Using Progressive Time Delay to Teach Purchasing Skills

What is the level of evidence?

- This is a Research-based Practice for **students with disabilities** based on two methodologically sound single subject studies across 8 participants.
- This is a Promising Practice **for students with moderate intellectual disability** based on one methodologically sound single subject study with 4 participants with moderate intellectual disability.
- This is a Promising Practice for **students with severe intellectual disability** based on one methodologically sound single subject study with 4 participants with severe intellectual disability.

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

- Using progressive time delay to teach purchasing skills:
  - Selecting Lower Prices Groceries (Sandknop, Schuster, Wolery, & Cross, 1992)

With who was it implemented?

- Students with
  - Moderate intellectual disability (1 study, n= 4)
  - Severe intellectual disability (1 study, n= 4)
- Ages ranged from 14 to 19
- Males (n=4), females (n=0)
  - Not reported (1 study, n= 4)
- Ethnicity
  - None reported (n= 8)

What is the practice?

Progressive 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. Progressive time

delay is implemented by presenting a trial with a 0-second delay between the presentation of the natural stimulus and the response prompt and then gradually and systematically extending the time delay, often in one second intervals (e.g., 0 sec to 2 sec to 3 sec; Cooper, Heron, & Heward, 2007).

In the studies used to establish progressive time delay as an evidence-based practice for teaching functional life skills the controlling prompts were:

- verbal paired with a gestural (McDonnell, 1987), and
- verbal paired with model (Sandknop, Schuster, Wolery, & Cross, 1993)

How has the practice been implemented?

- Progressive time delay paired with verbal prompts has been used to teach purchasing (McDonnell, 1987)
- Progressive time delay paired with a response prompt (i.e., number line) has been used to teach price comparison (Sandknop, Schuster, Wolery, & Cross, 1993)

Where has it been implemented?

- Community (2 studies)
- Separate classroom (1 study)

How does this practice relate to Common Core Standards?

- Apply and extend previous understandings of numbers to the system of rational numbers (The Number System, Grade 6)
  - Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates
  - Understand that positive and negative numbers are used together to describe quantities having opposite directions and values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.

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

- Demonstrate mathematics knowledge and skills required to pursue the full range of post-secondary education and career opportunities (Academic Foundations)

- Demonstrate knowledge of basic arithmetic operations such as: addition, subtraction, multiplication, and division
- Demonstrate use of relational expressions such as: equal to, not equal, greater than, less than, etc.

References used to establish this evidence base:

McDonnell, J. (1987). The effects of time delay and increasing prompt hierarch strategies on the acquisition of purchasing skills by students with severe handicaps. *The Association for Persons with Severe Handicaps, 12*, 227-236.

Sandknop, P.A., Schuster, J.W., Wolery, M., & Cross, D.P. (1992). The use of an adaptive device to teach students with moderate mental retardation to select lower priced grocery items. *Education and Training in Mental Retardation, 27*, 219-229.

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