Using Constant Time Delay and SMART Board Technology to Teach Grocery Store Vocabulary

What is the evidence base?

This is a promising practice for **students with moderate intellectual disabilities** based on one methodologically sound single-subject study across three participants with disabilities.

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

The best place to find out how to implement constant time delay (CTD) and SMART board technology to teach grocery store vocabulary is through the following research to practice lesson plan starter:

- Using CTD and SMART board technology to teach grocery store vocabulary
  - Using CTD and SMART Board to Teach Grocery Shopping - Lesson (Mechling, Gast, & Krupa 2007)

- Students with
  - Moderate intellectual disability (1 study, n=3)
- Ages ranged from 19 - 21
- Male (n=1), females (n=2)
- Ethnicity
  - None reported (n=3)

What is the practice?

Constant time delay (CTD) has been defined as 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).

SMART Board is an electronic whiteboard with an interactive touch screen. Touching the surface of the board functions as a mouse click. The SMART Board's settings were programmed

so that one touch served as one left mouse click. Slide transition feature "on a mouse click" was turned off to prevent advancement of slides by inadvertent touching of the screen. Students in needs can touch a photograph corresponding to a target word (Mechling, Gast, & Krupa, 2007).

In the study used to establish the evidence base for using CTD and SMART board to teach grocery store vocabulary, CTD and SMART board included using a:

- Three second constant time delay was used in combination with SMART Boards to tech grocery store vocabulary (Mechling, Gast, & Thompson, 2008)

Where has it been implemented?

- Technology lab of a local university (1 study)

How does this practice relate to Common Core Standards?

- 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

http://www.corestandards.org/ELA-Literacy/RI/9-10/4/

How does this practice relate to the Common Career Technical Core?

Communicate clearly, effectively and with reason.

- Career-ready individuals communicate thoughts, ideas and action plans with clarity, whether using written, verbal and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice and organization and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.

Use technology to enhance productivity.

- Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring and using new technology. They are proficient with ubiquitous

technology applications. They understand the inherent risks -- personal and organizational – of technology applications, and they take actions to prevent or mitigate these risks.

https://careertech.org/sites/default/files/CCTC_Standards_Formatted_2014.pdf

References used to establish this evidence base:

Mechling, L. C., Gast, D. L., & Thompson, K. L. (2008). Comparison of the effects of smart board technology and flash card instruction on sight word recognition and observational learning. *Journal of Special Education Technology, 23*, 34-46.

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