

# ***Using Mnemonics to Teach Academic Skills***

## **What is the evidence base?**

A *strong* level of evidence based on one high quality meta-analysis of 20 intervention studies including 15 group studies and 5 single subject studies

## **With who was it implemented?**

- A total of 669 participants
- Students with
  - Learning Disabilities (19 studies)
  - Emotional and Behavioral Disabilities (1 study)
  - Intellectual Disabilities (3 studies)
- Ages ranged from 13 – 17 years old, average age of 14
- Males: 16 studies included samples that were predominately male, female: 1 study had samples that were predominately female
  - Gender not reported (3 studies)
- Ethnicity
  - None reported (20 studies)

## **What is the practice?**

A mnemonic is an example of a response prompt: a stimuli that later functions as extra cues and reminders for desired behavior (Cooper, Heron, & Heward, 2007).

Mnemonics can include strategies such as:

- a. Memory-associative techniques - using known information to facilitate learning of new information (20 studies)
- b. Keyword mnemonic strategies - combining visual and auditory cues to provide direct links to responses (10 studies; McLoone, et al., 1986)
- c. Keyword-pegword - numbering or ordering in combination with rhyming (5 studies; Mastropieri, Scruggs, Levin, et al., 1985)
- d. Reconstructive elaborations - using keywords that provide acoustic reconstructions of unfamiliar information such as symbolic pictures of abstract concepts or descriptive pictures of concrete information (3 studies; Scruggs & Mastropieri, 1989)

## **How has it been implemented?**

Not applicable in this practice description

## **Where has it been implemented?**

- Special education classrooms (resource and self-contained)

- Regular education classrooms (history and science classes)
- Small rooms available within schools

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

- To teach North American battles (Scruggs, Mastropieri, Brigham, & Sullivan, 1992)  
<http://www.nsttac.org/sites/default/files/assets/pdf/ScruggsMastropieriBrighamSullivan1992M.pdf>
- To teach vocabulary words and definitions (Scruggs, Mastropieri, Levin, & Gaffney 1985)  
<http://www.nsttac.org/sites/default/files/assets/pdf/ScruggsMastropieriLevin1985M.pdf>
- To teach mineral hardness levels (Mastropieri, Scruggs, & Levin, 1986)  
<http://www.nsttac.org/sites/default/files/assets/pdf/MastropieriScruggsLevin1986M.pdf>
- To teach state names and capitals (Mastropieri, Scruggs, Bakken, & Brigham, 1992)  
<http://www.nsttac.org/sites/default/files/assets/pdf/Mastropierietal1992Mcapitals.pdf>
- To teach science vocabulary (King-Sears, Mercer, & Sindelar, 1992)  
<http://www.nsttac.org/sites/default/files/assets/pdf/KingSears1992MScience.pdf>

### **How does this practice relate to Common Core Standards?**

- Vocabulary Acquisition and Use (Anchor Standards for Language, Grades 9 – 12)
  - Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
  - Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.
- Key Ideas and Details (Anchor Standards for Reading, Grades 9 – 12)
  - Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- Craft and Structure (Anchor Standards for Reading, Grades 9 – 12)
  - Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

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

- Select and employ appropriate reading and communication strategies to learn and use technical concepts and vocabulary in practice (Communications)

- Determine the reading strategy or strategies needed to fully comprehend the content within a written document (i.e. skimming, reading for detail, reading for meaning or critical analysis)
- Demonstrate use of content, technical concepts and vocabulary when analyzing information and following directions

### **References used to establish this evidence base:**

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