Making in Meaningful: Memory Strategies Across the Curriculum

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Overview

- Unstructured Strategies
- Systematic Strategies
  - Developing acrostics and acronyms
  - Keywords
  - Pegwords
Mnemonic Strategies

A device, such as a formula or rhyme, used as an aid in remembering information

A systematic procedure for enhancing memory

A way to make memorizing information easier
Research Based Instruction

Effect Sizes: How much better did students do with an intervention then without? Larger numbers are better.

- 0 No difference with this intervention

- .2-.3 Noticable difference (yeah!)

- .5-.6 Very Noticable difference (YIPPEEE!!!!)

- .8 and above Incredibly Noticable difference (WOOOHOOO LOOK AT THIS!)

Research Based Instruction

- Mnemonic strategies (1.62)
- Reading comprehension strategies (1.13)
- Reading comprehension aids (.98)
- Academic behavior modification (.93)
- Direct instruction (.84)
- Modality-matched instruction (.14)
- Perceptual-motor training (.08)

Chapter 9 • Cognitive and Perceptual Characteristics

SENSORY REGISTER

The sensory register is the cognitive storage device for all sensory input (J. R. Hayes, 1989; Wyer & Srull, 1989) and is capable of receiving significant amounts of sensory information. It stores a relatively complete copy of the physical stimulus—much like photographic film—that is available for further processing (Swanson & Cooney, 1991). However, unless captured by the attention control process, this information decays within 3 to 5 seconds. Upon capture, sensory information is scanned and compared against information in long-term memory; if no match is found, the stimulus is deemed not meaningful, and the memory of the stimulus is lost through decay.

The sensory register (see Figure 9.3) is composed of separate stores, or buffers, for the different sensory modalities, including buffers for visual, auditory, tactile, olfactory, and gustatory stimuli. The visual and auditory buffers are most often used in the process of school learning, and they are the only ones that have been studied extensively. These buffers store pure sensory information without complex meaning. Such information is considered external stimulus output.
Why are Mnemonics Useful?

We tend to remember:

- Odd information
- Personally meaningful information
- Information attached to emotion
Silly Sayings: Math

How I wish I could calculate pi

http://www.philnel.com/2014/03/14/9kindsofpie/
Silly Sayings: Spelling

You **GAIN** when you buy a **barGAIN**
Silly Sayings: Spelling

There’s A RAT in separate
Boyle’s Law is best of all because it presses gasses awfully small.

At constant temperature, pressure is inversely proportional to volume.
Her bird has fur.
Pictures: Vocabulary
She screamed 'E-E-E' in the cemetery

E-E-E
Structured Strategies
Acronyms

Join first letters of words in a series

- IEP
- ROY G. BIV
- HOMES
- STOPS
Acrostics

Sentences with words that begin with the same letter as the words in a sequence to be remembered

My Very Educated Mother Just Served Us Noodles
I am a person
King Henry Drinks Much Dark Chocolate Milk
King Phillip Came Over From Spain
FIRST

F: Form a word – write first letter in each word in caps (acronym)
I: Insert a letter – add lowercase letter(s) to see if a word can be made
R: Rearrange the letters
S: Shape a sentence (acrostic)
T: Try combinations

Nagel, Schumaker, & Deshler, 2003
Keyword Method

Mastropieri & Scruggs, 1993
People and Important Events

Keyword Method Steps

• Write content to be remembered
  o Person & accomplishment
  o Vocabulary & definition
• Develop acoustically similar, easily pictured & concrete proxy or keywords for each
• Develop interactive picture or image
• Learn picture & keyword
• Learn how to associate the two

King-Sears, Mercer, & Sindler, 1992
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King-Sears, Mercer, & Sindler, 1992
Peg Word Strategy

1 = bun  
2 = shoe  
3 = tree  
4 = door  
5 = hive  
6 = sticks  
7 = heaven  
8 = gate  
9 = vine  
10 = hen  
11 = lever  
12 = elf  
13 = thirsting  
14 = forking  
15 = fixing  
16 = sitting  
17 = severing  
18 = aiding  
19 = knighting  
20 = twin  
30 = dirty  
40 = party  
50 = gifty  
60 = witchy  
70 = heavenly
To memorize the principal food exports of Latin America

ONE = SUN COFFEE
- Imagine the sun drinking a cup of steaming hot coffee.

TWO = SHOE SUGAR
- Imagine a shoe used as a sugar bowl.

THREE = TREE CACAO
- Imagine a tree that grows cacao beans. - Or, imagine a tree that grows chocolate bars, since chocolate is made from cacao beans.

Rehearse the memory aid by repeating one-sun-coffee, two-shoe-sugar, three-tree-cacao, etc.

http://www.muskingum.edu/~cal/database/general/memory3.html
Periodic Table
Your Turn: Mnemonic List

Presidents
1. Washington
2. Adams
3. Jefferson
4. Madison
5. Monroe
6. Adams (Quincy)
7. Jackson
8. Van Buren
9. Harrison
10. Tyler

NC Manufacturing
1. Food products
2. Chemicals
3. Computer & Electronics
4. Machinery
5. Electrical Equipment
6. Plastics & Rubber
7. Fabricated metals
8. Textiles
9. Transportation Equipment
10. Furniture

Common elements
1. Hydrogen
2. Helium
3. Oxygen
4. Neon
5. Iron
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<th>Number</th>
<th>Peg Word Strategy</th>
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<td>4</td>
<td>door</td>
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Alternative Peg Words

1. Magic wand
2. Swan
3. 3-leaf clover
4. 4-legged table
5. 5-pointed star
6. Elephant trunk
7. Flag on a pole
8. Hour glass
9. Smoking pipe
10. Bat and ball
11. Spaghetti strands
12. Analog clock at noon

adapted from: http://www.muskingum.edu/~cal/database/general/memory3.html
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