

Research paper on memory

Psychology



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Memory

Memory is always associated with recalling of something learnt at an earlier time ascribed to the description of conscious awareness based on remembering of something of the past, in relation to the set of response and stimuli. According to Baddeley (1997), memory is defined as the process that is used in acquiring, storing, retaining and retrieving information that is acquired through human sense. The human memory is a complicated unitary system with two core divisions; procedural memories that deal with physically based motor skills for instance writing, playing, all conducted via cerebellum, and declarative memories based on facts or incidences tentatively regarded as facts or episodes conducted via the locus coeruleus (Rodriguez, 2009). The declarative memory consist of episodic memories, events that an individual has experienced and semantic memory, which consist of general knowledge (Rodriguez, 2009; Bernstein, Penner, Clarke-Stewart & Roy, 2008). In addition to this, there is the explicit memory, that enables people remember things intentionally, and implicit memory for unintentional remembrance of things (Bernstein et al, 2008).

There are three basic processes involved in the memory system as asserted by Bernstein et al (2008); encoding, storage and retrieval processes. In the encoding process, the incoming sensory information is coded for better communication to the brain and storage (Kellogg, 2003). The codes are classified into three categories depending on the nature of the information received (Bernstein et al, 2008); acoustic code, that deals with the encoding of sounds, visual code and semantic code, which is a general presentation of the information. Storage process involves successful storage of the

information acquired, while retrieval process involves the recovery of the stored data and whether it unavailable or inaccessible (Bernstein et al, 2008; Kellogg, 2003).

Once the data is acquired, there are conceptual processes and development of the information obtained. To achieve this, the memory is divided into three vital stages tentatively referred to as the stage model that are sequential categories of memory. The first stage is the sensory memory. This memory lasts for about half a second for visual information and two to four seconds, for auditory information. Similarly, it aids in the constant flow of information, even when there is an interruption in flow of information (Bernstein et al, 2008). The sensory memory exists for each sensory channel; iconic memory that deals with visual stimuli, haptic memory haptic store for touch and echoic memory for aural stimuli (Rodriguez, 2009).

The information in the sensory memory is held briefly, but long enough to trigger an impression after which it is moved to the second stage, the short-term memory (STM), through a process of perception, and self-attention (Bernstein et al, 2008). The short-term memory, also known as the working memory, can accommodate a limited number of information for two to 30 seconds. However, the duration can be lengthened through aspects that comprise of repetition or rehearsal of the information (Plotnik & Kouyoumdjian, 2011). Bernstein et al (2008), still affirms that, STM develops a representation of a stimulus and it allows the mental work in tandem with the manipulation of information held in the STM.

The long-term memory (LTM) is the final stage and the perceptions generated in the STM are moved to this stage through enough and reliable rehearsal (Rodriguez, 2009). The LTM is unlimited, and it entails the encoding of the general meaning of the information, rather than the details (Bernstein et al, 2008). Concisely, LTM is the preconscious and the unconscious part of the mind and the information stored can be recalled when needed.

The information stored can be retrieved for future use. The retrieval is an active process of re imaging the perception, the feelings, and thoughts about an event and its context (Kellogg, 2003). According to Brown (2007), information can be retrieved through recall, which involves searching memory with few external cues and recognition that implements the idea of matching materials to external information. The two processes are aided by retrieval cues, which are the fundamental stimuli that assist people in retrieving information from the LTM (Bernstein et al, 2008).

Despite the mechanism and the processes involved in storing information, some information cannot be retrieved from the LTM. The inability to retrieve the information is referred to as forgetting (Plotnik & Kouyoumdjian, 2011). The core reason for this inability is retrieval failure, interference, failure to store information, amnesia and motivated forgetting (Rodriguez, 2009). However, there are plethora of procedures and methods used in retaining and improving memory. The methods comprise of elaborate and proper rehearsal of information, use of mnemonic devices

to remember information, built attention, relation of new information to what is learnt previously and exemplary structure and organization of information.

References

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