



EFFECTIVENESS OF CERTAIN INSTRUCTIONAL STRATEGIES TO OVERCOME LEARNING DISABILITIES IN MATHEMATICS AT PRIMARY LEVEL

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ABSTRACT :

The objective of the present study was to find out the effectiveness of certain instructional strategies to overcome learning disability in Mathematics at primary level. This study employs quantitative pre-experimental method with one group pre-test post-test design. A sample of 15 V standard students was chosen through purposive sampling in Karaikudi, Sivagangai District. The data analysis shows that using instructional strategies improves student learning outcomes. This study suggests that using instructional strategies is highly effective in improving student learning outcomes in dyscalculia students.

KEYWORDS : Learning Disability, Mathematics, Instructional Strategies.

INTRODUCTION

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 smart as their peers. However, they may have difficulty reading, writing, spelling, reasoning, recalling and/or organizing information if left to figure things out by themselves or if taught in conventional ways. A learning disability can't be relieved or fixed; it is a lifelong issue. With the right support and intervention, be that as it may, children with learning disabilities can prevail in school and go on to successful, often distinguished careers later in life. Parents can assist children with learning disabilities make such success by encouraging their strengths, knowing their weakness, understanding the educational system, working with professionals and learning about strategies for dealing with specific difficulties.

NEED AND SIGNIFICANCE OF THE STUDY

At present, most specialists believe that learning difficulties are caused primarily by educational rather than medical factors and the treatment should have an educational focus. Many psychologist and educators are of the opinion that it is important to assess children in the early years. It is for the reason at the time development disorders of different types and degrees are first suspected and can be recognized. Since the preschool years represent the critical period. During which reasonable prevention and intervention efforts are most effective, professionals and families must respond to the needs of pre scholars whose development is characterized by certain obvious deviations. In a country like India the awareness to learning disabilities is very meager and at a negligible rate. And the majority of parents being poor do not think of deficits of their children in the pre school age. Hence identification is possible only in the early school hood days it carries initiated by the school circles by enlightened the parents to learning disabilities. However identification of learning disabilities at a possible early age



is a necessary urge to overcome the difficulties of learning difficulty children at future date. Even though identification looks down upon the economic condition for the well being of children the future citizens, is a must for any country.

OBJECTIVE OF THE STUDY

- To find out the effectiveness of certain instructional strategies to overcome learning disabilities in mathematics at primary level.

METHOD & SAMPLE

The investigator employed experimental design, single group pre-test, post-test treatment design. The sample comprised 15 students of V standard through purposive sample, to find out the effectiveness of instructional strategies to overcome learning disabilities in mathematics at primary level at Karaikudi.

TOOL

- Child Assessment Test developed by Sarva Siksha Agyan, Govt. of India.
- Achievement Test pre-test and post-test constructed by the investigator.
- Intelligence Test.
- Instructional Strategies developed by the investigator.

INSTRUCTIONAL STRATEGIES

The following instructional strategies had been administered by the investigator.

1. **Visual Imaginaries Strategies:** It stands for mathematical concept to be visualized through the smart class room by audio video effect among the secondary level students by the help of the investigator.
2. **Visual Animation Oriented Strategies:** It stands for visual animated concept which representing mathematical concept through smart class pictorial manner among the secondary level student by the help of the investigator.

ANALYSIS OF DATA

Table 1: Pre Test and Post Test Mean Scores of the Effectiveness of Certain Instructional Strategies to Over Come Dyscalculic Students at Primary Level

Test	N	Mean	SD	t-value	Result
Pre-Test	15	12.93	2.631	16.98	Significant
Post-Test	15	35.13	4.324		

Table-1 shows that the scores of the pre-test and post-test of dyscalculia students. It is inferred that the post-test mean score (35.13) is greater than the pre-test mean score (12.93). There is significant difference between the mean scores of pre-test and post-test. This proves that the developed Instructional Strategies has a positive impact on dyscalculic students.

Table 2: Gender wise Comparison of the Post Test Mean Scores of the Effectiveness of the Developed Instructional Strategies for Dyscalculic Students at Primary Level

Gender	N	Mean	SD	t-value	Result
Boys	7	35.29	3.592	0.126	Not Significant
Girls	8	35.00	5.127		

Table-2 depicts that there is no significant difference between the performances of the experimental group in the post-test with respect to gender.

Table 3: Location Wise Comparison of the Post Test Mean Scores of the Effectiveness of the Instructional Based Strategies for Dyscalculic Students at Primary Level

Location	N	Mean	SD	t-value	Result
Rural	8	34.38	3.926	0.702	Not Significant
Urban	7	36.00	4.899		

Table-3 reveals that there is no significant difference between rural and urban students in their performance through instructional strategies with regard to their post-test.

Table 4: Medium of Instruction Wise Comparison of the Post Test Mean Scores of the Effectiveness of the Instructional Strategies for Dyscalculic Student at Primary Level

Medium of Instruction	N	Mean	SD	t-value	Result
Tamil	7	35.00	4.781	0.124	Significant
English	8	35.29	4.112		

Table-4 shows that there is significant difference between Tamil and English medium students in their performance through need based strategies with regard to their post-test.

CONCLUSION

The present study found that intervention strategies enhanced positive effect on dyscalculia students. This result is conformed to Carluccio (2005), Shih (2006) and Scheurman (2006), Jeya and Geetha (2004), Kaufmann, Handl & Thony (2003) who revealed that by using various intervention strategies, both instructor-oriented and technology oriented learning disability students.

RECOMMENDATIONS

The investigator found that there were some difficulties in giving intervention to the dyscalculic children. Therefore some recommendation which were very essential to be implemented. There should be awareness programme of this type of difficulty as dyscalculia to both teachers and parents. There should be provision of infrastructure regarding this type of difficulty in all educational institutions. There should be moral and physical support to the children who were afflicted with this difficulty

REFERENCES

1. Baran, G., Erdogan, S., & Cakmak, A. (2011). A study on the relationship between six-year-old children's creativity and mathematical ability. *International Education Studies*, 4(1), 105-111.
2. Carluccio, Diane. (2005). The use of the graphing calculator to support the learning of the function concept by students with learning disabilities in a mathematics classroom. Montclair State University (0759).
3. Evans, B .E. (2003). Success in university related mathematics courses - an investigation of students with learning disabilities. *Dissertation Abstracts International*, 64(2), 434-A.
4. Geary, D. C. (2004). Mathematics and learning disabilities. *Journal of Learning Disabilities*, 37(1), 4-15.
5. Manju, P. (2003). Learning disabilities in primary school children. New Delhi: Anmol Publication.