Memory: What Is It and How Do We Improve Retention?

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Learning Objectives

- Understand the parts of the information-processing system
- Identify strategies to improve information retention
What is Memory?
The Information-Processing System

(Seli & Dembo, 2020)
Parts of Long-Term Memory

- **Explicit/Declarative Memory**
  - Memory of facts and events that can be consciously recalled
  - Broken down into:
    - Episodic Memory
      - Experience and events in a serial form
    - Semantic Memory
      - Record of facts, meaning, concepts, and knowledge about the external world

- **Implicit/Procedural Memory**
  - Memory of how to perform actions

- **Prospective Memory**
  - Memory of contents to be remembered in the future

(Loprinzi et al., 2017)
Strategies to Promote Retention
Learning Strategies

- Rehearsal Strategies
  - Mixed problem sets
  - Spaced/Distributed Practice

- Elaboration Strategies
  - Mnemonics
  - Analogies

- Organizational strategies
  - Classifying information into groups
  - Representation maps

(Seli & Dembo, 2020)
Types of Mnemonics

- Pegword
- Key Words
- Method of Loci
- Letter Approach

(Brown, Roediger, & McDaniel, 2014), (Butler, 2018), (Dave & Awasthi, 2019)
**Pegword**

- *Utilizing rhyming phrases to symbolize numbers or order then creating a visual image to go with it*

(Brown, Roediger, & McDaniel, 2014), (Butler, 2018), (Dave & Awasthi 2019)
Key Words

- Linking new information to key phrases already encoded into memory

(Brown, Roediger, & McDaniel, 2014), (Butler, 2018), (Dave & Awasthi 2019)
Method of Loci

- Creating a mental walk and placing information to be remembered along the path

(Brown, Roediger, & McDaniel, 2014), (Butler, 2018), (Dave & Awasthi 2019)
Letter Approach

- **Acrostics**: sentences or poem whose first letters represent information to be remembered

- **Acronym**: words whose individual letters represent information to be remembered

(Brown, Roediger, & McDaniel, 2014), (Butler, 2018), (Dave & Awasthi 2019)
Other Strategies

- Sleep
- Exercise
- Self-Referencing
- Write it out
- Sing about it

(Brown, Roediger, & McDaniel, 2014), (Lipitz, Liu, & Gutchess, 2018), (Loprinzi et al., 2018), (Spencer, Walker, & Stickgold, 2017)
References


