

# UNIT 5 MEMORY AND FORGETTING

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## MEMORY

### Concept

According to psychologists memory is the process by which we encode, store and retrieve information each of these three parts of definitions encoding storage and retrieval represents the different processes of computer in which encode represents to a computers keyboard, storage is hard drive or CPU and the retrieval is software which display the information on the screen.

According to the three systems approach to memory we can understand the concept and development of its process like computer encoding the keyboard indicates the initial recording of information, storage the CPU enables information saved for future use and the screen that helps recovery of stored information.

### Memory System

The stage memory model which is referred to as the Atkinson and Shiffrin model has generated a large amount of research activity. The stage theory of memory assumes that humans have a three stage memory that meets our needs to store information for different length of time. The model contains three different stages of memory system which are clearly linked with three processes like encoding, storage and retrieval. They are:-

#### a. Sensory Memory

Sensory Memory system refers to the initial momentary storage of information that holds memory for very short period for further processing. The images of different sights, sounds and taste are provided in sensory memory. The sensory memory appears to last only about 0.5 seconds to 1 seconds depending upon which sensory system is involved. Visual registration seems to remain in photographic memory in the form of faint image called the iconic image which disappears from visions. The auditory counter parts of iconic storage is called 'echoic' image in which momentary memory for sound and speech are registered. The process of selective perception helps to attain stimuli which are selected from the sensory memory for further processing to transfer to the short memory sensory register holds information for a very brief time so, psychologist often calls it perception rather than memory.

#### b. Short-Term Memory

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According to the stage theory, information must be processed in short-term memory before it can be transferred to permanent storage in long term memory. STM holds a small amount of information lasting only for 10 to 20 seconds unless the person makes a deliberate effort to maintain longer items by repeating over. STM has limited capacity to process the limited amount of information consciously.

Psychologist George Miller, demonstrated that people can remember about 7 pieces of information at a time with a normal range from 5 to 9 items. For example, the phone number usually with 5 to 7 digit without code number which are broken up by dashes to remember easily or to increase the capacity of STM. Rehearsal strengthens the STM by memorizing or repeating several items (times). STM is also called working memory because attention and conscious efforts are employed to conduct the information through rehearsal. Working memory seems to be coordinating between STM and LTM.

### c. Long-Term Memory

LTM is a store house which consists of facts, figures, thoughts, feelings, ideas, experiences, words, language, skills etc. with limit less capacity. Psychologist categorize the long-term memory into two parts:-

- The declarative memory:- The mental database of facts and rules consists of places, things, meanings, and symbols. For example, remembering a happy memory of a picnic is a declarative memory. The declarative memory is also divided into:-
  - i. Semantic Memory (means the highly organized knowledge about the meaning of words, sentences, ideas and rules for using them in communication)
  - ii. Episodic Memory (consists of the memory of particular event, time or place about the past action)
- Procedural Memory:- Procedural Memory is skill or habit memory in a compact or compiled form which needs little attention on target resources. Procedural Memory is also called associative module of memory which suggest the memory consists of mental representations of clustrals of interconnected information. For example, people associates AIDs diseases with sympathy, hate, death and blood transfusion to another people or another person.

Conclusion:- Some of the psychologist use explicit memory as synonymous to declarative memory means a conscious recollection of information whereas implicit memory as behaviour, skill and conditional learning and associative memory.

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### Improving Memory

The memory power greatly affects in individuals learning and retaining materials from the different perspectives. The effectiveness of learning depends upon the behaviour of the individual, type of work, learning situation etc. there are several factors responsible for memory factors responsible for memory improving in human beings. They are as follows:-

- a. Meaningful Organization (Encoding)
- b. Use of imagery like pictures, images, visuals etc.
- c. Motivation for learning.
- d. Speed and quantity of learning.
- e. Method of learning.
  - Massed v/s Distributed Practice
  - Whole v/s Part Method
  - Recitation v/s Mere Reading
- f. Results and other reinforcement.

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### Forgetting

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The term forgetting refers to the loss of information which are already encoded and stored in our long term memory. Forgetting has both positive and a negative factor in a sense that it saves us from painful memories and it is also an easy way to excuse our burdens. The negative factor in a sense that failure to remember the important points in our exams creates disappointment and loss of opportunities. The human being is an intelligent creature in the world who always tries to remember his/her skills, knowledge, idea etc. but wants to forget unpleasant or painful experiences which frequently occur in our daily activities.

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