



Using a System of Least to Most Prompts to Teach Purchasing Skills

What is the evidence base?

- This is a research-based practice for **students with disabilities** based on one methodologically sound group study with non-random assignment and three methodologically sound single-case design studies across 62 students with disabilities.
- This is a promising practice for **students with autism and moderate intellectual disability** based on one methodologically sound single-case design study with four students with autism and moderate intellectual disability.
- This is a promising practice for **students with autism** based on one methodologically sound single-case design study with three students with autism.

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

The best place to find out how to implement a system of least to most prompts to teach purchasing skills is through the following research to practice lesson plan starters:

- Least to Most Prompting to Teach Purchasing, Lesson1: Counting-On Strategy
https://transitionta.org/system/files/resourcetrees/LP_CBI_Purchasing_0.pdf?file=1&type=node&id=230&force=
- Least to Most Prompting to Teach Purchasing, Lesson2
https://transitionta.org/system/files/resourcetrees/LP_CBI_Purchasing2.pdf?file=1&type=node&id=231&force=

With whom was it implemented?

Students with:

- Autism and moderate intellectual disability (1 study, n=4)
- Moderate intellectual disability (1 study, n=20)
- Mild intellectual disability (1 study, n=20)
- Moderate to severe intellectual disability (1 study, n=15)
- Autism (1 study, n=3)

Ages ranged from 14 to 20

Males (n=42), females (n=20)

Ethnicity:

- None reported (n= 62)

What is the practice?

A system of least-to-most prompts is a method used to transfer stimulus control from response prompts to the natural stimulus whenever the participant does not respond to the natural stimulus or makes an incorrect response. Least-to-most prompts begin with the participant having the opportunity to perform the response with the least amount of assistance on each trial. Greater degrees of assistance are provided with each successive trial without a correct response (Cooper, Heron, & Heward, 2007).

In the studies used to establish the evidence base for using least to most prompting to teach purchasing skills, least to most prompting was used in combination with:

- time delay (3 sec) and video modeling (Haring, Kennedy, Adams, & Pitts-Conway 1987)
- flash cards, community based instruction, verbal praise, and modeling (Cihak & Grim 2008)
- community based instruction and included social praise of correct responses at each step (Bates, Cuvo, Miner, & Korabek, 2001)
- community based training across multiple settings (Westling, Floyd, & Carr, 1990)

How has the practice been implemented?

- Least to most prompting was used during community based instruction and included social praise of correct responses at each step to teach selecting and purchasing items in a grocery store and purchasing a soft drink in a restaurant (Bates, Cuvo, Miner, & Korabek, 2001)
- Least to most prompting was used in combination with flash cards, community-based instruction, verbal praise, and modeling to teach making a purchase independently using the one-more-than strategy (Cihak & Grim 2008)
- Least to most prompting was used in combination with time delay (3 sec) and video modeling to teach purchasing skills (Haring, Kennedy, Adams, & Pitts-Conway 1987)
- Least to most prompting was used in combination with community-based instruction across multiple settings to teach purchasing skills (Westling, Floyd, & Carr, 1990)

Where has it been implemented?

- Resource classroom (1 study)
- Community restaurant (1 study)
- Community stores (3 studies)
- Home (1 study)
- School bookstore (1 study)
- School cafeteria (1 study)
- School library (1 study)

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
- Describe how to use different payment methods (National Standards in K-12 Personal Finance Education, Grade 12)
 - Demonstrate skill in basic financial tasks, including scheduling bill payments, writing a check, reconciling a checking/debit account statement, and monitoring printed and/or online account statements for accuracy
- www.corestandards.org

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

- 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.
- <https://cte.careertech.org/>

References used to establish this evidence base:

Bates, P.E., Cuvo, T., Miner, C.A., & Korabek, C.A. (2001). A simulated and community-based instruction involving persons with mild and moderate mental retardation. *Research in Developmental Disabilities, 22*, 95-115.

Cihak, D.F. & Grim, J. (2008). Teaching students with autism spectrum disorder and moderate intellectual disabilities to use counting-on strategies to enhance independent purchasing skills. *Research in Autism Spectrum Disorders, 2*, 716-727.

Haring, T.G., Kennedy, C.H., Adams, M.J., & Pitts-Conway, V. (1987). Teaching generalization of purchasing skills across community settings to autistic youth using video modeling. *Journal of Applied Behavior Analysis, 20*, 89-96.

Westling, D.L., Floyd, J., & Carr, D. (1990). Effect of single setting versus multiple setting training on learning to shop in a department store. *American Journal on Mental Retardation, 94*, 616-624.

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