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## RESEARCH ARTICLE

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### Effectiveness of Multisensory Strategies to Overcome Learning Disabilities in English at Secondary Level

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#### Abstract

Education is the ability to meet life's situations

Dr. John G. Hibben

As quoted by Nelson Mandela, Education is the most powerful weapon which you can use to change the world. As an educationist the investigator's present research aimed to find out the effect of teaching the children especially with dyslexia treating with a criteria of Multi Sensory Strategy which improves the level of listening with more interest and answering the academic assessment more accurately without error. Multi sensory Strategy can be used in regular classroom. This method can provide children to be free to learn without anxiety and move more enthusiastically with their peer group. The objective of the present study was to find out the effectiveness of Multi sensory strategies to overcome learning disability in mathematics at primary level. This study employs quantitative experimental method with single group pre test, post test design. A sample of 30, Ninth standard students were chosen through purposive sampling in Devakottai, Sivagangai District. This data analysis shows that using Multi sensory strategies improves students learning outcomes. This study suggest that using Multi sensory strategies is highly effective in improving learning outcomes in dyslexic students.

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## Introduction

In a country like India, with a population over a billion, problems like poverty, illiteracy and unemployment are very common. As we look around, we see that none of the individual is same. Individuals of the same age may differ from each other in many ways, it may be physically, socially, economically and intellectually. Each person has individual set of characteristics, abilities and challenges which determines the way he travels the way of his life with the rate of progress. Plato once stated that no individual are born exactly alike each differ from the other in natural endowments, one being suited for one occupation and the other for another. The survey by National Sample Survey Organization (NSSO) 1981 revealed that fifty-nine million children suffer from disabilities within the age group of five-fourteen years. The reauthorized individual with Disabilities Act 2004 was signed in law by President George W. Bush on December 3,2004. Approximately 6.8 million children and youth with disabilities are served by IDEA, the nation's special education law. IDEA lists out 13 different disable Categories under which three through twenty-one years old who are eligible for services. While individual with physically handicapped or partially hearing gains sympathetic attention, but there is a small group of disabilities often found among school-age children, who are improperly referred as slow learners, mentally retarded and even sometimes as demos, thickens or worse. Teachers are frustrated by the lack of progress in this group despite of giving frequent attention.

Dyslexia is a language-based learning disability. Dyslexia refers to a cluster of symptoms, which result in people having difficulties with specific language skills, particularly reading. Students with Dyslexia usually experience difficulties with other language skills, such as spelling, writing and pronouncing words. Dyslexia affects individuals throughout their lives; however, its impact can change at different stages in a person's life. It is referred to as a learning disability because Dyslexia can make it very difficult for a student to succeed academically in the typical instructional environment, and in its more severe forms, will qualify a student for special education, special accommodations, and/ or extra support services.

## Need and Significance of the study

The frequency of dyslexia is not that low that it will be illogical to sideline it from the mainstream pedagogic designs. In their sample of over 5000 British children between the ages of 9 and 11, Yule, Rutter, Berger and Thompson (1974), found that three to six percent could be classified as dyslexic. Lovell, Shapton & Warren (1964) have observed that boys more frequently have reading problems than girls do. Joseph, Choudhary, Jain, Chahar and Singhal (2012) reported that prevalence of learning disability is 10.25% in Class III to V at Bikaner City, India. Mogasale, V.V., Patil, V.D., Patil, N.M. and Mogasale, V. (2012) reported that prevalence of specific learning disabilities was 15.17% among school children aged 8-11 years in Belgaum, Karnataka. The present study is an attempt to identify the level

of dyslexic students at secondary level and to develop certain strategies to overcome dyslexic students at secondary level.

Many psychologist and educators are 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. In a country like India the awareness to learning disabilities is very meager and at a negligible rate However identification of learning disabilities at a possibilities 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 must for any country

### **Objectives of the study**

- To identify the level of Learning Disabilities in English at Secondary level
- To treat with the Multi Sensory Strategy for children with Learning Disabilities
- To find out the effectiveness of developed Multi Sensory Strategy to overcome Learning Disabilities in English at Secondary level
- To find out the significant difference between pre & post test of the experimental group with Learning Disabilities in English at Secondary level
- To find out the significant difference in the mean achievement scores of pre test and post test for the experimental group with respect to Gender.

### **Research Method**

In the present study Experimental method with a single group design was adopted

### **Sample and Sampling Techniques**

In this study purposive sampling techniques were used in higher secondary schools in and around Devakottai were chosen by the investigator for Student with Learning Disabilities in English at Secondary level.

### **Research Tool**

1. Achievement test (Pretest, Post test)
2. Multi Sensory Strategy

Multi sensory Strategy is one of the strategies using senses. This Multi sensory Strategy refers to teaching using 5 senses that combines cognitive instruction incorporates some combination of Sight, Hearing, Smell, Tactile and Taste. The programme focused on acquisition of prerequisite skills, reading comprehensions, vocabulary, and grammar.

The lessons developed based on Multi sensory Strategy have the following main features.

1. Multi sensory Strategy was adopted to teach Children with Learning Disability. In this approach children learn through - Visual, Auditory, Kinesthetic and Tactile modalities simultaneously.
2. Each unit has a general objective and each lesson has a specific objective.
3. Activities in the lessons were arranged in a sequential order from simple to complex. Only after achieving the objective of the previous lesson, students would learn the next lesson.
4. Lessons were prepared requiring 60 minutes to cover a single concept.
5. The concept taught in the previous class was reviewed before going to the new lesson.

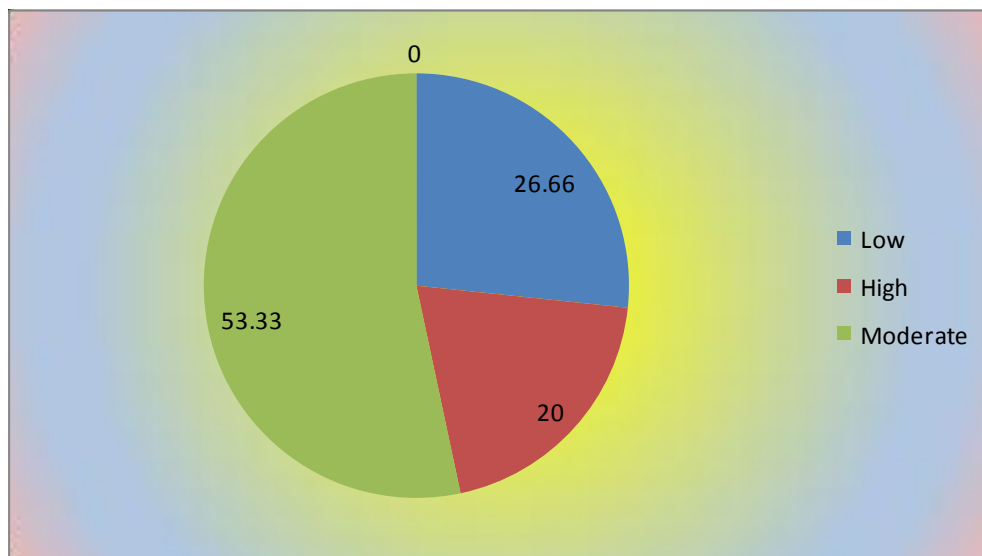
## DATA ANALYSIS

**Hypothesis 1** The level of learning disabilities in English at the Secondary level students is moderate.

**Table 1: The level of learning disabilities in English at the Secondary level**

| Level of LD | Low      | High     | Moderate |
|-------------|----------|----------|----------|
| Overall     | 4(26.66) | 3(20.00) | 8(53.33) |

It is inferred that the table shows that the identifying the level of learning disabilities in English at secondary level student is 53.33 % moderate, 26.66% low and 20.00% high.



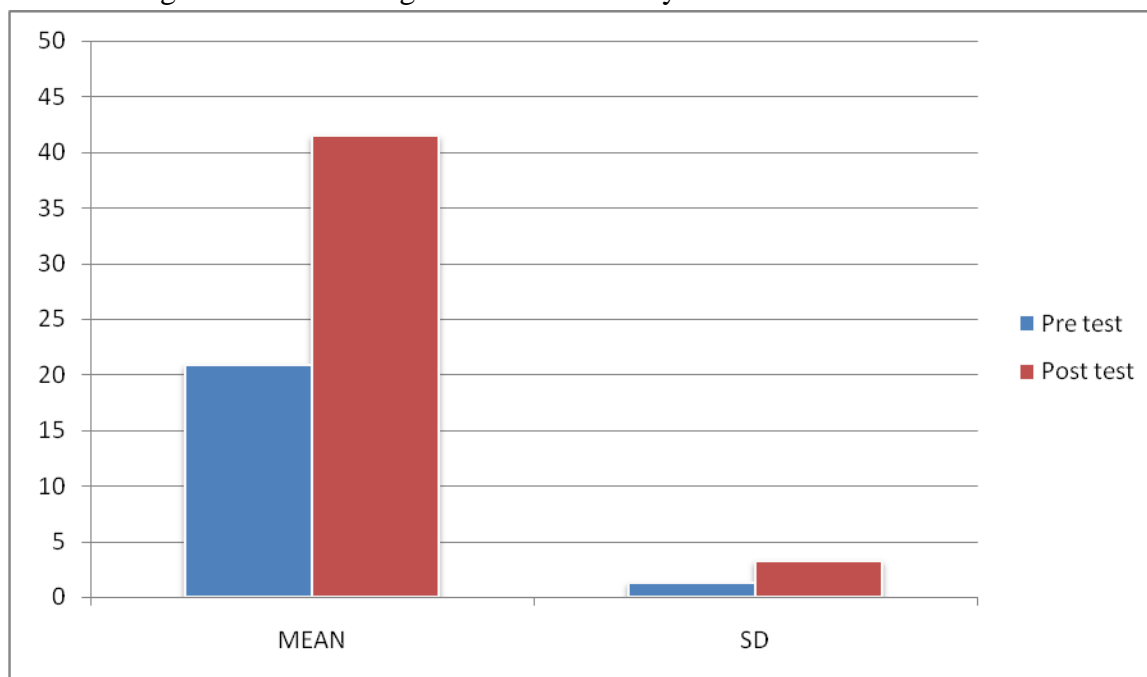
**Hypothesis 2** There is no significant difference between the Pre and Post test of experimental group of students with learning disabilities in English at secondary level.

**Table 2 Mean SD and ‘t’ test of an experimental group of student with disabilities in English at Secondary level**

| Experimental group | N  | Mean  | SD   | t-test | Level of Significance |
|--------------------|----|-------|------|--------|-----------------------|
| Pre test           | 15 | 20.93 | 1.28 | 23.78  | S                     |
| Post test          | 15 | 41.53 | 3.25 |        |                       |

Significant at 0.01 level

The above table shows that the mean score of post-test of the experimental group is 41.53 is higher than the pre-test means score (20.93) of the experimental group. The calculated ‘t’ value 23.78 is greater than the table value. Hence the hypothesis is rejected. It is concluded that there exists a significant difference between the pre and post-test of an experimental group of students with learning disabilities in English at the secondary level.



**Hypothesis 3** There is no significant difference between the Pre and Post test of experimental group of students with learning disabilities in English at secondary level with respect to Gender.

**Table -3 Mean SD and 't' test of an experimental group of student with disabilities in English at Secondary level with respect to the Gender**

| Group | N | Mean   | SD    | t - value | Significance    |
|-------|---|--------|-------|-----------|-----------------|
| Boys  | 7 | -35.29 | 3.592 | 0.126     | Not Significant |
| Girls | 8 | -35.00 | 5.127 |           |                 |

Significant at 0.01 level.

It is very clear from the table 3 shows that there is no significant difference between the performances of the experimental group in the post test with respect to the Gender.

### Findings of the study

1. The level of Learning disabilities in English at secondary level students is 53.33% moderate, 26.66% low and 20.00% high
2. The mean score of post test of Experimental group is 41.53 is greater than the pre test mean score 20.93 of Experimental group. The calculated t-value 23.78 is greater than the table value. Hence it concluded that there exists the significant difference between the pre and post test of Experimental group of disabilities in English at Secondary level
3. The performance of boys and girls in post test are found to be same.

### Recommendations of the study

- It is recommended that the teacher must encourage their dyslexic children to read and learn their English lessons using the Multi Sensory Strategy.
- It is recommended that the dyslexic children should learn English through some find of multisensory method to achieve more.
- It is recommended that students with dyslexia should be got encouraged themselves with their peer groups to learn mathematics through the developed strategies.
- It is recommended that children with learning disabilities should be assisted by the teachers and parents to spend more time with peer groups using Multi Sensory Strategy.

## Conclusion

The students with Dyslexia are very interest in learning with immense pleasure in doing activities when Multi Sensory Strategy is experimented by the investigator. It is also added these sensory strategies are very useful in teaching (English) language concepts namely Reading, Writing, Speaking and Listening and Prose, Poem.. This Multi Sensory strategy helps children with Dyslexia to minimize the frequent errors in reading English and achieve more in assessments. This study concluded that the effect of treating the dyslexic children through new Multi Sensory teaching approach to overcome the disability in English at Secondary level. The present study recommends the importance of learning English for Dyslexic children through certain strategies to overcome the learning disability. Hence English teachers, Heads of the institutions and the educationist and educational departments should take steps to improve the treatment of different types of instructional approaches in the classroom teaching.

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