



## Using Differential Reinforcement to Teach Short Response Latency and Task Completion

**Objective:** To teach students to respond to cues quicker thereby increasing task completion using differential reinforcement.

### Setting and Materials

**Settings:** Special education classroom/clinical setting

**Materials:**

- timer
- reinforcements based on a preference assessment
- data collection sheet

### Content Taught

Students will learn to respond to cues quicker and increase task completion using differential reinforcement.

### Teaching Procedures

#### Pretraining

1. Conduct a preference assessment to determine highly reinforcing items (up to 4 items so students will have a choice when criterion for reinforcement is met)
2. Determine the average rate of response time for your student
  - Issue a prompt (25-item question list – should be questions that students have been taught as part of their curriculum but may not answer consistently; e.g., “What is your name?” “Point to the shirt.”)
  - Provide 10 seconds for the student to respond to each question (set the timer)
    - Reinforcement is provided for responses within the 10 second time frame (15 seconds with a chosen item – set a timer and when timer goes off, say “My turn” and take the item before setting the timer and asking the next question on the list)
    - Provide corrective feedback (e.g., Good try, but try to answer a bit faster next time.”) for incorrect/ no responses.
  - Conduct 5 trials following this protocol
  - Average the response time to determine the baseline of response latency (e.g., average response time is 8.8 seconds)
3. Use differential reinforcement:
  - reinforce responses that occur at before the average rate of responding established in the pretraining baseline sessions (e.g., if the average response time is 8.8 seconds, set the timer for 8.8 seconds and conduct trials as previously

done but only provide reinforcement for responses that occur at 8.8 seconds or before)

- Provide reinforcement/corrective feedback as previously described
- When the student responds to 3 items consecutively before the set time (e.g., three responses in a row before the 8.8 criterion), decrease the criterion by 1 second (e.g., to receive access to the reinforcement, student must now respond within 7.8 seconds)
- Continue with this process until the response time is within 3 seconds of an issued prompt

### Evaluation

Mastery is met when students respond to questions with accuracy (20/25 questions) within 3 seconds of a prompt in 3 consecutive trials.

### Lesson Plan Based on:

Donohue, M. M., Casey, L. B., Bicard, D. F., & Bicard, S. E. (2012). Effects of differential reinforcement of short latencies on response latency, task completion, and accuracy of an adolescent with autism. *Education and Training in Autism and Developmental Disabilities*, 47, 97-108. Retrieved from: <http://www.jstor.org/stable/23880565>

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|   |                       |   |  |  |  |  |  |  |  |
|---|-----------------------|---|--|--|--|--|--|--|--|
| Student name:   |                       | <b>Shorten response time:</b> Mastery is met when student responds to questions with accuracy (20/25 questions) within 3 seconds of a prompt in 3 consecutive trials. |  |  |  |  |  |  |  |
| Questions:  | Time:                 |   |  |  |  |  |  |  |  |
| e.g., what is your name?  | start with 10 seconds | decrease reinforcement criteria/response time by 1 s if 3 questions in a row are answered faster than the set average   |  |  |  |  |  |  |  |
| New average:  | →                     |   |  |  |  |  |  |  |  |
| 1.  |                       |   |  |  |  |  |  |  |  |
| 2.  |                       |   |  |  |  |  |  |  |  |
| 3.  |                       |   |  |  |  |  |  |  |  |
| 4.  |                       |   |  |  |  |  |  |  |  |
| 5.  |                       |   |  |  |  |  |  |  |  |
| 6.  |                       |   |  |  |  |  |  |  |  |
| 7.  |                       |   |  |  |  |  |  |  |  |
| 8.  |                       |   |  |  |  |  |  |  |  |
| 9.  |                       |   |  |  |  |  |  |  |  |
| 10.   |                       |   |  |  |  |  |  |  |  |
| 11.   |                       |   |  |  |  |  |  |  |  |
| 12.   |                       |   |  |  |  |  |  |  |  |
| 13.   |                       |   |  |  |  |  |  |  |  |
| 14.   |                       |   |  |  |  |  |  |  |  |
| 15.   |                       |   |  |  |  |  |  |  |  |
| 16.   |                       |   |  |  |  |  |  |  |  |
| 17.   |                       |   |  |  |  |  |  |  |  |
| 18.   |                       |   |  |  |  |  |  |  |  |
| 19.   |                       |   |  |  |  |  |  |  |  |
| 20.   |                       |   |  |  |  |  |  |  |  |
| 21.   |                       |   |  |  |  |  |  |  |  |
| 22.   |                       |   |  |  |  |  |  |  |  |
| 23.   |                       |   |  |  |  |  |  |  |  |
| 24.   |                       |   |  |  |  |  |  |  |  |
| 25.   |                       |   |  |  |  |  |  |  |  |
| <b>Total:</b>   |                       |   |  |  |  |  |  |  |  |
| <b>Key:</b> use with documenting response times<br>I = Independent correct response    W = Independent incorrect response    NR = No response<br>IL = Late response |                       |   |  |  |  |  |  |  |  |