Using Constant Time Delay to Teach Food Preparation and Cooking Skills

What is the evidence base?

A moderate level of evidence based on two high quality and four acceptable quality single subject studies

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)

**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:

- For using CTD to teach food preparation and cooking:

**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:


