

Psychology

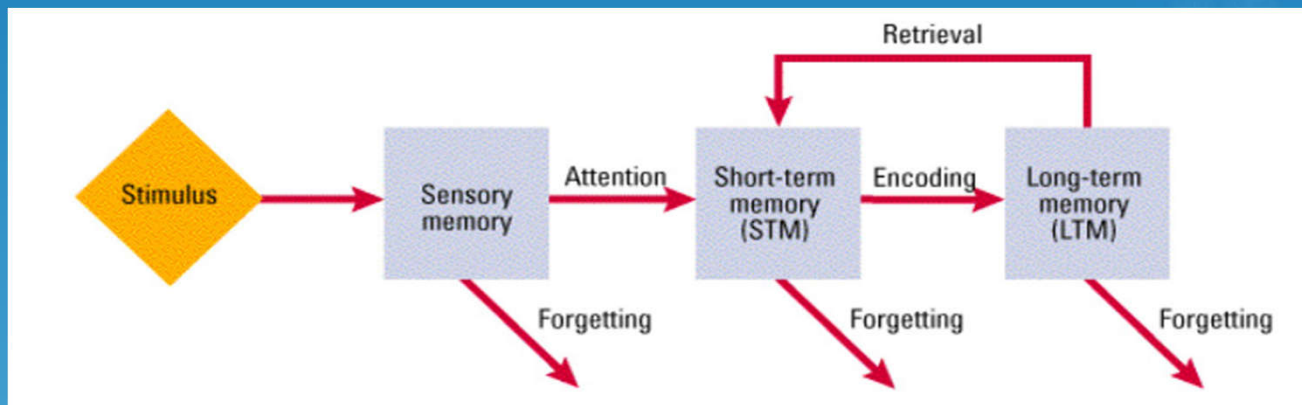
Chapter-4

Memory and Forgetting



Memory and Forgetting

- Memory is the process by which information is encoded and stored and retrieved.



- Process of memory
 1. Encoding:- the term in which information is placed in memory.
 2. Storage:- is the persistence of information in memory.
 3. Retrieval:- information in memory storage brought into awareness.

Memory and Forgetting

Stages/ Structures of memory

- **Memory structure:-** is the nature of memory storage itself-how information is represented in memory and how long it last and how it is organized.
- Model of memory is formulated by Richard Atkinson and Richard Shiffrin (1968)
- There are 3 structures of memory
 1. Sensory memory/ sensory register
 - A. Visual image (Iconic memory)
 - B. Auditory images (Echonic memory)
 2. Short term memory (STM):- working memory, immediate memory, active memory and primary memory

Memory and Forgetting

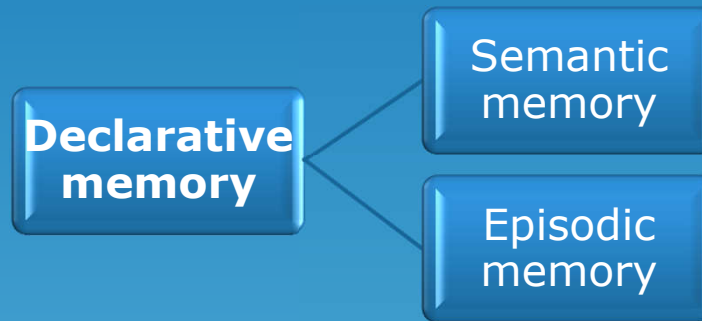
- Characteristics of STM

1. It is active
2. Rapid accessibility
3. Preserves the temporal sequence of information
4. Limited capacity:- George Miller (1956) estimate the capacity of STM. (7 ± 2) which is $5 \leq \text{STM} \leq 9$
 - ❑ In order of increasing the capacity of STM we collect information as a means of **CHUNK**.
 - ❑ **CHUNKING:-** is the grouping or packing of information into higher orders units that can be remembered as a single units.

Memory and Forgetting

3. Long term memory (LTM)

1. Declarative/ Explicit memory:-



- ❖ Semantic memory:- factual knowledge and internal representation of the world.
 - ❖ Eg:- meaning of words, concept, ability to do math

Memory and Forgetting

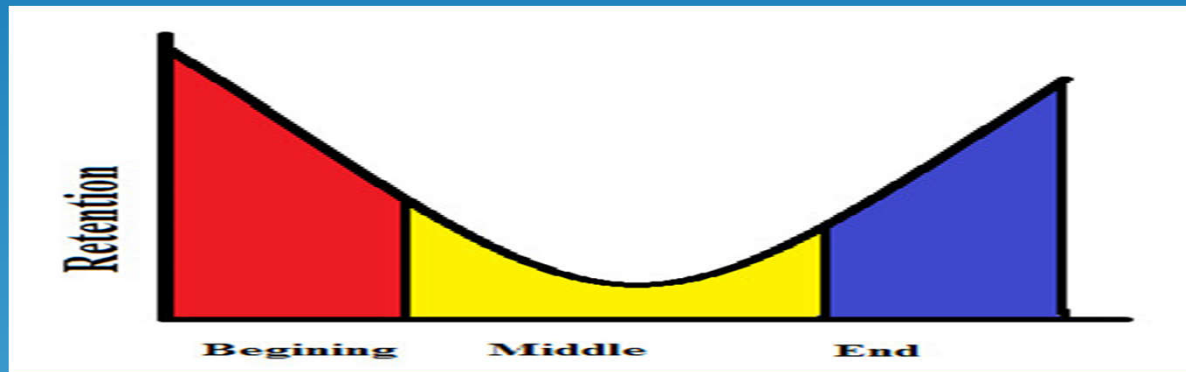
2. Non-declarative/ implicit memory

- Behavior is affected by the prior experience with out that experience is recollected.
- It is known as procedural memory.



Memory and Forgetting

3. Serial position effect (three-box model of memory)



 An items that are retained at the beginning of the list are called primacy effect. They are retained because of STM were empty at this stage. Then it is passed to LTM.

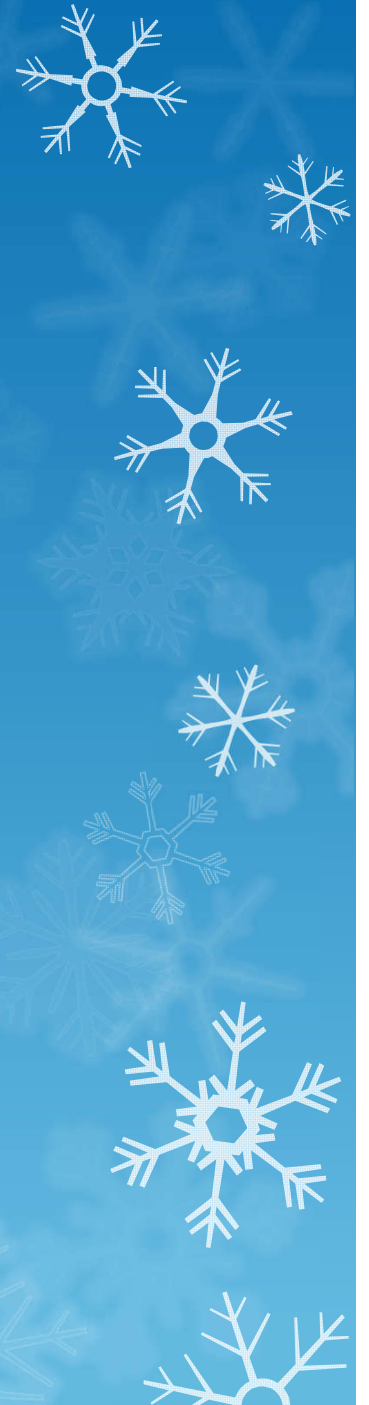
 An items or lists that are in the middle of the list are not so well retained because by time they get into short term memory, it is already crowded. It is dropped.

 The last few items are remembered for a different reason: At the time of recall, they are still sitting in STM.

Memory and Forgetting

- Factors affecting memory

1. Ability to retain
2. Good health
3. Age of learner
4. Maturity
5. Will to remember
6. Intelligence
7. Interest
8. Over learning
9. Speed of learning
10. Meaningfulness of the material
11. Sleep or rest



Memory and Forgetting

Forgetting

Meaning and concept of forgetting

- For the first time the concept of forgetting is established by German psychologist Hermann Ebbinghaus (1885-1913)
- Forgetting is the apparent loss of information already encoded and stored in the long term memory.

Memory and Forgetting

- Theories of forgetting

1. Decay theory:- Memory traces or engram fade with time if they are not accessed now and then.
2. Interference:- forgetting occurs because similar items of information interfere with one another in either storage or retrieval.



Memory and Forgetting

- Proactive Interference:- is occurred when information learned earlier interferes with recall of newer material.
 - Retroactive interference:- is occurred when the newer interferes with the ability to remember old information.
3. New memory for old/ displacement theory
- New information entering memory can wipe out the old information.
 - This is only associated with STM due to limited capacity

Memory and Forgetting

4. Motivated forgetting

- This theory for the first time established by sigmund freud.
- It is also known as self-protective process repression.

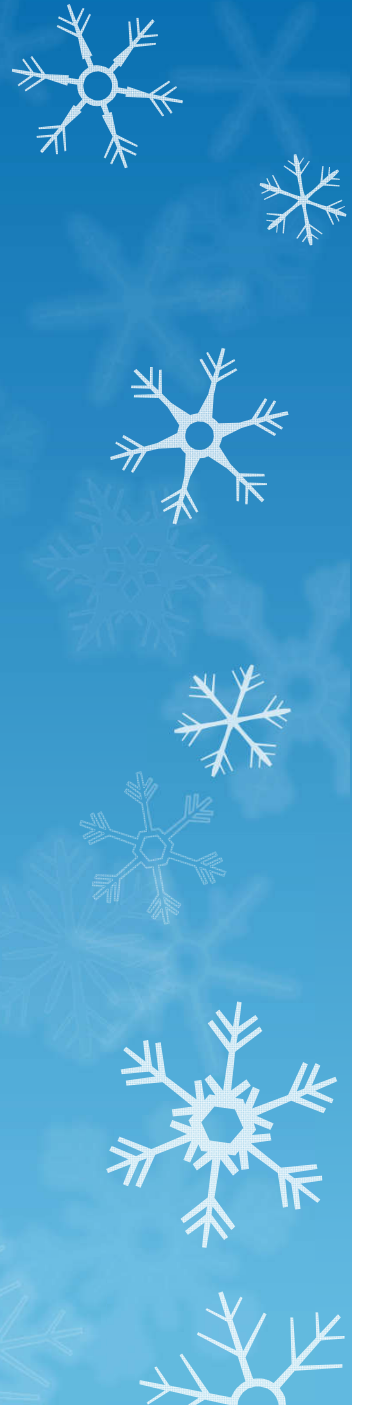
5. Cue dependent forgetting

- Cues that were present when you learned a new fact or had an experience are to be especially useful later as retrieval aids.

Memory and Forgetting

Improving memory

1. Paying attention
2. Encode information in more than one way
3. Add meaning
4. Take your time
5. Over learn
6. Monitor your learning



END

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