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1.1 Background of the Study

Education is the basic need of every individual. One can achieve maturity or growth in every aspect of life – social, economical, intellectual, physical, and mental through education. Development of a nation can occur only through its educated citizens. Every country strives hard to make all its citizens, educated. In India, Universalisation of Elementary Education (1950) was set up with an aim of educating all its citizens. During the past 60 years, we have achieved a tremendous growth in this field. Does this education reach all kinds of citizens- both abled and disabled with the same sort of empowerment? It is indeed a debatable issue. When some argue that everyone is provided with an education to make them stand on their feet i.e., to earn a living, others complain that some categories like people with disabilities are ignored. ‘Education for all’ still remains a distant dream and for learning disabled, it is even more remote.

In a country like India, with a population of over a billion, problems like poverty, illiteracy and unemployment are very common. With such a huge population and with so much poverty, it is difficult to educate a normal child, and therefore, training special children is difficult beyond imagination. There are many children who behave normally but are not academically good as their peers. They suffer from a lesser-known condition called Learning
Disability (LD) which refers to a group of disorders in listening, speaking, reading, writing, and arithmetic. Such children are subjected to constant acts of public humiliation. The hard fact is that LD is real and a stumbling block for a nation’s development process. The question is why and how does it affect development? In spite of normal intelligence, a citizen with LD could not contribute much to the development of the society. The person can be of average or above-average intelligence, without any sensory impairment like blindness or hearing impairment, and yet struggle to keep up with pupils of the same age in learning and regular functioning.

The important aspect which goes unnoticed is that these people indeed have a normal intelligence. That means they can be a part of a nation’s development. The most important factor hindering their growth is their low achievement in academics which in turn results in lack of self confidence. Most people who had overcome it could reach maximum potential in their life. Albert Einstein, Thomas Edison, Tom Cruise, Walt Disney, George Washington, Winston Churchill are few to name. From the biographies of these eminent persons, it is evident that if assisted properly and scientifically, the people with Learning Disability can achieve maximum in their life by becoming independent and successful. This assistance should be provided from the young age itself, i.e., from home and school. Teachers and parents are the most suitable persons to help these children at this stage. When a learning disabled child attains achievement in academics, it will in turn boost
up his/her self confidence and self esteem, thereby to attain personal development and contribute to national development.

1.1.1 Learning Disability

The spread of awareness on issues like Learning Disability in India is still in its infancy. There is a lot of inadequacy in rehabilitation services and special education programmes. Even if there are facilities, lack of awareness prevents them from being utilized. A better awareness of learning disorders and of culturally acceptable means to treat the affected children could greatly decrease the burden of affected children, their families and the society as a whole.

Movies like Taare Zameen Par have enlightened people on the subject of Learning Disability. The movie tells the story of an eight year old, Ishaan Awasthi, who suffers greatly until his teacher identifies him as a dyslexic. This movie was both, commercially and critically acclaimed, and it made parents and teachers aware of the reason some children cannot perform up to the mark. Despite this growing interest, India still does not have a clear idea about the incidence and prevalence of LD. At least 10% of children in the country have Learning Disability; say experts at Learn 2012, an international conference on inclusive education and vocational options (The Times of India, Jan 27, 2012). Unfortunately, most schools fail to lend a sympathetic ear to the problems of children with Learning Disability. As a result, these children are branded as failures. Acceptance and support from family, friends,
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teachers and others along with proper diagnosis, early detection, appropriate education, and hard work can help a learning disabled lead a successful and productive life.

Our country is a huge well of talents; all we need to do is to recognize and support them. The higher the awareness among health-care professionals and school authorities, the earlier will be the identification of the affected children. We never know, when a learning disabled can add a feather to our country’s cap if backed up with proper support and care.

According to World Report on Disability 2011, the inclusion of children and adults with disabilities in education is important for four main reasons.

- Education contributes to human capital formation and is thus a key determinant of personal well-being and welfare.

- Excluding children with disabilities from educational and employment opportunities has high social and economic costs. For example, adults with disabilities tend to be poorer than those without disabilities, but education weakens this association.

- Countries cannot achieve Education for All or the Millennium Development Goal of universal completion of primary education without ensuring access to education for children with disabilities.
• Countries that are signatories to the CRPD (Convention on the Rights of Persons with Disabilities, United Nations) cannot fulfill their responsibilities under Article 24 (right of persons with disabilities to education).

(World Health Organization, 2012)

Learning Disability is a disorder that affects people’s ability to either interpret what they see and hear or to link information from different parts of the brain. These limitations can show up in many ways- as specific difficulties with spoken and written language, coordination, self control or attention. Such difficulties extend to school work and can impede learning to read or write, or to do arithmetic calculations.

In almost every case, the exact cause of a child’s Learning Disability is unknown. In most cases the cause remains a mystery. A wide variety of causes have been proposed. However, there are mainly three general categories into which causal factors of Learning Disability fall. They are

1. Genetic factor: Learning problems and hyperactivity, which are most common characteristics of Learning Disability, run within families. Children with Truner’s syndrome (where the individual has inherited one X chromosome and no other sex determining chromosome) and Klinefetter’s syndrome (where the individual has one more X chromosome) have a higher incidence of Learning Disability.
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2. Organic factor: Learning Disability arises due to minimal brain dysfunction. It may occur due to cerebral hemorrhage, cerebral disease due to high fever, head injury, premature birth, anoxia, and genetic neurochemical dysfunction. Others are drugs, X-rays, excessive amount of vitamins, fever, German measles, difficult labor etc. (Baral, 2005).

3. Environmental factor: Exposure to environmental toxics may cause Learning Disability. For example, heavy metals like lead (which can be found in some old homes in the form of lead paint or lead water pipes) is sometimes thought to contribute to Learning Disability. Poor nutrition early in life also may lead to Learning Disability later in life (Mathew, 2013).

In most ways, children with Learning Disability are no different from children without these difficulties. At school, they eat together and share sports, games and after-school activities. The effect of Learning Disability can ripple outward from the disabled child to family, friends, and peers at school. Children with Learning Disability often absorb what others thoughtlessly say about them. They may define themselves in the light of their disabilities, as ‘behind’, ‘slow’, or ‘different’. Sometimes they do not know how they are different, but know how awful they feel. Their tension and shame can lead them to act in various ways- from withdrawal to belligerence or may stop trying to learn and achieve and eventually drop out of school.

The first step in solving any problem is realizing that there is one. Parents are usually the first to notice obvious delays in their child from
reaching early milestones. The pediatrician may observe more subtle signs of minor neurological damage, such as a lack of coordination. But the classroom teacher, in fact, may be the first to notice the child’s persistent difficulties in reading, writing or arithmetic. Although diagnosis is important, even more important is getting help.

Even though Learning Disability doesn’t disappear, given the right type of educational experiences, it could be minimized to a great extent. The brain’s ability to learn new skills is probably the greatest in young children.

1.1.2 Strategies to Overcome Learning Disability

It is not necessarily the smartest students who get the highest marks; it is the students who know how to study. The most intellectually able students may be among the lowest-performing students in the class. Too often, these are students struggling with unrecognised and untreated learning difficulties/disabilities. The Learning Disability affects performance in every area of the curriculum, especially for students who have not undergone effective training in learning strategies and study skills. Hence the need to prevent early failure is the strongest argument for aggressive intervention in the early school years. Students who have experienced continual failure inevitably have low self-esteem. Once eroded, self-esteem is difficult to restore. Cruickshank held that a student with a Learning Disability needs every stable support possible to assist him/her in developing a strong ego (as
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cited in Nissenbaum & Henley, 2011). To provide this support researchers and educators are following different strategies in teaching-learning process.

Although a number of intervention strategies which included instructional components related to sequencing, drill-repetition-practice-feedback, segmentation of information, technology (structure presentation medium), controlling task difficulty (e.g., scaffolding), modelling problem-solving steps, presenting cues to prompt strategies use, supplementing teacher instruction (e.g., homework), small interactive groups, and directed response/questioning of students had an influence on Learning Disability, there is large amount of variance in its effect. The results supported the pervasive influence of cognitive strategy and direct instruction models for remediating the academic difficulties. But the results suggested that a combined model is the instructional heuristic that yields the largest effect size (Swanson, 1999).

For years, students of neuroscience were taught that the neocortex, the most developed of the cerebral tissues, is involved in higher functions such as sensory perception, generation of motor commands, spatial reasoning, conscious thought and language; it is subdivided into three fundamental areas: sensory, motor and association. According to Kaas and Collins, another view based on more recent research that processing is unimodal involving an arrangement of interacting specialised cortex areas with minimal architecture dedicated to multisensory integration is also wrong. Scientists are discovering
that the brain is far more multisensory than once thought. That is, the brain’s multisensory processing capabilities are more elaborate and less compartmentalized than previously understood. According to Wallace, the brain’s multisensory design facilitates attention, perception, and learning (as cited in Farrel & Sherman, 2011). Hence it was decided to follow a multisensory approach in this study to overcome Learning Disability.

The ‘multi-sensory approach’ makes maximum use of the different senses, in particular integrating seeing, hearing and feeling. Multi-Sensory approaches are used to teach reading and writing (including spelling) through using auditory (hearing), visual (sight), kinesthetic (movement) and tactile (touch) pathways. This gives multiple pathways for the information to reach the brain. As it involves constant testing and reflection on the knowledge of the student, it is diagnostic.

Teaching and learning will be exciting journeys of discovery in multi sensory approach. Learning is fun, since it is a fast paced and creative process, where each small step is mastered and the learner is aware of what they have gained. Confidence is built with growing mastery of written language. The students can see themselves successful and this helps each individual learner to gain independence and a great “can do” attitude.

1.2 Need and Significance of the Study

‘Education for all’ still remains a distant dream and for disabled, it is even more remote in India. A recent survey of the National Centre for
Promotion of Employment for Disabled People (NCPEDP), revealed that only 1.2 per cent of the disabled in India has had any form of education. In its effort to have an all India school level survey, NCPEDP found that from the 89 schools, 34 did not have a single disabled student and unfortunately, 18 of them have a policy against giving admission (as cited in Sakhuja, 2004).

Bateman (1965) defines children with specific Learning Disability as those who manifest an educationally significant discrepancy between their estimated intellectual potential and actual level of performance (as cited in Mathew, 2013). The main features of LD are: (a) a distinct gap between the level of achievement that is expected and what is actually being achieved (b) individuals with average to above average intelligence (c) absence of sensory impairments.

The LD movement in India is of recent origin and is today comparable with that of its Western counterpart. Reports of lower incidences of LD in the Eastern world were attributed by western scholars to the general lack of awareness and sensitivity among educationists to the specific difficulties faced by children in learning to read in overcrowded classrooms. The Nalanda Institute report has highlighted that in India during the last two-decade or so, there has been an increasing awareness and identification of children with LD (Sakhuja, 2004). In spite of this growing interest India still does not have a clear idea about the incidence and prevalence of LD. Unfortunately, epidemiological studies of LD are fraught with difficulties ranging from the
very definition of LD, identification, assessment, to socio-cultural factors unique to India.

In India around 13-14% of all school children suffer from learning disorders. Unfortunately, most of the schools fail to lend a sympathetic ear to their problems. As a result, these children are branded as failures. To cope up with these problems and overcome them, the first step should be early detection, acceptance by parents and broad awareness among the academic community and above all by a mature handling of the problems (Sakhuja, 2004). It is no secret that many students find learning a painful and tiring process. Learning is made more difficult by a number of factors, like inadequate prior knowledge, poor study skills, problems with maintaining attention, cultural or language differences, and the presence of a hidden handicap namely Learning Disability. Students who have Learning Disability are often overwhelmed, frustrated and disorganised in the learning situations. Learning can become a nightmare when there are memory problems, trouble with the visual or auditory perception of information, difficulties in following directions, and an inability to perform paper-pencil tasks (i.e., writing compositions, note taking, doing written homework, taking tests etc). Another factor that contributes to the difficulties for students who have Learning Disability is their own fear of failures. Due to their history of academic problems, such students may believe that they cannot learn, that school tasks are just too difficult and not worth for the effort, or that, if they succeed at a
task, it is merely because of luck. They may not readily believe that there is a
connection between what they do, the effort they make, and their academic
success. This negative attitude towards their ability to learn, and the nature of
learning itself, can have far-reaching academic consequences. Hence the most
important task in helping these children is to build up their self confidence for
success. This can be achieved if and only if they encounter success in their
academic activities and for that any intervention strategy should focus on
training in the very basic skills such as reading, writing and arithmetic. As a
science teacher, the investigator believes that a child with Learning Disability
in a science class can only be given training, beginning from language and
mathematics, the very essentials to learn science. Hence a study is envisaged
to develop a multisensory strategy for enhancing academic achievement of
primary school children with Learning Disability.

1.3 Statement of the Problem

The major problem faced by children with Learning Disability is that
they possess normal intelligence yet they cannot follow the instructional
strategies adopted by their teachers. Kishore says if a child cannot learn by the
way he/she is taught, teach him/her in the way he/she learns (as cited in
Joseph, 2010). But since children with Learning Disability are identified as
children possessing normal intelligence, even parents and teachers expect
them to perform well without any special care. With the popularity of
Learning Disability in recent years the teachers are becoming aware of this
special care needed. Still most of them do not know what or how it shall be rendered. The investigator therefore attempts to develop a Multi Sensory Strategy which will act as a guideline to help children with Learning Disability. The problem therefore is entitled:-

“EFFECTIVENESS OF A DEVELOPED MULTISENSORY STRATEGY ON ACADEMIC ACHIEVEMENT OF CHILDREN WITH LEARNING DISABILITY AT PRIMARY LEVEL”

1.3.1 Operational Definition of Key Terms

Certain terms in the statement of the problem need either explanation or elaboration of their meanings.

Effectiveness

Effectiveness refers to the degree to which something is successful in producing a desired result (Oxford Dictionary, 2002).

Multi Sensory Strategy

A multisensory approach to instruction involves presenting instructional content through several modalities such as the visual, auditory, kinesthetic and tactile modalities.

In the present study multisensory strategy refers to learning activities which incorporate visuals, sounds and activities

Academic Achievement

Academic achievement refers to a student’s attainment of academic content areas. Reading, writing and mathematical functioning are the major
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domains under the rubric of academic achievement. In the present study, the scores obtained by administering the achievement tests in English, Malayalam and Mathematics developed by the investigator are taken as a measure of academic achievement.

Learning Disability

Defining Learning Disability is a debatable issue. National Joint Committee on Learning Disability (1988) defines Learning Disability as a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. The present study focuses on the common elements of academic difficulties in the areas of reading, writing and arithmetic.

Primary Level

Primary level refers to primary education i.e., from first standard to seventh standard of education in Kerala. In the present study investigator selected students studying in standard VI as the representative group.

1.4 Objectives of the Study

The objectives formulated for the study are:-

1. To identify students with Learning Disability at primary level.

2. To develop a design on Multi Sensory Strategy for children with Learning Disability at primary level.
3. To determine the effectiveness of Multi Sensory Strategy on Academic achievement among children with Learning Disability at primary level.

4. To determine the effectiveness of Conventional Activity Oriented Method on Academic achievement among children with Learning Disability at primary level.

5. To compare the effectiveness of Multi Sensory Strategy and Conventional Activity Oriented Method on Academic achievement among children with Learning Disability at primary level.

6. To compare the effectiveness of Multi Sensory Strategy on Academic achievement among children with Learning Disability at primary level on the basis of gender.

7. To compare the effectiveness of Multi Sensory Strategy and Conventional Activity Oriented Method on Achievement in English among children with Learning Disability at primary level.

8. To compare the effectiveness of Multi Sensory Strategy on Achievement in English among children with Learning Disability at primary level on the basis of gender.

9. To compare the effectiveness of Multi Sensory Strategy and Conventional Activity Oriented Method on Achievement in English with regard to components - reading comprehension, vocabulary and grammar among children with Learning Disability at primary level.
10. To compare the effectiveness of Multi Sensory Strategy and Conventional Activity Oriented Method on Achievement in Malayalam among children with Learning Disability at primary level.

11. To compare the effectiveness of Multi Sensory Strategy on Achievement in Malayalam among children with Learning Disability at primary level on the basis of gender.

12. To compare the effectiveness of Multi Sensory Strategy and Conventional Activity Oriented Method on Achievement in Malayalam with regard to the components- grahanam, padaprayogam and vyakaranaparam among children with Learning Disability at primary level.

13. To compare the effectiveness of Multi Sensory Strategy and Conventional Activity Oriented Method on Achievement in Mathematics among children with Learning Disability at primary level.

14. To compare the effectiveness of Multi Sensory Strategy on Achievement in Mathematics among children with Learning Disability at primary level on the basis of gender.

15. To compare the effectiveness of Multi Sensory Strategy and Conventional Activity Oriented Method on Achievement in Mathematics with regard to components- place value, multiples and factors; and word problems among children with Learning Disability at primary level.
16. To find out whether there is any relationship between Achievement in English and Achievement in Malayalam among children in the Experimental group with Learning Disability at primary level.

17. To find out whether there is any relationship between Achievement in Reading Comprehension in English and Achievement in Grahanam in Malayalam among children in the Experimental group with Learning Disability at primary level when taught using Multi Sensory Strategy.

18. To find out whether there is any relationship between Achievement in Vocabulary in English and Achievement in Padaprayogam in Malayalam among children in the Experimental group with Learning Disability at primary level when taught using Multi Sensory Strategy.

19. To find out whether there is any relationship between Achievement in Grammar in English and Achievement in Vyakaranaparam in Malayalam among children in the Experimental group with Learning Disability at primary level when taught using Multi Sensory Strategy.

1.5 Hypotheses of the study

Hypothesis I

Multi Sensory Strategy (MSS) will be more effective than Conventional Activity Oriented Method (CAOM) on Academic Achievement as a whole on children with Learning Disability at primary level.
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Hypothesis II

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Academic Achievement as a whole on the basis of gender.

Hypothesis III

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in English than those taught using Conventional Activity Oriented Method (CAOM).

Hypothesis IV

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in English on the basis of gender.

Hypothesis V

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in English with respect to Reading Comprehension than those taught using Conventional Activity Oriented Method (CAOM).

Hypothesis VI

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in
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English with respect to Vocabulary than those taught using Conventional Activity Oriented Method (CAOM).

**Hypothesis VII**

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in English with respect to Grammar than those taught using Conventional Activity Oriented Method (CAOM).

**Hypothesis VIII**

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in Malayalam than those taught using Conventional Activity Oriented Method (CAOM).

**Hypothesis IX**

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in Malayalam on the basis of gender.

**Hypothesis X**

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in Malayalam with respect to Grahanam than those taught using Conventional Activity Oriented Method (CAOM).
Hypothesis XI

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in Malayalam with respect to Padaprayogam than those taught using Conventional Activity Oriented Method (CAOM).

Hypothesis XII

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in Malayalam with respect to Vyakaranaparam than those taught using Conventional Activity Oriented Method (CAOM).

Hypothesis XIII

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in Mathematics than those taught using Conventional Activity Oriented Method (CAOM).

Hypothesis XIV

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in Mathematics on the basis of gender.

Hypothesis XV

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in
Mathematics with respect to Place value than those taught using Conventional Activity Oriented Method (CAOM).

Hypothesis XVI

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in Mathematics with respect to Multiples and Factors than those taught using Conventional Activity Oriented Method (CAOM).

Hypothesis XVII

Children with Learning Disability at primary level taught using Multi Sensory Strategy (MSS) will have significantly higher Achievement in Mathematics with respect to Word problems than those taught using Conventional Activity Oriented Method (CAOM).

Hypothesis XVIII

There will be significant relationship between Achievement in English and Achievement in Malayalam in children with Learning Disability when taught using Multi Sensory Strategy (MSS).

Hypothesis XIX

There will be significant relationship between Achievement in the component of English - Reading Comprehension and Achievement in the component of Malayalam - Grahanam in children with Learning Disability when taught using Multi Sensory Strategy (MSS).
Hypothesis XX

There will be significant relationship between Achievement in the component of English - Vocabulary and Achievement in the component of Malayalam - Padaprayogam in children with Learning Disability when taught using Multi Sensory Strategy (MSS).

Hypothesis XXI

There will be significant relationship between Achievement in the component of English - Grammar and Achievement in the component of Malayalam - Vyakaranaparam in children with Learning Disability when taught using Multi Sensory Strategy (MSS).

1.6 Methodology in Brief

Survey and experimental methods were used for collecting relevant data for the present study. The survey method was adopted for identifying Children with Learning Disability at primary level. The experimental method was found to be the most appropriate design for finding out the effectiveness of the developed Multi Sensory Strategy (MSS). The experimental design used for the present study was pre test-post test non-equivalent design. The sample for the study was the primary school students in Kottayam District. For the experiment, 66 students with Learning Disability were identified from the total sample by administering the Diagnostic Test for Learning Disability (DTLD), Intelligence Test, Achievement Motivation Scale and Learning Problem Checklist. The identified learning disabled students were divided
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into experimental group and control group. The experimental group was taught using the developed Multi Sensory strategy (MSS) and the control group with the Conventional Activity Oriented Method (CAOM). Before starting the experimental treatment, the standardised academic achievement tests were administered to the students in both groups as pre-tests and after the treatment, the same tests were conducted as post tests.

1.6.1 Variables Used in the Study

Research variables are scientific variables that can take on different values and influences the outcome of experimental research. The independent variables are the conditions or characteristics that the experimenter manipulates or controls in his or her attempt to ascertain their relationship to observed phenomena. The dependent variables are the conditions or characteristics that appear, disappear or change as the experimenter introduces (Best & Kahn, 2004). In the present study the independent variables are the methods of teaching viz., Multi Sensory Strategy (MSS), Conventional Activity Oriented Method (CAOM) and the dependent variable is Academic Achievement.

1.7 Tools Used in the Study

The following tools were used in the present study for the collection of data.

1. Diagnostic test for Learning Disability (DTLD) prepared and standardized by the investigator
2. Raven’s Standard Progressive Matrices (RSPM) to assess the general intelligence of the students (Raven, 1938).

3. Learning Problem Checklist (Mathew, 2000)

4. Achievement Motivation Scale (Shah, 1996)

5. Interview schedule prepared by the investigator

6. Lesson transcripts based on Multi Sensory Strategy (MSS)

7. Lesson transcripts based on Conventional Activity Oriented Method (CAOM)

8. Academic Achievement Tests on English, Malayalam and Mathematics, prepared and standardized by the investigator

The data collected is analysed using the statistical techniques of paired t-test, ANOVA and ANCOVA.

1.8 Scope of the Study

Studies about Learning Disability gained momentum about half a century ago in Western countries. The term was introduced in our country only a few decades ago. Earlier the condition was misunderstood as the laziness of the child. Even though, the introduction of the term Learning Disability brought about new insights about the condition, the studies and researches done in this area remain few in number. Therefore, the effort to help the children with Learning Disability failed to gain a progressive track. Hence it is evident that Learning Disability is an area neglected by researchers
in India. The situation is same, even if we consider only Kerala state. With teachers reporting the presence of children with Learning Disability in their classrooms and with an estimated 10% of students being learning disabled in the country, it is high time to have research studies in this area.

Children with Learning Disability struggle with their academics. They continually fail to achieve in schools. This makes them more vulnerable. If a child is not helped at this stage, he/she may end up as a failure in life. Some of them even drop out of school. Learning Disability is a lifelong condition and intervention can have a positive impact on a person’s ability to read and write. Research shows that with appropriate early intervention, 75-90 percent of children at-risk can overcome many of their difficulties and increase their academic abilities to an average level (Rief & Stern, 2010). In this scenario, the present study is quiet relevant to the need of the time. The study focuses on developing a multisensory strategy to promote achievement in children at primary level with Learning Disability.

Learning Disability is often referred as a hidden handicap where children learn in a different way and not considered as a disease. With the use of Multi Sensory Strategy, the investigator tries to bring various learning techniques into the classroom to cater to the needs of diverse learners. Using a multisensory approach, employing as many senses as possible, simultaneously, will aid automaticity and speed of retrieval, by enabling each mode of information to be stored in its specific location in the brain, while
establishing linkages between them. Multisensory teaching, therefore, aids the transfer from short-term to long-term memory. Brooks (2007) and Singleton (2009) have pointed out that successful intervention using structured, sequential, multisensory programmes do make good progress on learners with Learning Disability (as cited in Kelly & Philips, 2014). The Multi Sensory Strategy used in the present study includes techniques of learning using different senses and thus intends to help these children to learn in a different way to overcome their learning problems.

The investigator strongly believes that the findings of the study will enlighten the path of those who have Learning Disability. It is also hoped that the present study would help the educators of children with Learning Disability. Even though teachers are aware of the methods of identifying children with Learning Disability they are not equipped with techniques to overcome this hurdle. The findings of the study will help the educators to adopt the design based on Multi Sensory Strategy in their regular classrooms. The design developed in the study would in fact, act as a guideline for teachers to plan their lesson, especially for teaching Learning Disabled students. It will provide policy makers, academicians and administrators with an insight regarding the measures for minimising Learning Disability, which in turn will help them to implement inclusive education in its true form. Hence it can be stated without doubt that the present study will benefit the
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society. The investigator also believes that it will pave way to more researches in this area.

1.9 Limitations and Delimitations of the Study

Even though the study aims to help the entire population of learning disabled, some factors do remain as the limitations and delimitations for the study.

- The study was confined to a sample size of 1500 primary school children for the survey to identify children with Learning Disability and 66 learning disabled students for the experiment.

- The study was confined only to Kottayam district in Kerala due to the time needed for identifying learning disabled students. A more generalised result could be obtained if more districts were selected.

- Though the study was aimed at primary level students, the sample was taken from Standard VI only due to the time limit.

- The study focused on Learning Disability. But among the various Learning Disabilities only Dyslexia, Dysgraphia and Dyscalculia are considered in the study.

- Since the students with Learning Disability from different schools had to be bought into one classroom, the experiment was conducted during summer vacation.
• The focus of the study was mainly on educational aspects and not on medical aspects.

In spite of the above limitations, all attempts have been made to make the study as valid and reliable as possible. It is hoped that this study would serve as the basis of further research in this area.

1.10 Organization of the Research Report

The research report of the study is arranged in six chapters.

Chapter I

This chapter consists of the background of the study, need and significance of the study, statement of the problem, operational definition of the key terms, objectives of the study, hypotheses formulated, brief description of methodology, scope of the study, limitations and delimitations of the study, and the organisation of research report.

Chapter II

This chapter depicts the theoretical background of Learning Disability and Multi Sensory Strategy.

Chapter III

This chapter presents a brief review of related literature supporting the study.
Chapter IV

This chapter discusses the methodology in detail which includes the design used, the variables used, the sample selected for the study, description of tools employed for the collection of data, data collection procedure, statistical techniques employed for analysing the data and description of the design based on Multi Sensory Strategy.

Chapter V

The detailed statistical analysis of the data and its interpretations are presented in this chapter.

Chapter VI

This chapter contains summary of the procedure adopted, findings of the study, tenability of hypothesis followed by conclusions based on findings and some suggestions for further research.