data collection.

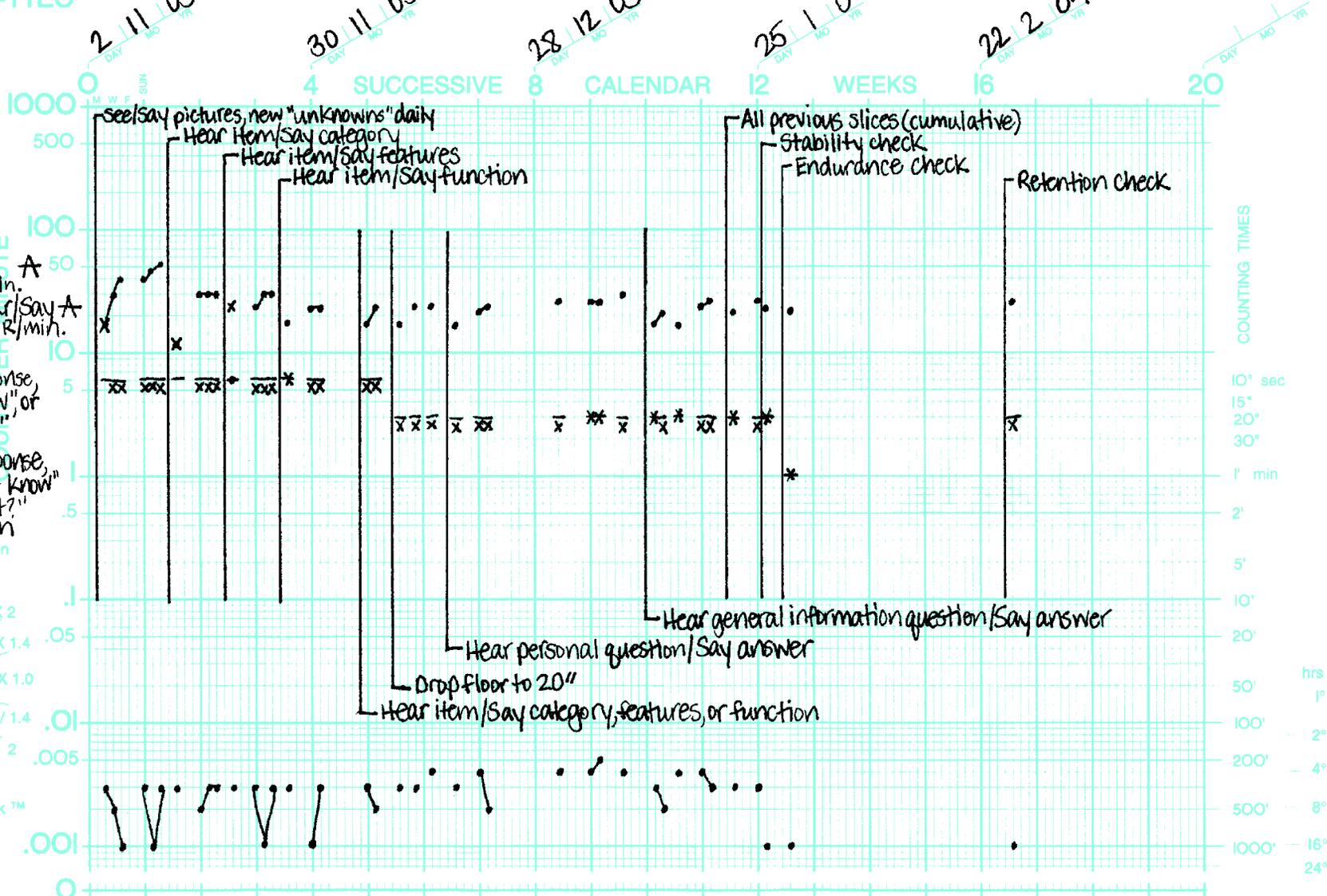
## REFERENCES

- Fabrizio, M. A., & Moors, A. L. (2003). Evaluating mastery: Measuring instructional outcomes for children with autism. *European Journal of Behavior Analysis, 4(1&2)*, 23-36.

Dpmin-11EC

DAILY per minute CHART™

DAILY per minute Standard Celeration Chart - Dpmin 11EC  
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See/Say A  
 50-55 R/min.  
 Hear/Say A  
 25-30 R/min.

• = correct response, "I don't know" or "What is it?"  
 x = incorrect response, says "I don't know" or "What is it?" when known

X16  
 X4  
 X2  
 X1.4  
 X1.0  
 /1.4  
 /2  
 /4  
 /16  
 per week™

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ORGANIZATION DIVISION ROOM TIMER COUNTER CHARTER

3.4 See known or unknown picture/say name, "I don't know," or "What is it?" and Hear known or unknown question/Say answer, "I don't