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MODERN COLLEGE OF
ARTS, SCIENCE & COMMERCE
SHIVAJINAGAR, PUNE - 411 005.

*(*Star College Award, DBT, *CPE Status, UGC, *'A' Grade, NAAC, *Best College Award, UoP.)*

Department of Psychology

Experiment / Test No. : 4

Date : 23/3/2019

Title of the Experiment / Test : Retroactive Interference

Subject's Name : S.D

Student's Name : Madhura Vivek Pawar

Class : MA(I) Roll No. : 1865120

Signature of the Teacher

Retroactive Interference.

- STATEMENT OF THE PROBLEM:-

To study the effect of retro active interference on learning.

- INTRODUCTION :-

1) Defination of Memory :-

"Memory is an active system that recieves information from the senses, organizes and alters it as it stores it away, and then retrieves the information from storage" [Baddeley].

"Memory is the means by which we draw on our past experiences in order to use this information in present." [Sternberg]

"Memory is the process of maintaining information overtime." [Matlin].

2) Types of Memory :-

i) Sensory Memory :-

It is the first stage of memory, the point at which information enters the nervous system through the sensory system, eyes, ears and so on. Information is encoded into sensory memory as neural messages in the nervous system. As long as those neural messages are travelling through the system. It can be said that people have a "memory" for that information that can be access if needed.

There are two kind of sensory memory that have been studied extensively. They are Iconic memory and Ecohic memory. Iconic memory is visual sensory memory, lasting only a fraction of a second. Ecohic memory is

the brief memory of something a person has just heard.

ii) Short - Term Memory :-

Information moves from sensory memory to the next stage of memory, called short-term memory, through the process of selective attention or the ability to focus on only one stimulus from among all sensory input. When a person is thinking actively about some information, that information is said to be conscious. It can also be said to be short-term memory, the memory system in which information is held for brief period of time while being used.

Another way to think about short-term memory is as a working memory. This term emphasis the fact that short-term memory is not merely a box into which information is placed but is a working, active system that process the information it contains at any given movement. Short-Term memory lasts from about 12 to 30 seconds without rehearsal.

iii) Long-Term Memory :-

The third stage of memory is long term memory (LTM), the system into which all the information is placed to be kept more or less permanently. There is physical change in the brain itself when a long term memory is formed. This physical change is relatively permanent.

Although many long term memories are encoded as images, sounds, smells and tastes in

general LTM is encoded in meaningful form, a kind of store house of the meanings of words, concepts and all the events that people want to keep in mind. Long term memories include general facts and knowledge, personal facts and even skills that can be performed.

Long-Term Memory.

- Declarative Memory
  - Episodic Memory
  - Semantic Memory.
- Procedural Memory.

A) Procedural Memory :-

Type of long term memory including memory for skills, procedures habbits and conditioned responses. These memories are not conscious but are implied to exist because they affect conscious behaviour.

B) Declarative Memory :-

Type of long term memory containing information that is conscious and known.

a) Episodic Memory :-

Type of declarative memory containing personal information not redily available to others, such as daily activities and events.

b) semantic Memory :-

Type of declarative memory containing general knowledge, such as knowledge of language and information learned in formal education.

3) Defination of Forgetting :-

Concepts of forgetting processes are stated interms of the blocking of ideas or events. Forgetting is the apparent loss or modification of information already encoded and stated in the individuals LTM. It is a process in which old memories are unable to be recalled from memory storage. Forgetting happens unnessarily. Forgetting also helps in to recognize the storage of new information with old knowledge.

4) Theories of Forgetting :-

(i) Trace Theory :-

In sensory trace theory places a heavy emphasis on changes in memory storage over time. A basic correction is that the effects of learning or practice persist in terms of memory trace after active practice has ceased. This trace can be then modified over time by internal syntonomous events. If the trace is not disturbed are infered with forsome (unspecified) period of time. Forgetting might be recognised in terms of the original memory.

In the 1st instance, a memory trace may strengthen or set over time spontaneously to instance little forgetting would result. In the 2nd instance a memory trace is assumed to change spontaneously but quite lawfully. In 3rd instance a memory tracemay decay spontaneously overtime.

(ii) Interference Theory :-

According to this theory, forgetting involves difficulties in retrieval rather than storage. Interference explanations of forgetting often begin by assuming that habbits or associations has already been learnt. In order to describe the processes that characterizes forgetting, interference theories have examined 2 sources of interference. One involves the period between storage and retrieval and the other involves the period before storage has taken place. In both situations. however forgetting is thought to result from interference between old memories already in storage for new memories coming into storage. When old memories are displaced by new memories theorist attribute forgetting to retroactive processes. In contrast, the displacement of newer memories by older memories is explained on the basis of proactive processes.

5) Defination of Interference :-

Hindarance of learning new information because of other information learned before or after the new information.

6) Types of Interference :-

There are two types of interference, they are as follows :-

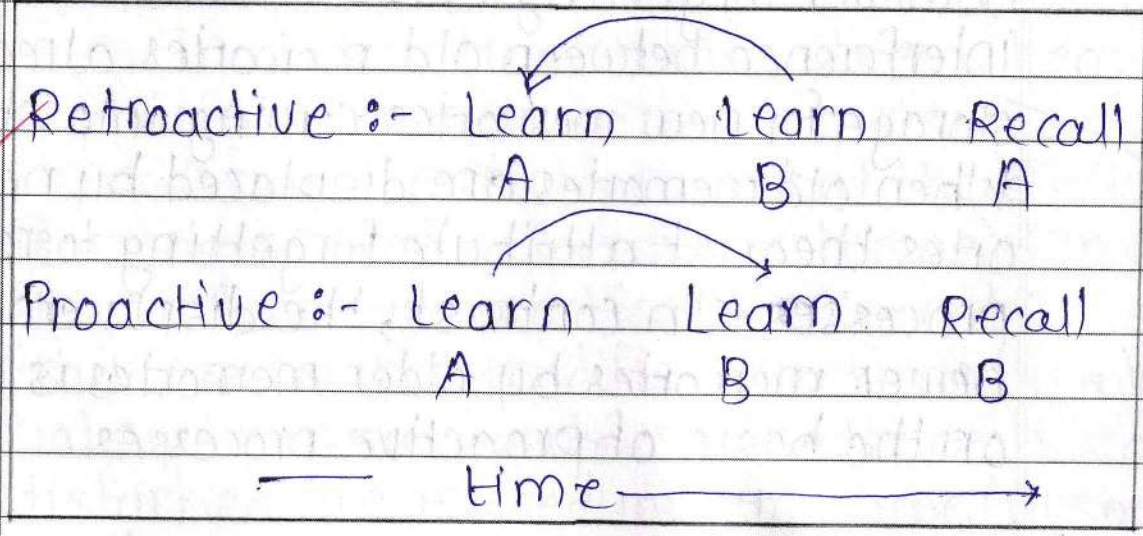
(i) Proactive Interference :-

Information learned previously causes problem with new information. Proactive interference

, is due to events that come before the to be remembered information. Proactive interference is responsible for a great deal of forgetting.

(ii) Retroactive Interference :-

New information causes recall problem with previously learned information. The interference in memory resulting from activities that come after, subsequent to the events to be remembered, it is called retroactive because the inference is with the memory of events that came before the interfering activity.



- HYPOTHESIS :-

While learning different lists of syllabus new learning hampers retaintion of previous learned list.

- VARIABLE :-

Independent Variable :- Nature of interpolation task.

Dependent Variable :- Recall of previously learned list.

- MATERIAL :-

Three lists of nonsence syllabuls, stop-watch, stationary, wooden screen, cancelation sheet.

- PLAN OF THE EXPERIMENT :-

Conditions	Task (learning)	Interpretation Task	Retaintion.
Control	Learning list 'A'	cancellation task	Free recall of list A.
Experiment	Learning list 'B'	Learning list 'c'	Free recall of list B

- PROCEDURE :-

The cubical was arrenged and subject was called inside the cubical and seated comfortably. Then rapport was established and further instructions were given :-

Part I [control] :-

" I am going to read out a list of some 3 letter meaningless words. Your task is to learn them in a some order. In a next trial you must try to say what was the first word. If is correct or wrong I will read that word loudly. Each time I will be telling you meaningless word if you cannot say it. This will be continued till you will able to say all the words in correct order in 2 back to back trials. After that I will give you sheet of paper on which some alphabets are written you have to cancel the letter I will tell you. Then I will ask yous to stop. Afterwards I

am going to give you sheet of blank paper on which you have to write nonsence words you learned previously in any order. Then gap of 2-3 min. will be given.

Part 2 (Experimental) :-

"I am going to read out a new list of some words (nonsence words). Same procedure as above will be followed for 2 back to back trial without any error. Then again I am going to give read out new list of word and you have to learn it. Then I am going to give you sheet of blank paper on which you have to write words from the previous list in any order you like"

- PRECAUTION :-

1) List should not be exposed to the subject prior to the experiment.
2) Experimenter must read out all nonsence syllabuls in a same pase, tone and peech at the rate of 2 sec per nonsence syllabul.
3) Experimenter must make sure that subject pronounces each nonsence syllabul correctly.
4) Record learning time and trial carefully.
5) Experimenter must ensure that subject is performing interpolation task carefuly.
6) The experimenter must not reveal that recall of the list will be taken post the interpolation task

- DISCUSSION :-

Statement of the problem is to study the effect of retro-active interference on learning.

According to Baddeley, "Memory is an active system which recieves information from the senses, organizes and alters it as it stores it away and then retrieves the information from storage."

Retroactive interference is when a person has difficulty recalling old information because of newly learned information.

Cubical was set, experimentor checked all the material. Subject was called inside the cubical and seated comfortably. Then instructions were given to subject.

Hypothesis was that, when while learning different list of syllables new learning hampers retention of previous learned list.

For list A subject has taken 22 trials and 1886 sec to learn that list and % of correct recall is 50%. Here in this before recall task cancellation task is given. The obtain result refers that half of the words from list subject is able to recall without any interference task. Subject has mentioned that list A was hard for him to learn and remember because he was not able to make any associations.

For list B subject has taken 11 trials and 948 sec to learn this list. % of correct recall for this list is same as list A 50%. Here, learning of list C that is interference task is given before the recall. So from the result we can see that no interference has happened. Subject has

mentioned that he find this list very easy to learn and remember because he was able to make association between words from list and day to day life.

There is one graph which shows % of correct recall for list A and B. Graph here indicates that % of correct recall is same for both list A and B which refers that interference task has not affected the recall.

From the above discussion we can see that there is no effect of interference task in the recall as subject was able to make associations with day to day life.

- CONCLUSION :-

Hypothesis was that, while learning different list of syllables new learning hampers retention of previous learned list. From obtain result and above discussion, it can be concluded that hypothesis is denied.

- REFERENCES :-

1) Mishra, B.K (2008) Psychology, The study of Human Behaviour, N.D: BHJ learning.
2) Rajmanikam, (2006) Experimental Psychology with advance experiment, Volum 1 and 2, New Delhi concep publishing com.

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Title of the Graph : Graph showing % of CR per list.

Origin = ( )

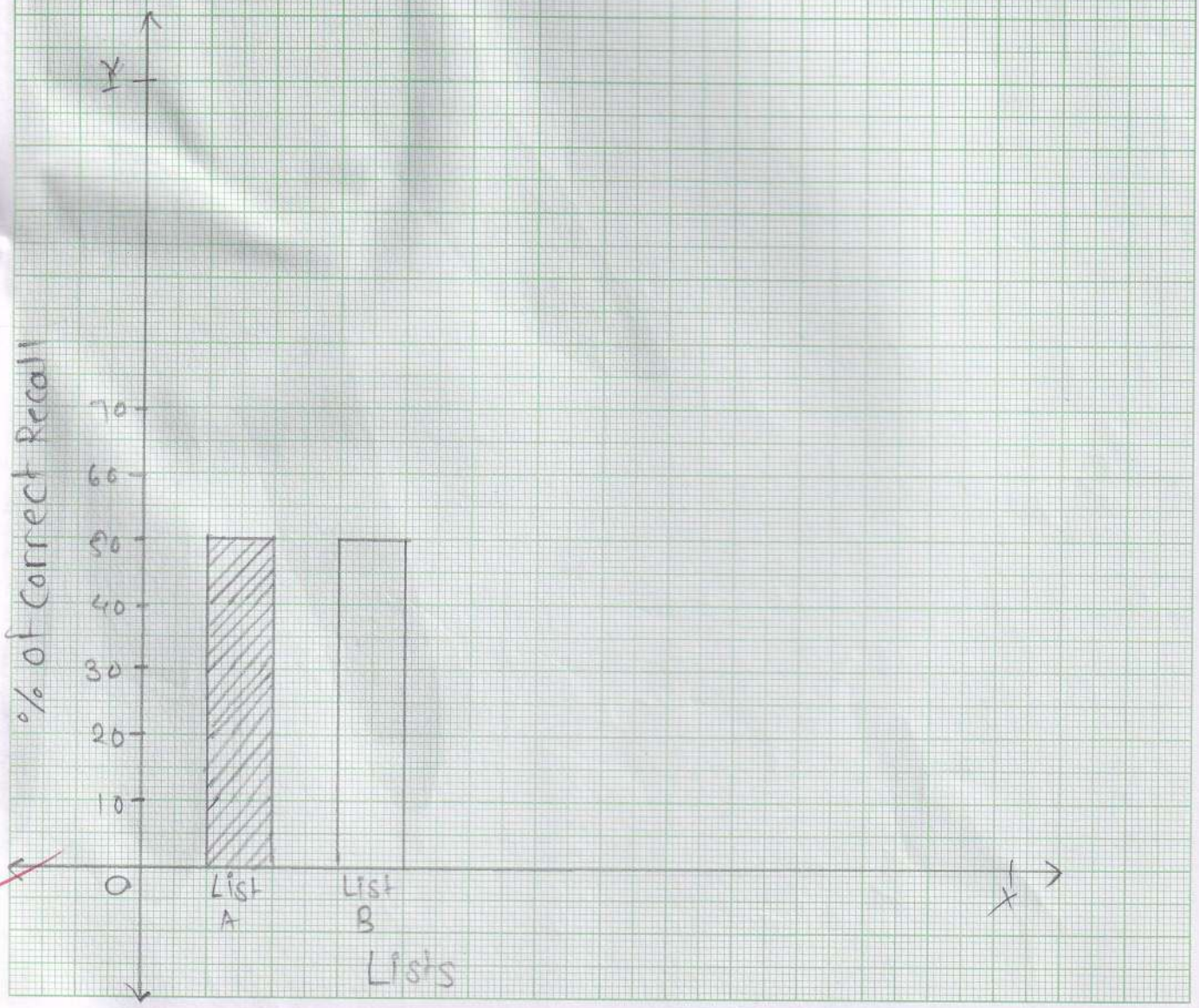
Slope = _____

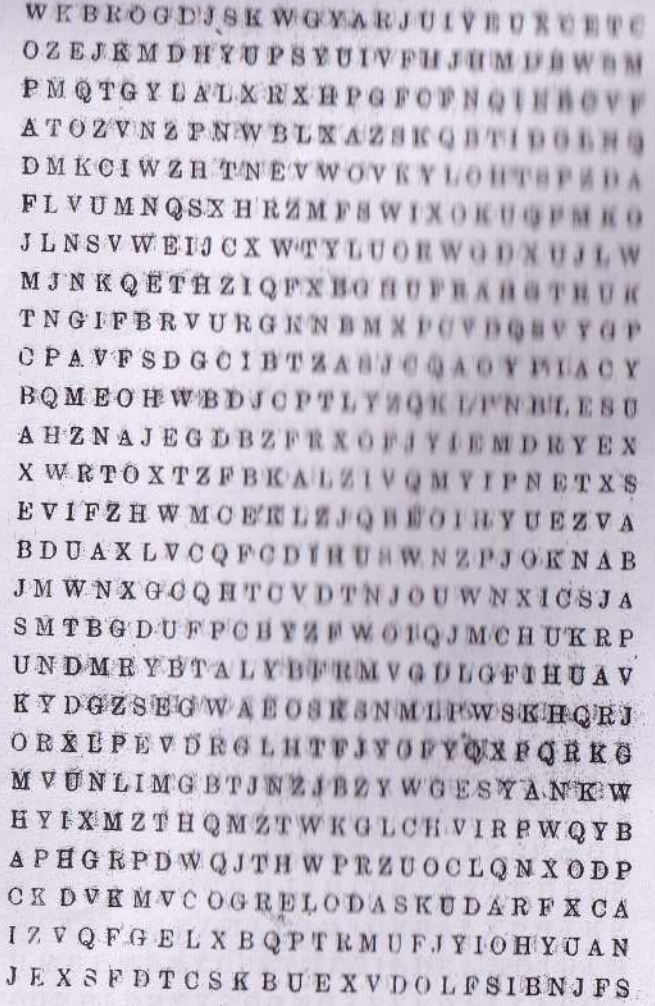
Scale
on x - axis, 1 cm = 1 List
on y - axis, 1 cm = 10 %

Intercept
on x - axis =
on y - axis =

▨ - list A

□ - list B





CANCELLATION - TEST

College _____ Class _____

E's Name _____ Date _____

S's Name _____ S's Age _____

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