

# Gendered Memory Patterns: Unravelling Primacy and Recency Effects in Comparative Analysis

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## Abstract

This experiment was done to see the impact of Primacy and recency Effect. Ebbinghaus demonstrated that in serial learning, words heard at the beginning and the end of the list are better memorized and recalled. It is a study that investigates in serial learning the primary effect reflects the output of the long-term store, whereas the recency effect reflects the output of short-term store. The Primacy and Recency Effect refers that items in the middle of the list are recalled poorly for at least two reasons, first they are so far from the end of list that they are not in the short-term store at the beginning of the retention test. Second, the subjects did not rehearse them extensively because only few items can be rehearsed at a time. The Primacy and Recency Effect Test requires individual to view a list of forty words, one word at a time for three seconds and asked to recall in any order. This Test demonstrates Primacy and Recency effect on recall and this outcome is called the serial position effect because the retention of an item depended upon the position effect in which it had been presented. The sample consist of total thirty subjects fifteen boys and fifteen girls. The subjects are graduate students of the age group sixteen-thirty, located in Hyderabad. In this study Simple Random Sampling is used.

**Keywords:** Primacy and Recency Effect, Serial Learning, Memory Recall.

## 1. Introduction

One of the most used procedures to study memory is the free recall procedure. In a typical free recall task, the experimenter presents a list of words at a rate of one word for every three seconds. The subject is to recall items in any order. The result show that the level of recall was highest for the words that had been presented at the beginning and end of the list (Glanger and Cumitz, 1966). This outcome is called the serial position effect because the retention of an item depended on the position effect in which it had been presented.

Serial learning is one of the methods of verbal learning. Memorization through serial method was first experimented by Ebbinghaus (1902). Better recall of the words at the beginning of the list contributes to the serial position effect and is known as the primacy effect. Items encountered/exposed first are remembered relatively well. The better recall of the words at the end of the list is known as recency effect.

## 2. Related Research Work

Haugtvedt & Wegener (1994) researched across discipline and media has demonstrated the importance of an item 's position in an ordered list – its serial position -in dependent measures of memory, attitude formation and choice. This research shows both recency and primacy effects across many media, often mediated by the individual 's involvement or motivation to think about the object or activity.

Chung, Jin & KeukHwang (2019) were conducted a study on “A Study on the Serial Position Effect of Memory according to Illumination of LED Light” to verify the forms of the effect of serial position effects of memory according to the illuminance of light. Results of this study showed that the difference between primacy and middle items was statistically significant in relatively dim conditions. These results show that the primacy effect is strong in the dim condition, and the retrieval is low in the middle item. The recency effect was also good in the dim condition, but it was low in the relatively bright condition.

Devanshi (2016) was conducted a study on “The significance of mode of presentation on the serial position effect: an exploratory study”. This experiment aimed to look at the significance of mode of presentation (auditory, visual printed and visual pictures) on serial position effects. Participants in this experiment were tested with different treatment conditions. With the auditory group, participants were asked to recall the words by writing them down after the experimenter read out the list of twenty-one common-concrete nouns at the rate of one second per word. With the visual printed and visual pictures group, the participants were asked to recall the words by writing them down after the experimenter presented the stimuli on a PowerPoint presentation. The results indicated that there was a significant main effect of serial position. However, a significant of presentation and the interaction between the mode of presentation and serial position wasn't found.

## 3. Purpose Of the Study

The Primacy and Recency Effect refers, when you are learning new information, you are most likely to remember the things that you study first (the primacy effect) as well as those things you study last (the recency effect). This means that when tested on the material, you are more likely to forget the things you learned in the middle.

## 4. Research Methods

**Problem:** To determine the effect on primacy and recency effect on recall (retrieval)

**Variables:**

**Independent variable:** Serial position (the order of presentation of a list of forty words, primacy words and recency words).

**Dependent Variable:** Recall of primacy /recency or both (The number and percentage of primacy and recency words recalled).

**Hypothesis**

Primacy and Recency effect on recall will be demonstrated.

## 5. Materials Required

A list of forty words divided into three categories: the first ten words represent the primacy effect; the middle twenty words and the last ten words represent recency effect. Wooden screen used in the lab method.

### 6. Sample

The sample consist of total thirty subjects fifteen boys and fifteen girls. The subjects are graduate students of the age group sixteen to thirty, located in Hyderabad. In this study Simple Random Sampling is used.

**Table 1 Showing the Details of the Sample**

Gender		Group		No. Of Subjects
Boys	Girls	1	2	15 boys and 15 girls Total: 30

### 7. Procedure

A list of forty words was prepared using MS Power Point. The participant is seated comfortably in front of the computer screen. The Instructions on the screen are read out clearly and after checking if they understood the slides were presented.

### 8. Precautions

1. Care was taken to ensure the list was not exposed to the subject prior to the experiment
2. The subject should be able to view only one word at a time.

### 9. Results

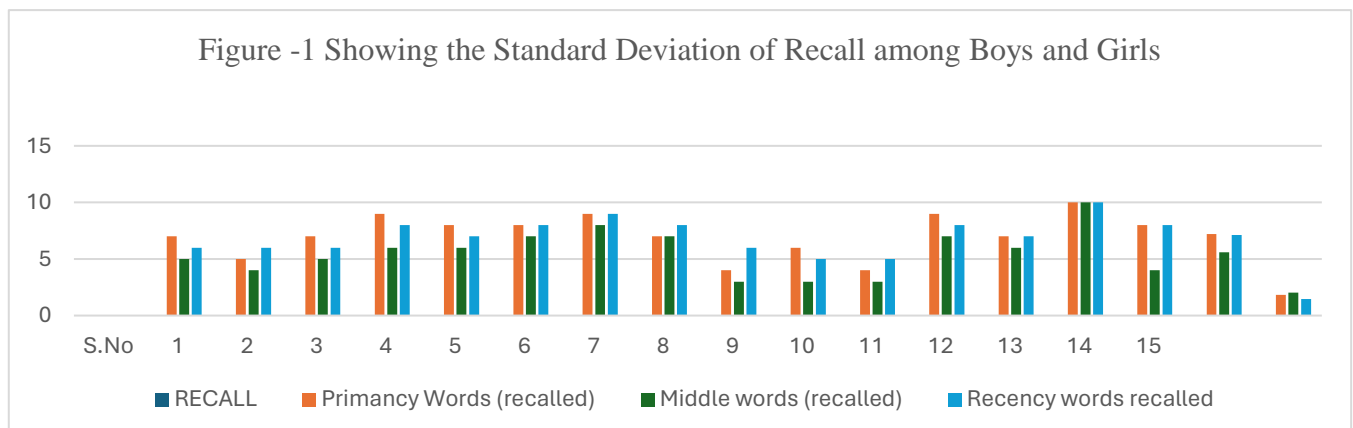
**Table -1 Showing the Mean of boys and girls.**

Recall Words	Boys	Girls
Primacy Words (recalled) MEAN	6.6	7.2
Middle words (recalled) MEAN	4.3	5.6
Recency words recalled MEAN	6.1	7.1

**Table -2 Showing the Standard Deviation of Recall among Boys and Girls**

Recall Words	Boys	Girls
Primacy Words (recalled) S. D	1.6	1.8
Middle words (recalled) S. D	1.7	2
Recency words recalled S. D	1.8	1.4

**Figure -1 Showing the Standard Deviation of Recall among Boys and Girls**



### 10. Discussion

Table 1 shows that the Mean for Primacy words Boys 6.6, Girls -7.2, Middle Boys 4.3, Girls 5.6, Recency words Boys: 6.1, Girls 7.1. This shows that primacy /recency effect has been noted. Thus, it clearly shows that though there is a positive \_ effect at the group data.

### 11. Conclusion

At the group level, primacy and recency effects have been proved.

### 12. Practical Application

This Phenomenon of primacy and recency helps us in acquiring learning strategies and in enhancing our memory.

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