Using Computer-Assisted Instruction to Teach Job Specific Skills

What is the evidence base?

- This is a research-based practice for **students with disabilities** based on two methodologically sound single-subject studies across 7 participants with disabilities.
- This is a research-based practice for **students with intellectual disability** based on two methodologically sound single-subject studies across 7 participants with intellectual disability.

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

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

> Using CAI to teach job specific skills
> - [Computer Assisted Instruction - Employment Lesson1 - Office Job Skills](#)
> - [Computer Assisted Instruction - Employment Lesson2 - Service Job Skills](#)

With whom was it implemented?

- Students with
  - Mild to moderated intellectual disability (1 study, n=4)
  - Moderated intellectual disability (1 study, n=3)
- Ages ranged from 16 - 21
- Males (n=3), females (n=4)
- Ethnicity
  - Hispanic (n=1)
  - White (n=3)
  - None reported (n=3)

What is the practice?

Computer-assisted instruction (CAI) has been defined as "the use of a computer and other associated technology with the intention of improving students' skills, knowledge, or academic performance" (Okolo, Bahr, & Rieth, 1993, p. 1) and is synonymous with terms such as computer-based instruction, computer-mediated instruction, interactive hyper-media instruction, and multimedia instruction. CAI offers an interactive format that can provide examples and feedback to students, while including multiple components, such as graphics, photographs, audio, text, and video (Hutcherson, Langone, Ayres, & Clees, 2004).

In the studies used to establish the evidence base for using CAI to teach employment skills, CAI included using a:
- multimedia software program on a hand-held palmtop computer, picture prompts, and audio prompts (Riffel, Wehmeyer, Turnbull, Lattimore, Davies, Stock, & Fisher, 2005)
- multimedia, computer-based program using Magic Touch, touch-screen technology, Microsoft$^©$ PowerPoint, a Dell latitude 300 laptop computer, a 3s constant time delay procedure (Mechling & Ortega-Hurndon, 2007)

Where has it been implemented?

- School (1 study)
- Community job site (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
- 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 Common Career Technical Core?

- Identify, write, and monitor workplace performance goals to guide progress in assigned areas of responsibility and accountability (Problem Solving and Critical Thinking)
- Implement personal and jobsite safety rules and regulations to maintain safe and healthful working conditions and environments (Health, Safety, and Environmental)
- Identify and demonstrate positive work behaviors and personal

qualities needed to be employable (Employability and Career Development)

- Identify and explore career opportunities in one or more career pathways to build an understanding of the opportunities available in the cluster (Employability and Career Development)

References used to establish this evidence base:

Mechling, L. C., & Ortega-Hurndon, F. (2007). Computer-based video instruction to teach young adults with moderate intellectual disabilities to perform multiple step, job tasks in a generalized setting. *Education and training in Developmental Disabilities, 42*, 24-37.

Riffel, L. A., Wehmeyer, M. L., Turnbull, A. P., Lattimore, J., Davies, D., Stock, S., & Fisher, S. (2005). Promoting independent performance of transition-related tasks using a palmtop pc-based self-directed visual and auditory prompting system. *Journal of Special Education Technology, 20*, 5-14.

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