Use of Discrete Trial Training Instruction and Naturalistic Teaching with Toddlers with Autism Spectrum Disorders: Independent Manding and Tacting

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ABSTRACT

Autism Spectrum Disorders (ASDs) are developmental disorders characterized by social impairment, deficits in communication skills, restricted interests, and repetitive behaviors. Children with ASD often need specialized instructional techniques to successfully learn material typically translated through social means. Two such methods, Discrete Trial Training (DTT) and Naturalistic Teaching (NT), are commonly used to teach children with ASD new skills related to communication, play, and self-care. In this study, DTT and NT were used to teach three children with ASD manding and tacting skills. Specifically, the participants were exposed to DTT and NT instruction in independent manding, DTT instruction in tacting actions, and DTT instruction in tacting the shape, color, and function of an object, respectively. DTT and NT were found to be effective methods for teaching these skills.

Labeling Actions
Waving, Knocking, and Clapping

Measurement
Percentage of correct DTT trials per clinic session

Teaching Procedure
While modeling the action, the RBT would present the stimulus: "What am I doing?'
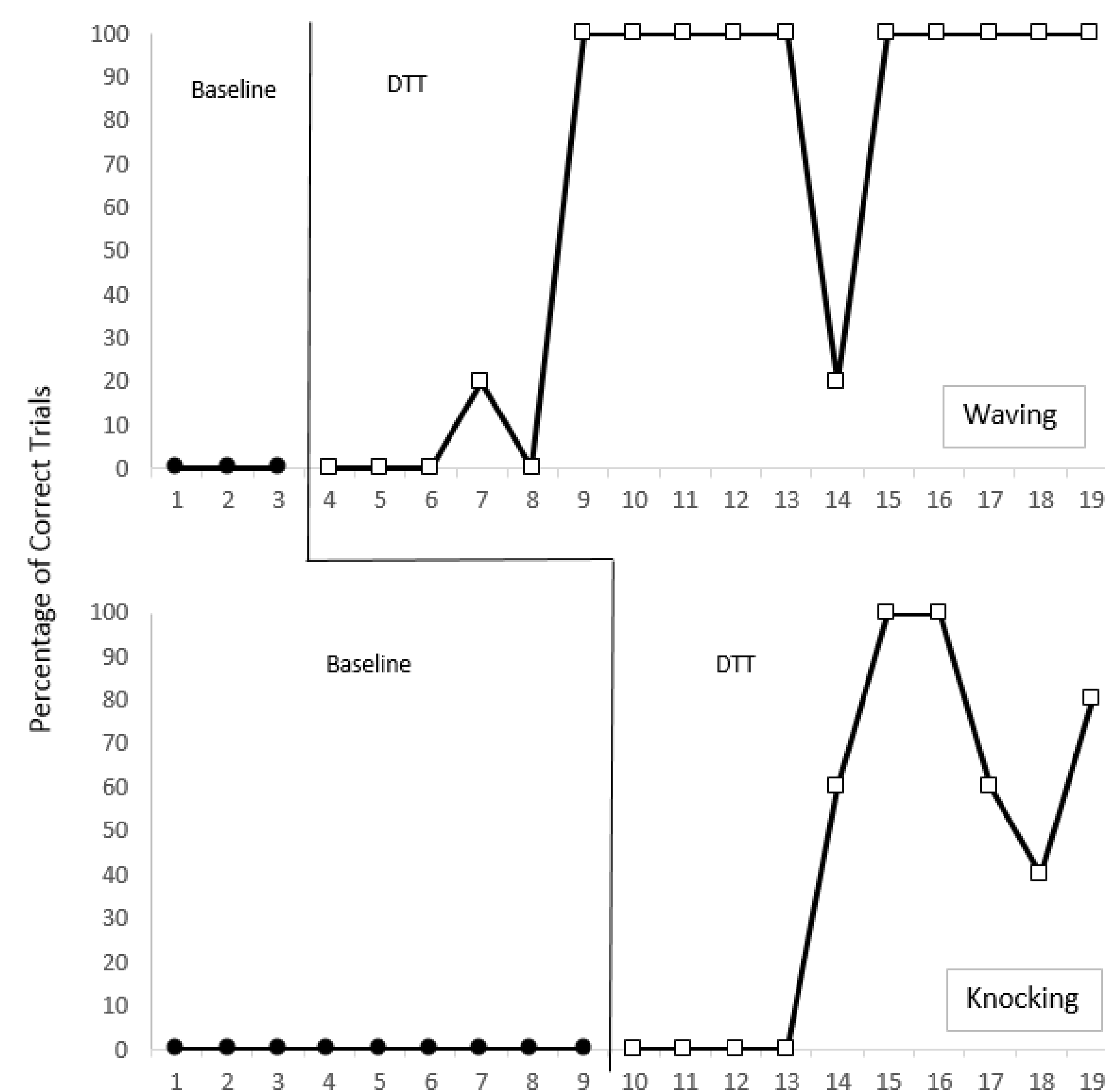Correct response: Accurate verbal label of the action: "Waving"
- Full prompt: Labeling the action immediately after presenting the stimulus: "Waving"
- Partial prompt: Providing the first part of the label: "Wave"
- Gestural prompt: Providing the sound of the first letter of the label: "W…
Moved on to next target once the participant reached 80% on 2 consecutive session

Discussion
Due to illness, there was about a 2 week lapse when the intervention was not implemented. This could account for the decrease in correct trials during session 14 for waving. The decrease in correct trials for knocking after session 16 is due to the participant responding with "knock" instead of "knocking." To address this, the RBT made sure that the participant was attending to the full prompt and emphasized the last half of the word: "Knock-ING"

## Tacting Shape, Color, and Function of an Object

Measurement
Percentage of independent, correct DTT trials per clinic session.

Teaching Procedure
The RBT presented the child with the stimulus (a green block), while simultaneously presenting the S^D:
- What shape is it? (Correct response = square)
- What color is it? (Correct response = green)
- What do you do with it? (Correct response = stack it)
A full prompt consisted of the RBT saying the full correct response. A partial prompt consisted of the RBT saying the first sounds of the correct answer (i.e. squa-, gree-, sta-). S^D questions were not always presented in the order depicted here, nor always together without other tasks in between.
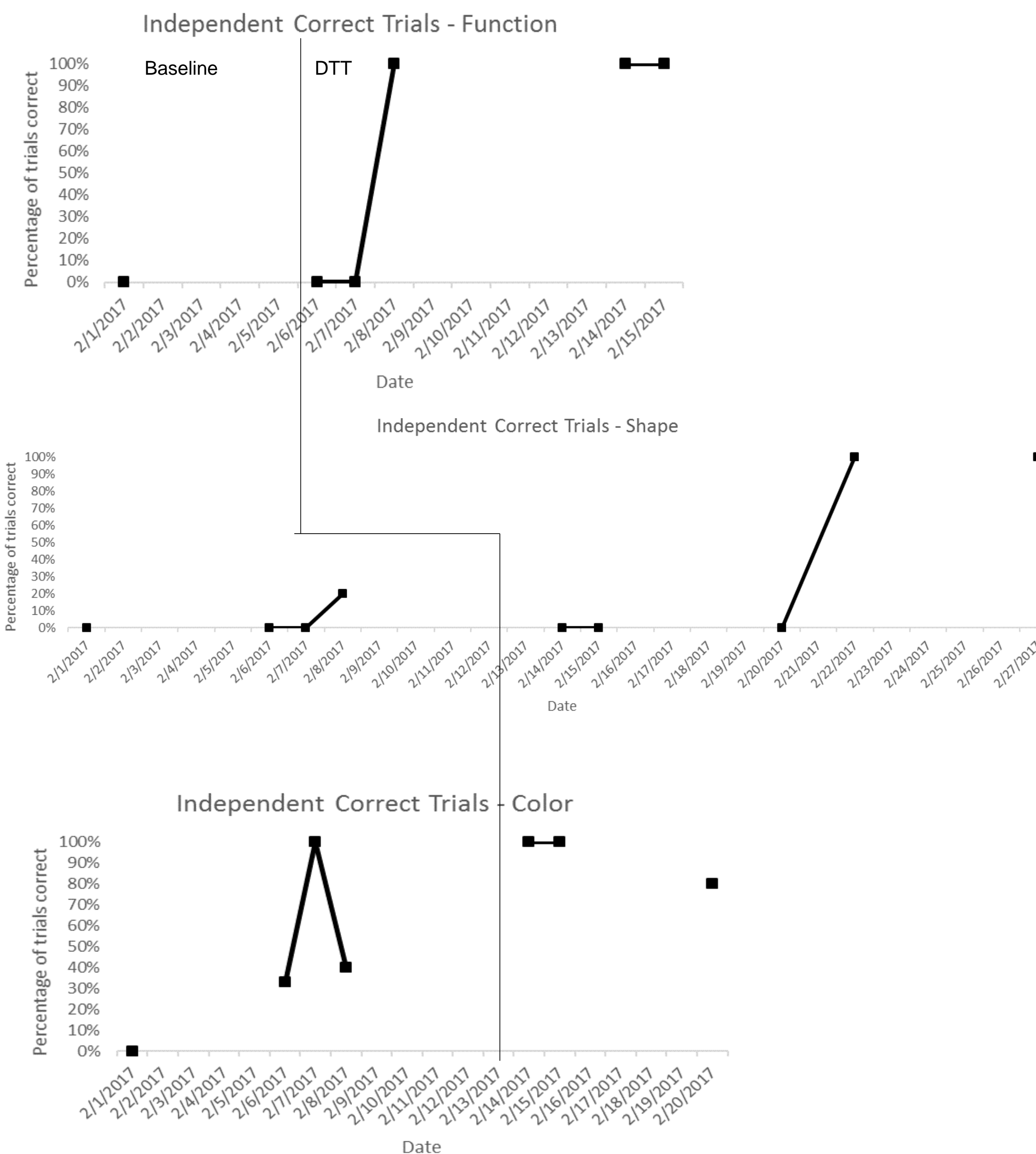
Discussion
The third tacting behavior, color, never technically left baseline, but the child learned the skill without having to be explicitly taught. This is likely because the child is a relatively advanced learner who had previously learned colors. This child sometimes because bored with frequently asked prompts, leading to inaccurate, "silly" responses at times.

Independent Manding in the Natural Environment
### Car, Balloon, Open, Marble

Measurement
Percentage of independent mands and error/no response per NT trial.

Teaching Procedure
During naturalistic play, the RBT presented the child with one of the preferred stimuli and wait for an independent mand:
Correct response: accurate mand ("go", "ba", "oh", "ma")
- Error: Partial or incorrect mand vocalization made
- No response: No mand vocalization made
- When an error or no response was made, the RBT prompted the child until the mand was made appropriately.
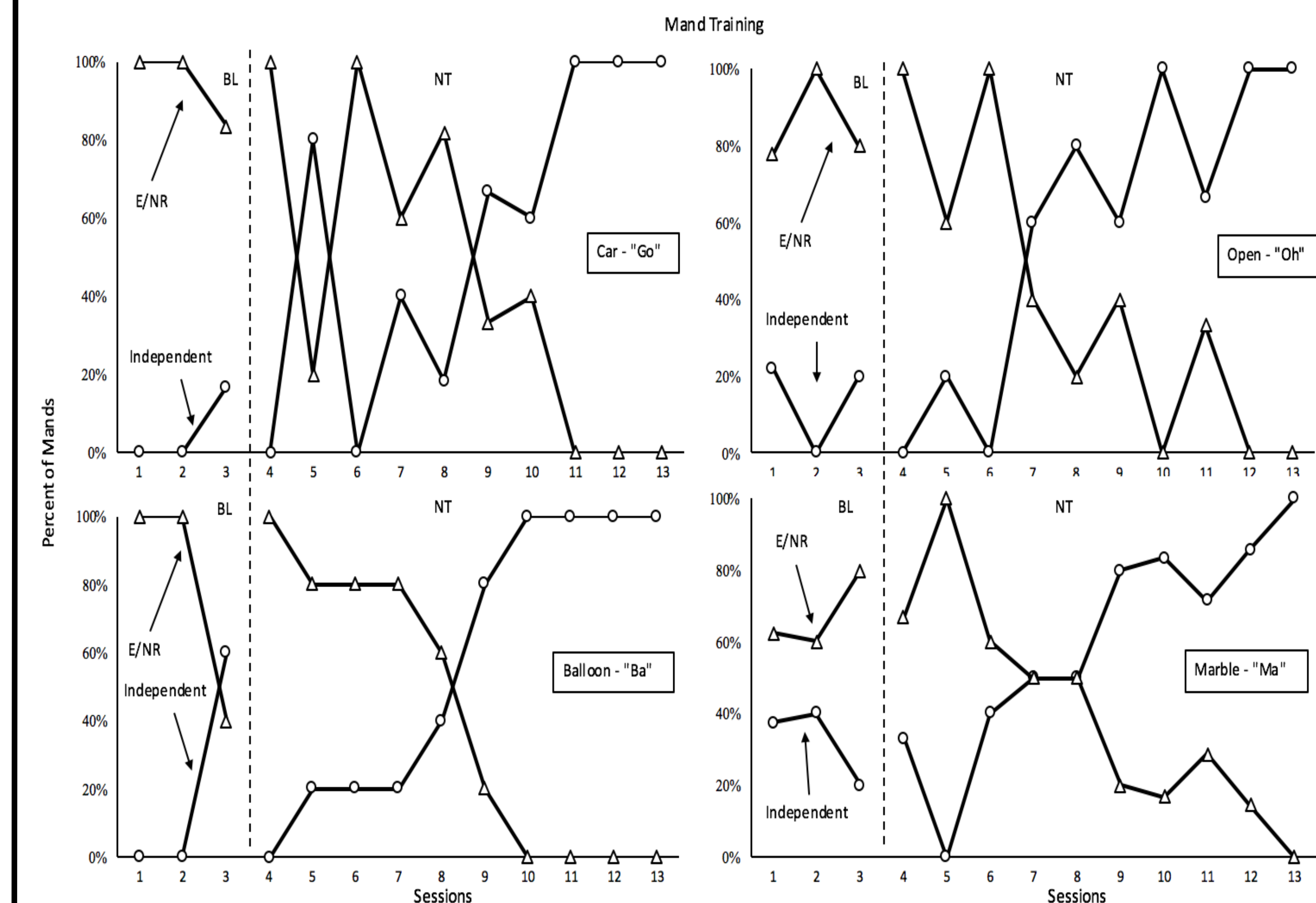
Discussion
Another stimuli, a bubble machine ("bu"), was also used, but the data was thrown out due to the bubble machine breaking and being replaced with a less preferred bubble wand. When the bubble machine was fixed, the child was also fixed on the mand "on", due to it being taught previously. Finally, it was suspected that the closeness of mands for balloon and bubble resulted in difficulty with discrimination.