

Generalization Effects in Imitations, Prepositions, and Discriminations: An Illustration

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Background & Aim

Children with developmental delays can be taught a wide range of behaviors and discriminations using discrete trial teaching (DTT). Some examples are grammar such as pronouns, plurals, past tense, questions and prepositions, generalized imitation such as vocal and motor, and discriminating objects, colors, emotions, and so on^{1,2,3}.

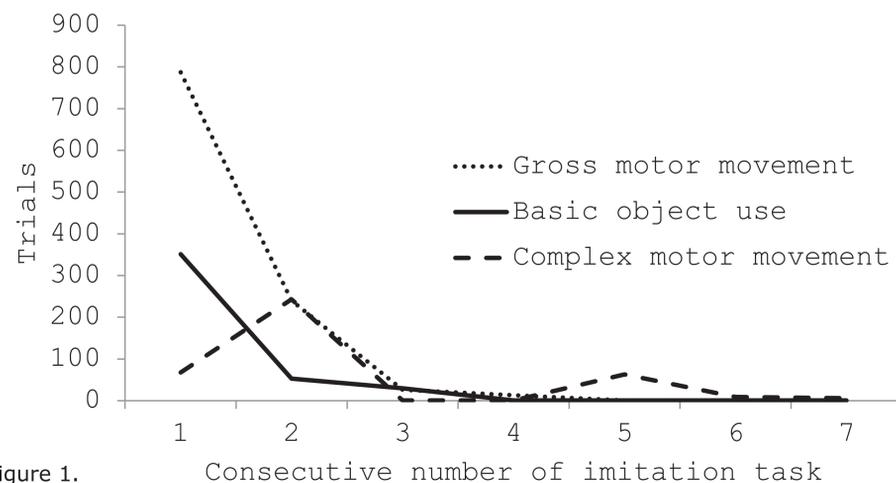
A consistent finding in DTT that children generalize across multiple responses: each task in a domain is easier to learn than the previous one.⁴ In other words, skills acquisition in a domain tends to proceed more and more rapidly with fewer and fewer trials to mastery.

This study aimed to illustrate this generalization effect using prepositions, motor imitation and color discriminations.

Method

Participant was a girl with atypical autism, aged 4 years. At the time of the study she received 15 hours of DTT each week.

Imitation training. Using DTT, the participant was taught to imitate movements. The first three domains taught was imitation of gross motor movements (e.g. clapping), object use (pretend-drinking from a



cup) and complex motor movement (touching right shoulder with left hand). These domains were taught in parallel. Mastery criterion was set to 3-2-1 (this was the same for all training programs).⁴

Preposition training. The participant was taught to place a small block in spatial relation to other objects. The S^D was a verbal demand made by the teacher, such as "Place the block *behind* the cup." Each preposition was first taught in relation to a plastic bucket. When this was mastered a new preposition was taught, and then a third - all in relation to the bucket. These three were then mixed together (mastery criterion was 10 consecutive correct trials). Next, the three prepositions were taught in relation to a new object. Thus, prepositions 1-3 were first mastered, mixed and generalized across nine objects. Then the same was done with prepositions 4-6.

Color discrimination. The participant was taught to tact the colors of pieces of paper. When three colors were correctly tacted, these were mixed. Next, three more color discriminations were taught.

Data Collection. Data was collected on trial-by-trial basis by the first author during training. Unfortunately, no inter-observer agreement assessments were made.

Results

Imitation. Data for imitation trials are shown in figure 1, and show that for two of the three domains, the first imitation was the hardest to master. Subsequent imitations were mastered with fewer trials.

Prepositions. The data for preposition training are shown in figure 2. The first three prepositions in relation to the first object took the highest number of trials to master. Responding with subsequent objects was mastered with more and more ease. Three new prepositions were easier to master in relations to the nine objects than the first three.

Color discrimination. Data for color naming are shown in figure 3. The first three colors took more trials to master than the following eight.

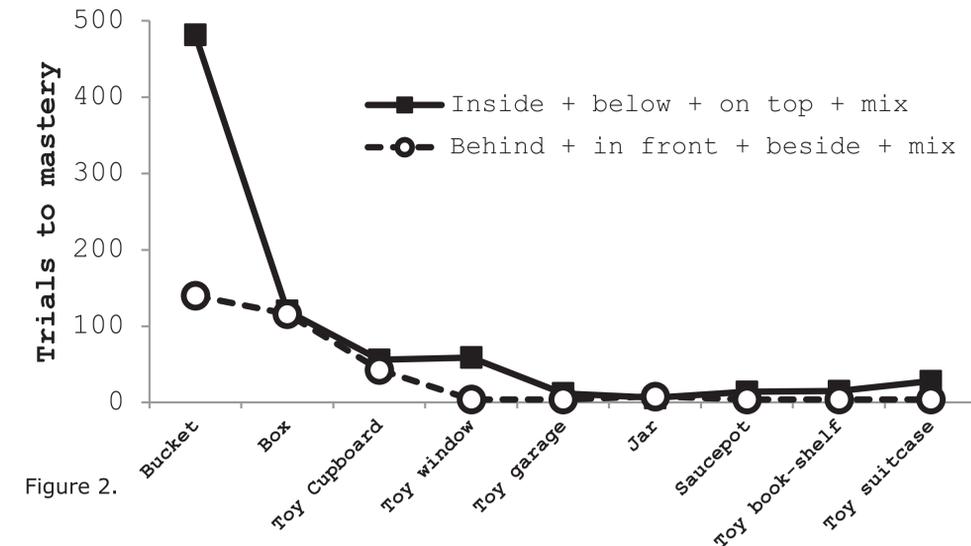


Figure 2.

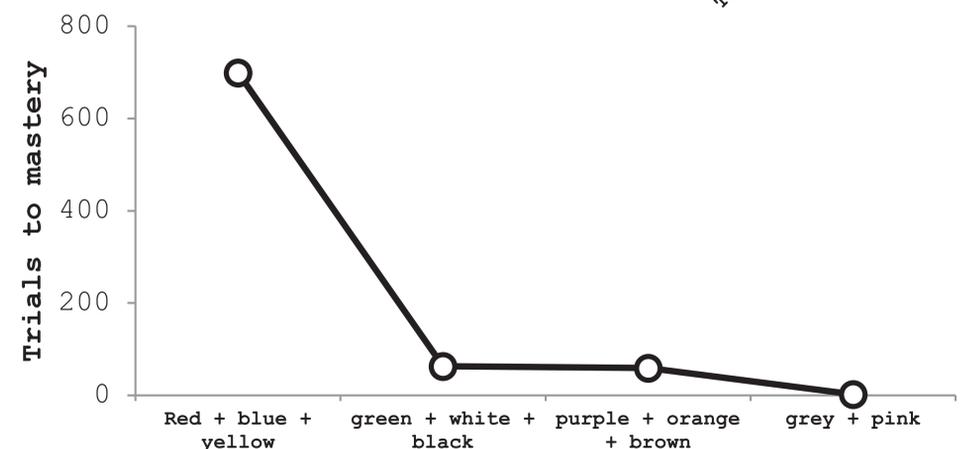


Figure 3.

Conclusions

The study exemplifies that mastering the first response in a domain is usually the hardest. Subsequent discriminations and behaviors are acquired with less trials. This was exemplified using motor imitation, responding to prepositions and, color naming.

References

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