

## **EFFICACY OF MNEMONIC INSTRUCTIONAL STRATEGY FOR ENHANCING HISTORY ACHIEVEMENT AMONG IX STANDARD STUDENTS**

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### **Abstract:**

*In this research, the researcher has used Mnemonic instructional strategy to find out its efficacy in the enhancement of History achievement among IX standard students. Quasi experimental design was used in which Pre- test and Post-test non – randomized two group i.e., control and experimental group for the study. Purposive sampling technique was used to select 80 samples from one Government Girls higher secondary school at Namakkal District of Tamil Nadu. In the selected school, each 40 female students from section A and B were constituted as a sample for both control and experimental group respectively. The researcher constructed and standardized the achievement test to compare the performance of the students between control and experimental group in pretest, posttest and retention test. The control group was taught with conventional method and experiential group was taught with Mnemonic instructional strategy. The results of study support prior research study by demonstrating that samples in the experimental group have learnt through mnemonic strategies made statistically significant difference in History achievement, and their performance was higher than students in the control group. when mnemonics are used correctly, teachers can streamline the learning process, giving students access to wide range of information so that students learn "bridges" to other information with less working memory for high academic achievement.*

### **Key words:**

*Mnemonics, teaching method, History achievement.*

### **INTRODUCTION**

History is one of the core subjects in high school level and it plays a predominant role in shaping students understanding of the world around them. It is a subject that can provide pupils with insights into the past and help them to make sense of the present. The teaching of history should be carried out in a way to make children get knowledge of the historical events and occurrence happened previously, and could make the students aware of how our society and culture evolved over the past years. According to Haydon, T., Musti-Rao, S., & Alter, P. "A mnemonic is any procedure or instructional strategy designed to improve a student's memory". A mnemonic is an instructional strategy created to develop retention and recall of information through the use of visual or auditory clues. These clues improve pupils' ability to associate between their current knowledge and new information. The uses of mnemonics are two-fold. Firstly, mnemonic help pupils encode information in long-term memory. secondly, and which is even more important, mnemonics help -pupils retrieve information from long-term memory.

### **NEED AND SIGNIFICANCE OF THE STUDY**

A teacher or teaching method is unengaging or ineffective can also support to an absence of interest in studying History. Now and then students may lose attention and interest in studying because they find the physical boring or uninteresting. This is specifically true when subjects are taught in a dry and uninspired manner. The traditional approach Teachers teach the subject, students take notes and are tested on the information. However, this approach doesn't work for every child. Not all children learn through verbal/auditory instruction. The Positive effects of mnemonic acronyms were shown particularly in situations where the order of items had to be learned and retrieved (Nelson and Archer,

1972; Morris and Cook, 1978). The availability of a pronounceable acronym provides a cuing structure whose inherent links between the different letters might strengthen the associations between successive steps (Malhotra, 1991), which could make the learners to remember and recall the learnt content and concept.

Mnemonic integrated instruction emphasizes on learning for long term retention as it is specifically designed to improve memory. Jurowski, Jurowska and Krzeckowska (2015) defined it as a memory-enhancing pedagogical method aimed at improving learning and information recall through the use of mnemonics. Solso (2005) defined mnemonics as devices that help learners learn faster, recall better while keeping learners motivated and the classroom very interesting.

History achievement is the academic achievement described as the gain in one's knowledge as a result of taking part in a learning activity of the History subject. Uwaleke and Offiah (2013) described it as a student's performance on a standard of measurement such as performance test, skill test or analytical thinking test. This simply implies that academic achievement is a result-oriented output that explains the extent of one's performance in a desired task. In the context of this study, History achievement therefore refers to one's performance in a test after exposure to a mnemonic instructional strategy over a period of time.

## **STATEMENT OF THE PROBLEM**

The History teachers generally adopt traditional way of teaching using lecture method, chalk and talk method, role play method and demonstration methods in teaching History subject at standard IX level. These method does not help to encode new information in memory and also not easy to retrieve. Hence, the researcher designed, developed and evolved a mnemonic instructional strategy to improve the working memory of the IX standard students while learning History and to encode history related information in memory and same to be retrieved easily. Moreover, how far the Mnemonic strategy could improve the performance of history achievement among IX standard students and the same to be measured over the period of time through the retention test this experimental research study was carried out by the researcher.

## **OBJECTIVES OF THE STUDY**

### **General objective of the study**

To find out the efficacy of mnemonic instructional strategy for enhancing History achievement among IX standard students.

### **Specific objectives of the study**

1. To Examine the mean difference in History achievement of std IX students between control and experimental group in the pre-test.
2. To design, develop, validate and implement the mnemonic instructional strategy to teach History.
3. To find out the mean difference in History achievement of std IX students between control and experimental group in the post-test.
4. To determine the mean difference in History achievement of std IX students between control and experimental group in the retention test.
5. To judge the mean difference in the retention ability of History concepts of the IX standard students of control and experimental group between posttest and retention test.

## **RESEARCH QUESTIONS**

1. What is the mean difference in History achievement of the IX standard students before the implementation of Mnemonics strategy in teaching History between control and experimental group?
2. How far the Mnemonic strategy would improve the history achievement among the IX standard students?

3. What would be the significant difference in the mean score of History achievement between pre-test and post-test score among IX standard students?
4. What is the mean difference in the retention ability of History concepts of the IX standard students of control and experimental group between posttest and retention test?

### **HYPOTHESES OF THE STUDY**

1. There is no significant difference in the mean score of History achievement of standard IX students between control and experimental group in the pretest.
2. There is no significant difference in the mean score of History achievement of standard IX students between control and experimental group in the Post-test.
3. There is no significant difference in the mean score of History achievement of standard IX students between control and experimental group in the retention test.
4. There is no significant difference in the mean score of History achievement between posttest and retention test score of standard IX students in control group and experimental group.

### **METHODOLOGY**

**Method of study:** The researcher used Quasi experimental design in which Pre- test and Post-test non – randomized two group i.e., control and experimental group for the study.

**Population:** The students studying IX standard in Tamil medium under the state board of Tamil Nadu are the population of the study.

**Sample for the study:** The Researcher used purposive sampling technique to select samples from one Government Girls higher secondary school at Namakkal District of Tamil Nadu for the study. In the selected school there are two sections for IX standard. Out of two Sections A section was considered as a control group and section B was used as an experimental group. In both section who are regular to schools are considered as a sample for the study. From each section each 40 students are taken for the study respectively. Altogether 80 standard IX students are constituted as a sample for the study.

**Selection of the content:** The researcher has selected III unit of IX standard Tamil medium History lesson i.e., Early Tamil Society and Culture. In this lesson the researcher has chosen the contents such as Sources for the study of early Tamil society; The Sangam Age; Sangam Age Polity; Political Powers of Tamilagam; Society in Sangam Age; Emergence of towns and ports; Faith and Belief System and Fine Arts.

**Mnemonic Strategy:** The researcher prepared four lesson plans based on traditional method to teach History for the control group. The researcher taught the lesson in 7 periods for control group. The researcher prepared the Mnemonics instructional strategy in Tamil for the chosen content using Acronyms, image mnemonics, connection mnemonics, Loci method, chunking, rhymes and mind map methods of mnemonics instructional strategy and same was validated with 5 experienced subject teachers. The researcher taught the lesson in 7 periods based on the mnemonic instructional strategy for experimental group.

**Validity of the Mnemonics Strategy:** The Developed Mnemonic strategy was validated by one Professor from the Department of Education, one lecturer in the DIET and 5 Graduate Social science teachers having more than 10 years of teaching experience in teaching social science at Standard IX level in Namakkal District.

**Tools for the study: Achievement test:** The researcher constructed achievement test in consultation with the social science teachers. Initially there were 43 multiple choice questions were framed. In the

item analysis 3 questions are rejected based on the calculation of difficulty index and discrimination index. In the final tool there were only 40 items kept in the achievement test. The raw scores are converted into 100. The reliability of the achievement test was established by using Split half method. r value was found to be 0.89

**TESTING THE HYPOTHESES OF THE STUDY**

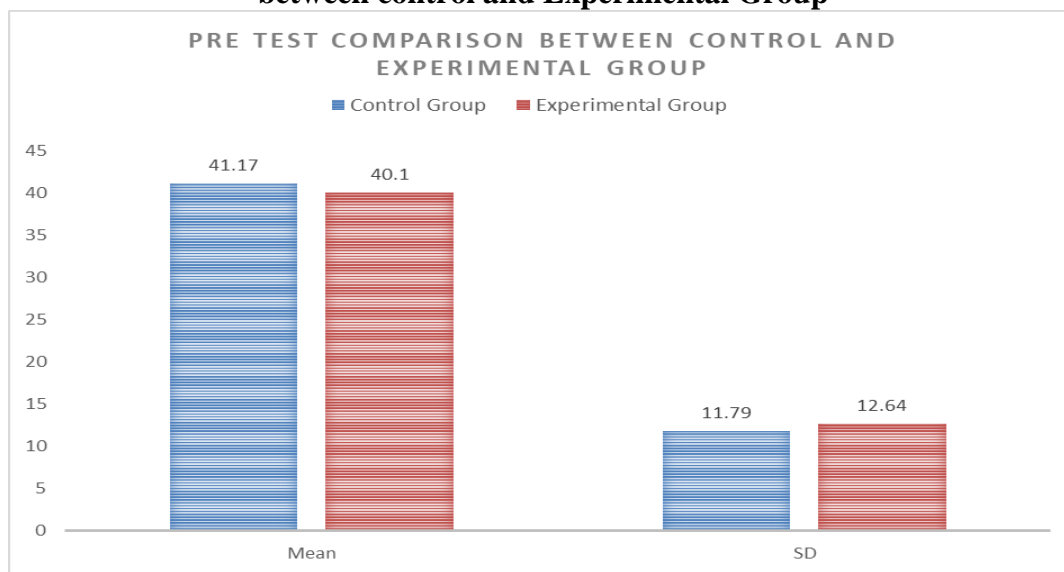
**NULL HYPOTHESIS- 1** There is no significant difference in the mean score of History achievement of standard IX students between control and experimental group in the pretest.

**Table 1: Analysis of Significance Difference in the mean score of History achievement of standard IX students between control and experimental group in the pretest**

Test	Group	N	Mean	Standard Deviation	Calculated t-value	P value	Remarks
Pre test	Control Group	40	41.17	11.79	0.422	0.67	Not Significant
	Experimental Group	40	40.10	12.64			

The above table revealed that the calculated P value 0.67 is greater than 0.05 and it is not significant at 0.05 level. Hence, it is found that there is no significant difference in the mean score of History achievement of standard IX students between control and experimental group. In the pretest the samples in the control and experimental group do not differ in their History achievement.

**Graph 1: Pretest Mean score comparison of History achievement of standard IX students between control and Experimental Group**



**NULL HYPOTHESIS- 2** There is no significant difference in the mean score of History achievement of standard IX students between control and experimental group in the Post-test.

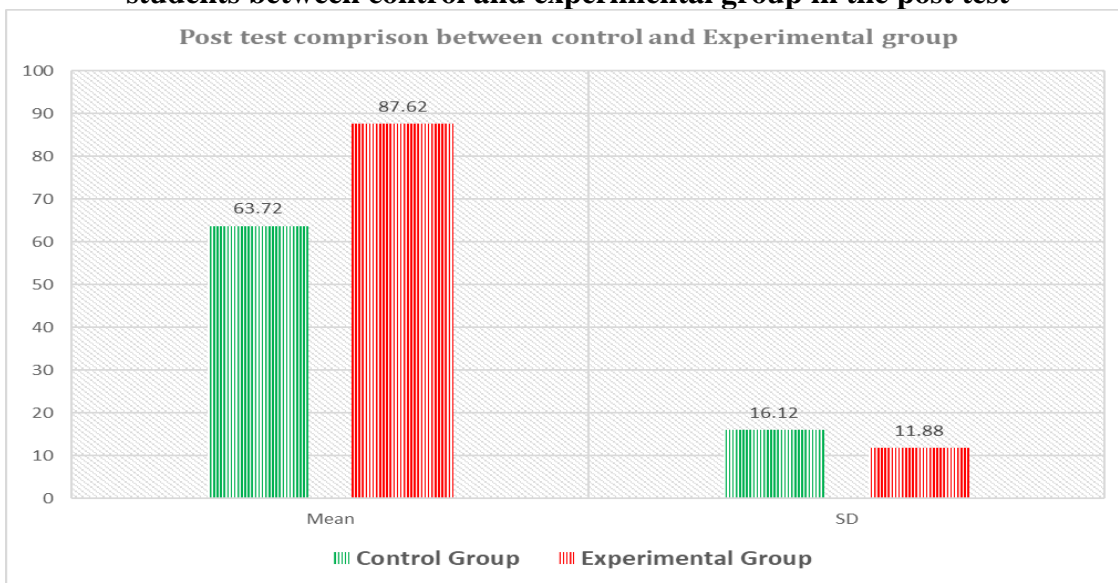
**Table 2: Analysis of Significance Difference in the mean score of History achievement of standard IX students between control and experimental group in the post test**

Test	group	N	Mean	Standard Deviation	Calculated t-value	P value	Remarks
Post test	Control Group	40	63.72	16.12	12.64	0.00	Significant
	Experimental Group	40	87.62	11.88			

The above table revealed that the calculated P value is less than 0.05 and it is significant at 0.05 level. Hence, it is found that there is significant difference in the mean score of History achievement of standard IX students between control and experimental group.

In the post test, the samples in the control and experimental group differ in their History achievement.

**Graph 2: Significance Difference in the mean score of History achievement of standard IX students between control and experimental group in the post test**



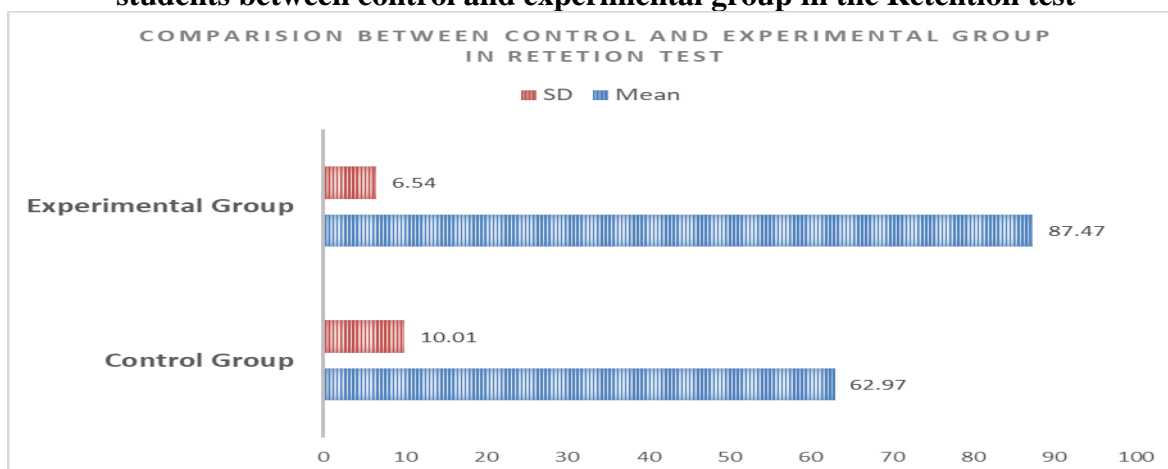
**NULL HYPOTHESIS- 3** There is no significant difference in the mean score of History achievement of standard IX students between control and experimental group in the retention test.

**Table 3: Analysis of Significance Difference in the mean score of History achievement of standard IX students between control and experimental group in the Retention test.**

Test	Group	N	Mean	Standard Deviation	Calculated t-value	P value	Remarks
Retention test	Control Group	40	62.97	10.01	12.74	0.00	Significant
	Experimental Group	40	87.47	6.54			

The above table revealed that the calculated P value 0.00 is less than 0.05 and it is significant at 0.05 level. Hence, it is found that there is significant difference in the mean score of History achievement of standard IX students between control and experimental group in the retention test. In the retention test, the samples in the control and experimental group differ in their History achievement.

**Graph 3. Significance Difference in the mean score of History achievement of standard IX students between control and experimental group in the Retention test**



**NULL HYPOTHESIS- 4** There is no significant difference in the mean score of History achievement between posttest and retention test score of standard IX students in control group and experimental group.

**Table 4: Analysis of Significance Difference in the mean score of History achievement between posttest and retention test score of standard IX students in control group and experimental group**

Category	Test	N	Mean	Standard Deviation	Calculated t-value	P value	Remarks
Control Group	Post test	40	63.72	10.01	5.11	0.00	Significant
	Retention test	40	62.97	9.81			
Experimental group	Post test	40	87.62	6.48	1.77	0.83	NS
	Retention test	40	87.47	6.54			

The above table revealed that the calculated P value for control group is 0.00 is less than 0.05 and it is significant at 0.05 level. When compare to the post test and retention test score of Experimental groups, the calculated p value 0.83 is greater than 0.05 and it is not significant at 0.05 level.

Hence, it is found that

✚ There is significant difference in the mean score of History achievement of standard IX students between posttest and retention test of control group.

✚ There is no significant difference in the mean score of History achievement of standard IX students between posttest and retention test of Experimental group.

### MAJOR FINDINGS OF THE STUDY

1. There is no significant difference in the mean score of History achievement of standard IX students between control and experimental group in pretest.
2. There is significant difference in the mean score of History achievement of standard IX students between control and experimental group in the post test.
3. There is significant difference in the mean score of History achievement of standard IX students between control and experimental group in the retention test.
4. There is significant difference in the mean score of History achievement of standard IX students between posttest and retention test of control group.
5. There is no significant difference in the mean score of History achievement of standard IX students between posttest and retention test of control group.

### DISCUSSION OF THE STUDY

In the pretest the samples in the control and experimental group do not differ in their History achievement. It is shown that the samples in the control and experimental group are equal in the History achievement. In the post test, the samples in the control and experimental group differ in their History achievement. The mean score of experimental group i.e., 87.62 is higher than the mean score of control group i.e. 63.72. The mean difference between control and experimental group is 23.9. the samples in the experimental group have performed well.

When compare to the post test and retention test score of Experimental group and control group the mean score of control group has reduced from 63.72 to 62.97 and there is a significant difference. It means the samples have learnt through traditional method have forget the concept. At the same time there is no significant difference in the mean score of history achievement between posttest and retention test of the samples in the experimental group. It is evidently proved that the implemented mnemonic instructional strategy is unique one the history achievement.

The findings of the present study proved to accept Solo's (2005) view that mnemonics as devices that help learners learn faster, recall better. This finding of the study supports the result of the study of Jurowski, Jurowska and Krzeckowska (2015) that Mnemonic integrated instruction emphasizes on learning for long term retention as it is specifically designed to improve memory. Further, the outcomes of research studies of (Bahrami et al., 2019; Brogla-Krupke, 2003; Governor et

al., 2013; Haydon et al., 2017; Tamminen et al., 2017) have demonstrated as similar to the findings of the present study that mnemonic strategies are beneficial for students' academic achievement.

## **CONCLUSION**

In this research, the researcher has used the judicious combination of various Mnemonic techniques such as Acronyms, image mnemonics, connection mnemonics, Loci method, chunking, rhymes and mind map methods to memorize a phrase and idea with patterns. The findings of the study proved that when mnemonics are used correctly, teachers can streamline the learning process, giving students access to a wide range of information so that students learn "bridges" to other information with less working memory for high academic achievement.

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