Using Constant Time Delay to Teach Food Preparation and Cooking Skills

What is the level of evidence?

This is an Evidence-Based Practice based on two high quality and four acceptable quality single subject studies.

Where is the best place to find out how to do this practice?

The best place to find out how to implement CTD is through the following research to practice lesson plan starter:


With who was it implemented?

- Students with
  - Moderate intellectual disability (6 studies, n= 23)
  - Ages ranged from 9-18
  - Males (n=9), females (n=14)
  - Ethnicity
    - None reported (n=23)

What is the practice?

Constant time delay is a variation of time delay, a prompting procedure that uses variations in the time intervals between presentation of the natural stimulus and the response prompt. Time delay transfers stimulus control from a prompt to the natural stimulus by delaying the presentation of the prompt following the presentation of the natural stimulus. Constant time delay is implemented by presenting several trials using a 0-second delay between the presentation of the natural stimulus and the response prompt. The trials that follow the simultaneous prompt condition apply a fixed time delay (e.g., 3 seconds or 5 seconds; Cooper, Heron, & Heward, 2007).
In the studies used to establish the evidence base for using CTD to teach banking skills, CTD included using a:

- five second constant time delay (Griffen, Wolery, & Schuster, 1992; Schuster, Gast, & Wolery, 1988; Schuster & Griffen, Wolery, Ault, Gast, Doyle, & Griffen, 1991)
- four second constant time delay (Bozkurt & Gursel, 2005; Hall, Schuster, Wolery, Gast, & Doyle, 1992)

**How has the practice been implemented?**

- Five second constant time delay in combination with total task chaining was used to teach
  - Making a sandwich, boiling an egg, baking canned biscuits (Schuster, Gast, & Wolery, 1988)
  - Making a milkshake, scrambling eggs, and making pudding (Griffen, Wolery, & Schuster, 1992)
  - Making eggnog and making a fudge shake (Wolery, Ault, Gast, Doyle, & Griffen, 1991)
- Five second constant time delay was used to teach
  - Making Kool-Aid (Schuster & Griffen, 1991)
- Four second constant time delay in combination with a reinforcement schedule was used to teach
  - Making a sandwich and preparing a hot drink (Bozkurt & Gursel, 2005)
- Four second constant time delay in combination with differential reinforcement was used to teach
  - Making a Spanish omelet, microwave cake, and tuna casserole (Hall, Schuster, Wolery, Gast, & Doyle, 1992)

**Where has it been implemented?**

- Home economics classroom (1 study)
- Classroom (4 studies)
- Kitchen in community home (1 study)

**How does this practice relate to Indicator 13?**

- Indicator 13 Checklist Item #3: Teaching food preparation and cooking skills may reflect results of transition assessment information
- Indicator 13 Checklist Item #4: Food preparation and cooking activities may be a transition service designated in an IEP that will enable a student to meet his or her postsecondary independent living goal(s)
- Indicator 13 Checklist Item #6: Teaching food preparation and cooking skills may be an annual IEP goal that supports a student’s postsecondary independent living goal(s)
How does this practice relate to Common Core Standards?

- Understand ratio concepts and use ratio reasoning to solve problems (Ratios and Proportional Relationships, Grade 6)
  - Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations
- Reason quantitatively and use units to solve problems (Number and Quantity, High School)
  - Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; and interpret the scale and the origin in graphs and data displays
- Comprehension and Collaboration (Speaking and Listening, Grade 8)
  - Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally
- Knowledge of Language (Language, Grade 8)
  - Use knowledge of language and its conventions when writing, speaking, reading, or listening

How does this practice relate to the State’s Career Cluster Initiative: Essential Knowledge and Skills?

- Demonstrate language arts knowledge and skills required to pursue the full range of post-secondary education and career opportunities (Academic Foundations)
  - Comprehend key elements of oral and written information
- Employ emergency procedures as necessary to provide aid in workplace accidents (Safety, Health, and Environmental)
  - Use safety equipment as necessary

References used to establish this evidence base:


