The Serial Position Effect (Glanzer and Cunitz)

Introduction – read this first!!

This experiment was to designed to test the basic concepts of long and short term memory. Glanzer and Cunitz wanted to know whether these were separate memory stores.

Short term memory is defined as memories which last about 18-30 seconds and have between 5-9 items of information. Long term memory is memory that is potentially unlimited in amount – and lasts up to a lifetime.

This is a very simple experiment to perform – but can produce very strong (and usually reliable) results.

The basic method is as follows:

1. Read out a list of words to participants – the word list is the same for all participants (think about why this might be)
2. Participants then write down as many words as they remember – the order participants recall the words doesn't matter
3. Record which words each participant remembered

Glanzer and Cunitz found that participants tended to remember words at the start of the list (the primacy effect) and at the end of the list (the recency effect). Participants tended not to recall as many words from the middle of the list.

Remembering words from the start (**primacy**) was explained through participants rehearsing the words (so they went into LTM); remembering words from the end was explained by words being stored in STM and recalled quickly (**recency**)

Glanzer and Cunitz got a curve when they plotted their results (see below) – which they called the **serial position curve/effect**

The recency effect was removed when participants were asked to count backwards after they had learned the list of words.
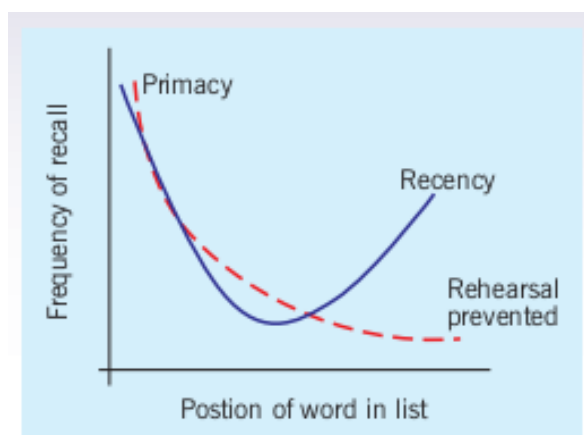
This experiment shows we have two separate memory stores – STM and LTM.

You are going to recreate the original study. Follow the instructions on the next page to run and record the study.

What you need to do: Serial position experiment

1) ***Read these instructions through carefully so that you understand them fully***
2) Collect data from two people if you can manage it (the more, the better but it depends on who you have with you in lockdown!!)
3) Only use participants aged 16+!!
4) You need these instructions, a pen/pencil and piece of paper.
5) Ensure your participant is aged 16+ and is happy to take part in the study. At this stage you should just tell them you are looking at memory.
6) Read out to your participant these instructions:

I am going to read you a list of words. At the end of the list I will tap the desk to indicate I have finished. I would then like you to write down as many of the words that you remember from the list. The order and spelling of the words doesn't matter.

7) Check that your participant understands what will happen and what they have to do
8) Read out each word in the list below at about 1 second / word (i.e. don't rush or go too slowly)
9) Tap the table when you have finished reading the list to indicate the participant should start writing.
10) The participant should then write down as many words as possible. Allow them to run out of steam!!!
11) Thank the participant for their participation. You should then explain what Glanzer and Cunitz found (use the previous page to help you).

The word list

Use these words in this order!!

Distant
Stable
Cabbage
Mattress
Uncle
Shopper
Question
Cottage
Bargain
Finger
Landscape
Future
Velvet
Stomach
Flower
Gossip
Chamber
Sandal
Warehouse
Village
Carpet
Favour
Lawful
Started

Recording

1) On the web open this spreadsheet (use Chrome): https://tinyurl.com/serialposexp
2) Find the next empty numbered column.
3) For each word the participant got correct, put a 1 into the appropriate cell. An example is shown in the spreadsheet
4) The sheet will save itself so don't worry about closing it!!
5) The spreadsheet updates the results automatically – see the Results tab – there is already some data in there from previous years (more data = more valid results!)

Example recording (✓ = participant remembered word)

Participant sheet

Distant	✓
Stable	
Cabbage	
Mattress	
Uncle	✓
Shopper	✓
Question	✓
Cottage	
Bargain	
Finger	
Landscape	✓
Future	✓
Velvet	
Stomach	
Flower	
Gossip	
Chamber	
Sandal	
Warehouse	
Village	✓
Carpet	✓
Favour	
Lawful	
Started	

Spreadsheet

	A	B	C	D	E	F
1	Place in list	Serial Position	Word	Example	1	
2	Primacy	1	Distant	1	1	
3	(LTM) (rehearsed)	2	Stable			
4		3	Cabbage	1		
5		4	Mattress	1		
6		5	Uncle	1	1	
7		6	Shopper	1	1	
8		7	Question			
9		8	Cottage		1	
10	Middle	9	Bargain	1		
11		10	Finger			
12		11	Landscape		1	
13		12	Future		1	
14		13	Velvet			
15		14	Stomach			
16		15	Flower			
17	Recency	16	Gossip			
18	(STM)	17	Chamber			
19	(5-9 items)	18	Sandal	1		
20		19	Warehouse			
21		20	Village	1	1	
22		21	Carpet	1	1	
23		22	Favour	1		
24		23	Lawful			
25		24	Started	1		
26			Totals	11	8	
27						

Results, Conclusions and Write up

Write up your study following this format – use the headings:

Introduction

What did Glanzer and Cunitz do/why/what did they find out

Method

What you did, who the participants were, how did you get the participants, what materials did you use (word list etc)

Results

1) Use the Results tab on the Google spreadsheet (https://tinyurl.com/serialposexp) to get the graphs and frequency counts for the experiment
2) Put these graphs/frequency counts into your write up. Make sure that everything is properly labelled.

Conclusions

What does your data show?

Does it support/not support the Glanzer and Cunitz study?

Why/why not?