

## Effectiveness of Remedial Teaching on Thinking Strategies of Slow Learners

Neelu Jangid<sup>1\*</sup>, Umed Singh Inda<sup>2</sup>

### ABSTRACT

Remedial teaching methods are innovative teaching strategy designed to improve the storage and retrieval of information from long-term memory. The present study was conducted to explore the effectiveness of Remedial teaching on thinking strategies of Slow Learners. For the present research work investigators have selected sample of 22 children who have identified and screened as slow learner. Purposive sampling technique was used. The total sample was divided into experimental (12) and control (10) group purposively. Dimensions of thinking strategies were measured by Swarup-Mehta Diagnostic Test of Learning Disability (2008). Findings of present research revealed that experimental group has revealed remarkable changes in their cognitive and thinking abilities after the getting three-month Remedial teaching. Remedial teachings substantially enhance higher levels of retention in the immediate and delayed recall of language vocabulary and concepts in comparison with general teaching methods.

**Keywords:** *Thinking strategy, Cognitive functioning, Remedial Teaching*

A learning disability is a neurological disorder. In simple terms, a learning disability results from a difference in the way a person's brain is "wired." Children with learning disabilities are as keen as or quicker witted than their companions. However, they may experience issues perusing, composing, spelling, and thinking, reviewing and additionally sorting out information if left to make sense of things by them or if taught in conventional ways. Memory has a key effect on eventual vocabulary and grammar achievement. There are two types of fundamental memory: short-term memory and long-term memory. Short term memory keeps the information which is being processed (a new word which is encountered for the first time). It is fast but it can hold information for a very short time due to its small storage capacity. Long-term memory, on the other hand, has an unlimited storage capacity but is relatively slow. The aim of vocabulary learning and teaching is to transfer the lexical information from the short term memory to the long term memory (Schmitt, 2000). Accordingly, the general picture of the mental lexicon is one

<sup>1</sup> Special Educator, Vallabh Vidyanagar, Anand, Gujarat, India

<sup>2</sup> Department of Psychology, J. N. Vyas University, Jodhpur, Raj., India

\*Responding Author

## Effectiveness of Remedial Teaching on Thinking Strategies of Slow Learners

in which there a variety of links between words, some strong, some weak. The main way, to transfer the vocabulary items from short-term to long-term memory and create a strong connection there is by finding some elements in the mental lexicon to attach the new lexical item to (Schmitt, 2000).

Remedial education is education which is designed to bring students who are lagging behind up to the level of achievement realized by their peers. Remedial Teaching means that help is offered to students who need pedagogical or didactic assistance. These are often children who function at a lower than average level because of a certain learning- or behavioral problem/disorder. However, remedial teaching can also be offered to pupils who accomplish at a higher than average level, they also can do with the extra attention and care.

There are a unit variety of reasons why a student would possibly would like remedial education. Some students attend schools of poor quality and do not receive adequate grounding in mathematics and language to organize them for school or life. Other students might have transferred in and out faculties' of colleges or missed school plenty, making gaps in their education that contribute to the lack of information in core subjects. Students can also have learning disorders and other problems that have impaired their ability to find out. In remedial education, people are usually given assessments to determine their level of competency. Based on test results, the pupils are placed in classes which are most likely to provide benefits. Classes are often little, with a spotlight on high teacher-student interaction, and that they will occur at the hours of darkness or throughout the day to accommodate various needs. Within the course of the category, the teacher can bring students up to hurry in order that they need skills comparable to those of their peers.

Silva and Capellini (2010) showed that the Phonological and Reading Remediation Program was effective. The use of the Program improved perception, production and manipulation of sounds and syllables, interfering directly on the reading skills and comprehension of students with learning disabilities.

Selvarajan and Vasanthagumar (2012) identified the low achievers as one of its issues and wants to test the effectiveness of remedial teaching in its context. This study was designed to identify the reasons for low achievement and the effectiveness of the remedial teaching program. The findings show that the socio economic condition of the family and physical and psycho social status of the student cause low achievement. The implemented remedial program proved to be effective by recovering ninety four percentage of students in Tamil language and ninety three percentage of students in Mathematics.

## Effectiveness of Remedial Teaching on Thinking Strategies of Slow Learners

### ***Statement of problem:***

The present investigation attempts to “*Effectiveness of Remedial Teaching on the Thinking Strategies of Slow Learners*”

### ***Objectives:***

1. To examine and evaluate the effectiveness of Remedial Teaching on thinking patterns of slow learners.
2. To examine and evaluate Remedial Teaching for slow learners.
3. Make recommendations for the focus and development of future research in this area.

### ***Conceptual Clarifications:***

**Slow learners:** A “slow learner” is not a diagnostic category, it is a term people use to describe a student who has the ability to learn necessary academic skills, but at rate and depth below average same age peers.

**Thinking Strategies:** Thinking styles of children at earlier level towards, cognitive processing viz. Memory, Concept development, Reasoning and Problem-Solving skills.

**Remedial Teaching:** education is also known as developmental education, basic skills education, compensatory education, preparatory education, and academic upgrading. It is signed to assist students in order to achieve expected competencies in core academic skills such as literacy and numeracy.

### ***Hypothesis:***

1. Remedial teaching will help to improve the thinking strategies of Slow Learners.
2. There will be no significant difference between mean scores of pre & post sessions of the control group on the Thinking Strategies of Slow Learners.

## **METHODOLOGY**

### ***Research Design:***

Present research is a Quasi-experimental design in which pre and post design were used, further divided into experimental and control group purposively. In the experimental group abilities of slow learners were assessed regarding thinking patterns prior to application of Remedial Teaching. The same abilities of these pupils were measured after the application of Remedial Teaching, whereas in the control group the same abilities of the pupils were measured without initiation of Remedial Teaching. The difference between these two sessions revealed the effect of Remedial Teaching. This is a field experimental study; the slow learners are tested in general as well as inclusive schools. In this investigation, the independent variable is the application of Remedial Teaching methods. Dependent variables are the thinking patterns of slow learners. The design is as follows:-

## Effectiveness of Remedial Teaching on Thinking Strategies of Slow Learners

### *Experimental Group*

BEFORE	Exposure of Remedial Teaching	AFTER
Ability regarding thinking patterns	Duration – 3 months	Ability regarding thinking patterns

### *Control group*

BEFORE	Application of Regular Teaching Methods	AFTER
Ability regarding thinking patterns	Duration – 3 months	Ability regarding thinking patterns

### *Sample:*

For the present research work investigators have selected Sample of 22 children with the help of purposive sampling technique who are diagnosed as slow learners. The total sample was divided into experimental (12) and control group (10) purposively. The samples were selected from different institutes and NGOs Gujarat state. These children were diagnosed on the following basis.

- Screening
- Parental interview
- Teachers interview

No child is going to be chosen if he/she has any other associative disorder. Details of sample

Experimental Group	Control Group	Total
12	10	22

### *Tool:*

*Thinking Strategy* – is measured by Swarup-Mehta Test of Thinking Strategies (2011). The detail of sub-tests are as follows –

1. Memory:
2. Concept Development:
3. Reasoning:
4. Problem Solving:

### *Procedure:*

The study took place over a period of three months. The investigator had worked with thirty students (age group 9 to 12 years) who were placed into two groups. The first group was an experimental group in which a meeting with the teachers occurred before intervention days to review the training procedure. During the meeting suggestions regarding the procedures were incorporated. The three teachers were provided a formal training of two week about remedial teaching. The instructional material and work sheets were developed by the investigators according to their regular classroom curriculum with the help of their teachers. Before giving

## Effectiveness of Remedial Teaching on Thinking Strategies of Slow Learners

intervention to both the groups, entry level assessment was carried out to evaluate their thinking pattern. Two hour remedial teaching was given to the students per day by the trained teachers. During the intervention period, follow-up process was also done by the investigators regarding proper procedure of intervention in the experimental group.

In the second group, which was the control group, intervention of remedial teaching was not produced. Regular classroom teaching methods were used for instructions. The curriculum content was same as the experimental group. After the completion of the three-month intervention period, participants in both the control as well as the experimental group were administered assessment through the tools used for the pre-assessment process.

### Scoring:

In the present study, scoring of the obtained data was done with help of respective manuals available for the test. The data have been arranged in the respective tables according to the statistical test applied.

### Statistical Analysis:

In the present study to find out the significant mean difference between Pre and post assessment of slow learners. Mean, SD and Paired sample 't' tests were also calculated.

## RESULTS & DISCUSSION

*Table:- 1 Showing Mean, SD & 't' values between pre-test and post-test scores of the Experimental group for various areas of Thinking Strategy.*

Areas	Groups	Mean	N	SD	"t"	Significance level
Memory	Pre-test	13.0000	12	3.13340	3.91	P<.01
	Post-test	17.7500	12	4.18058		
Development	Pre-test	10.5000	12	3.06001	3.28	P<.01
	Post-test	16.5833	12	6.65321		
Reasoning	Pre-test	12.9167	12	3.11764	4.47	P<.01
	Post-test	21.0833	12	6.66686		
Problem Solving	Pre-test	17.0833	12	3.08835	3.61	P<.01
	Post-test	23.8333	12	6.07279		

It is evident from table 1.1 that scores of both the session i.e. pre and post test have a significant difference on thinking strategy area Memory. Calculated 't' value is to be found significant ('t'=3.91,  $p<.01$ ). The mean score of pre-test and post-test are 13.00 (SD=3.13) and 17.75 (SD=4.18) respectively. On the basis of a significant mean difference, it can be said that Remedial Teaching has a significant impact on the enhancement of memory of slow learners. It means children with slow learning become more capable of encoding and decoding process after the application of Remedial instructions. They used to integrate the newly acquired information

## Effectiveness of Remedial Teaching on Thinking Strategies of Slow Learners

into earlier existing information through associations, rehearsals, coding and chunking because researchers have shown that slow learner pupils have a problem with regard to information gathering, processing and organizing.

It may be inferred from Table 1.2 that significant difference is to be found between pre and post test scores of slow learners on concept development in the experimental group. The mean score of pretest and post test are 10.50 (SD=3.06) and 16.58 (SD=6.65) respectively. 't' ratio is reported significant ('t'= 3.28,  $p < .01$ ). On the basis of this significant difference conclusively one can say that remedial instructions play a significant role in concept development of slow learners. It confirms the strengths and weakness of abstractions, categorization and generalization. These process, through distinct from each other call for their integration, when a concept is to be attained, the performance of children can reveal whether the child is under generalized or over generalized.

An analysis of table 1.3 highlights that the two sessions are under studies i.e. scores of pre and post test sessions differ significantly on reasoning. 't' value and mean scores for thinking strategy area reasoning in which mean difference is to be found significant ('t'=4.47,  $p < .01$ ). Slow learners have scored higher (M=21.08, SD=6.66) in post-test than pre-test (M=12.91, SD=3.11). On the basis of a significant mean difference, it may be said that Remedial teaching methods are an effective strategy for increasing student comprehension and reasoning skills. Thinking patterns of pupils have deductive or inductive logics and restructure content or acquire desirable perception and cognitions. They search out relevant information, see it in relation to early acquired information, thereby returning to some conclusions, make predictions or solve a problem.

When 't' test was applied to check the impact of remedial teaching on problem-solving skills of slow learners, mean score of pre-test and post-test are differed significantly with each other on thinking strategy area problem solving. The calculated paired sample 't' value is significant ('t'=3.61,  $p < .01$ ). The mean value obtained in pre-test and post test for problem solving are M=17.08 (SD=3.08) and M= 23.83 (SD=6.07) respectively. It can be concluded that remedial teaching has greater potential in the development of problem-solving skills of slow learners. They have more skills of overcoming difficulties that appear to interfere with the attainment of the goal. They recognize their ideas or restructure their experiences in order to overcome obstacles and attain goals.

## Effectiveness of Remedial Teaching on Thinking Strategies of Slow Learners

**Table:- 2 Showing Mean, SD & 't' values between pre-test and post-test scores of Control group for various areas of Thinking Strategy.**

Areas	Groups	Mean	N	SD	"t"	Significance level
<b>Memory</b>	Pre-test	12.91	10	3.97	1.12	NS
	Post-test	13.62	10	3.27		
<b>Concept Development</b>	Pre-test	10.53	10	3.55	1.75	NS
	Post-test	11.94	10	3.01		
<b>Reasoning</b>	Pre-test	13.41	10	3.27	1.51	NS
	Post-test	14.12	10	2.68		
<b>Problem Solving</b>	Pre-test	16.52	10	4.28	0.94	NS
	Post-test	17.65	10	3.16		

The findings can very well be analyzed from Table 2.1 to 2.4 that insignificant mean differences are to be reported in control group for thinking strategy dimensions like memory, concept development, reasoning and problem solving of slow learners. For the thinking strategy area memory mean scores of pretest and posttests are  $M=12.91$  ( $SD=3.97$ ) and  $M=13.62$  ( $SD=3.27$ ) respectively. 't' value is also to be found insignificant. ( $t=1.12, p>.05$ ). By the same point of view table also indicate that mean value obtained by control group on thinking strategy area concept development in pre and post tests are  $M=10.53$  ( $SD=3.55$ ) and  $M=11.94$  ( $SD=3.01$ ). The difference between both the mean scores is to be found insignificant ( $t=1.75, p>.05$ ). Similarly, in both pre and post sessions, control group have obtained a mean score for thinking strategy area reasoning are  $M=13.41$  ( $SD=3.27$ ) and  $M=14.12$  ( $SD=2.68$ ) respectively. Insignificant ('t') value is obtained ( $t=1.51, p>.05$ )

As again mean score of pre and post test for control group on thinking strategy area problem solving are  $M=16.52$  ( $SD=4.28$ ) and  $M=17.65$  ( $SD=3.16$ ) respectively. On the basis of above insignificant Mean differences, one can say that regular classroom teaching instructions are less effective in comparison of remedial teaching. Thus, both the hypotheses are maintained.

### **CONCLUSION**

The study indicated that how the students of experimental group had significant improvement in the test scores as evaluated by their post-test evaluation. These twenty-two students had been selected because of their inactive and poor academic skills when it came to their facts about concept development, reasoning, and problem-solving skill. Characteristics of slow learners such as integration of newly acquired information into the earlier existing information through association, encoding and decoding process of information, rehearsal, coding and chunking, generalization abilities, abilities of diagnose the problem, development of inductive and deductive logical thinking, making predications to solve problems, process of overcoming

## Effectiveness of Remedial Teaching on Thinking Strategies of Slow Learners

difficulties, instant respond in typical situations and seeking freedom from tension created by obstructions in a way of want-satisfaction are found less in those slow learners who are getting normal teaching instructions in comparison to the children who are getting remedial teaching. Remedial teaching can help struggling learners shore up their fundamental skills. This extra support can help them catch up to their peers. And sometimes, it eliminates the need for referral to special education.

### RECOMMENDATIONS

The study further recommended organizing seminars and workshops to create awareness in general public, parents, teachers and students regarding usefulness of remedial teaching methods. It was also recommended that there was a great requirement of researches to be carried out in field of learning disability.

### *Acknowledgments*

The author appreciates all those who participated in the study and helped to facilitate the research process.

### *Conflict of Interests*

The author declared no conflict of interests.

### REFERENCES

- Aitchison, J. (2002). *Words in the Mind: An Introduction to the Mental Lexicon* (3rd Ed.). Blackwell Publishers: Great Britain.
- Pressley, M., & Schneider, W. (1997). *Memory development between two and twenty*. Mahwah, NJ.: Lawrence Erlbaum Associates.
- Schmitt, N. (2000). *Vocabulary in Language Teaching*. Cambridge: Cambridge University Press.
- Selvarajan, P. and Vasanthagumar, T (2012) *The Impact of Remedial Teaching on Improving the Competencies of Low Achievers*, *International Journal of Social Science & Interdisciplinary Research* Vol.1 Issue 9, ISSN 2277 3630
- Silva, C. D., Capellini, S. A. (2010) *Efficacy of the reading and phonological remediation program in learning disabilities*, *Pro Fono*. 2010 Apr-Jun;22(2):131-9.
- Swarup, S., and Mehta, D.H.(2011). *Manual of Diagnostic Test of Learning Disability*. Published by Prasad Psycho Corporation, New Delhi.
- Yates, F. A. (1972). *The art of memory*. Chicago: The University of Chicago Press.