REVIEW OF LITERATURE
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CHAPTER - 2

REVIEW OF LITERATURE

2.1 Introduction

Review of Literature pertaining to a problem makes the researcher familiar with the summary of previous research and the writings of recognized experts with what is already known, what is still unknown and untested and thus provides a background for the development of the present study and brings the researcher to the proximity of the solution.

Literature reviews are important as research tool, especially in emerging areas, with population that specially yield small samples, or areas that present values laden position adopted by advocacy groups. Literature reviews are also valuable in light of knowledge explosion and consequent impossibility of reading everything (Mertens- 1998).

A summary of the writings of recognized authorities and of previous research provides evidence that the researcher is familiar with what is already known and what is still unknown and untested. Since effective research is based upon past knowledge, this step helps to eliminate the duplication of what has been done and provides useful hypotheses and helpful suggestions for significant investigation. Citing studies that show substantial agreement and those seem to present conflicting conclusions helps to sharpen and define understanding of existing knowledge in the problem area, provides a background for the research project, and makes the reader aware of the status of the issue. (Best and Kaha 1996) Good, Barr and Scates (1935) state that as the competent
physician must keep abreast of the latest discoveries in the field of medicine, the research worker and investigator should become familiar with the location and sources of educational information. Review of related researches is indispensable to get a clear out perspective of the problem. In the words of R. Borg (1965) the literature in any field forms the foundation upon which all future work will be built. Scanning of relevant research reports guides the researcher in the right direction, highlighting the pitfalls of the earlier studies showing him the landmarks achieved. It makes the researcher aware of the research possibilities that have been overlooked. His focus on these areas may pave the way to break new grounds and come out successful with new theories and principles which may be permanent value in the field of teaching and learning. In this chapter an attempt is made to present a summary of literature related to the research topic under the categories such as studies on learning difficulties, studies on English language reading, writing and spelling difficulties and studies on multisensory remedial instruction.

2.2. Purpose of Review of Related Literature

To be precise, the following are some of the purpose of the review of literature

1. Review of literature gives an idea of how much research has been in the area of present study.
2. It helps to delimit the problem
3. It provides the necessary insight to the problem
4. It helps to avoid unnecessary duplication of previous research
5. It suggests valuable basis for hypotheses.
6. It suggests appropriate method for the problem under study
7. It widens the horizon of the research.
8. If any pitfalls or loop holes occurs in the previous study, the investigator will overcome those pitfalls and loop holes.
9. It provides fine background for methodology of research under study.

2.3 Studies on Learning Disabilities/ Difficulties

Learning Disability, unlike other disabilities, is a hidden handicap. It affects nearly 10 percent of the school population. It is a disorder that affects an individual’s ability to either interpret what they see or hear or to link information from different parts of the brain. It is a concept that denotes a group of disorders where the child experiences difficulties in skills like reading, writing, spelling, arithmetic, motor co-ordination, language and social skills (Myktebust and Johnson, 1967)

❖ Children with learning disabilities have average or above average intelligence
❖ Exhibit a discrepancy between potential and performance (Pagene and Turner, 1999)
❖ Could have a difficulty with only reading, or writing or mathematics or spelling in all of the mentioned area
Have difficulties that could range from mild to severe difficulty as in the case of any disorder (Keogh and Becker, 1985)

Diagnostic and structural Manual (DSM, 1990) defined learning disability as – ‘Learning disorders are diagnosed when the individuals are diagnosed when the individuals achievement on individually administered standardized tests in reading, mathematics or written expression is substantially below the expected for age, schooling and level of intelligence. The learning problems significantly interfere with academic achievement or activities of daily living.

The LD population is a heterogeneous group. Each student is unique and may exhibit difficulty in one or more areas. The range of combinations is enormous. However there are certain features that most LD children tend to exhibit. They are:

Academic difficulties: It includes difficulties in academic skills like reading, reading Comprehensions, Spelling, Written expression, writing and mathematics

Language disorders: Nearly 50percent of LD Children have language deficits. Research indicates that many children who do not read well suffer from underlying language problems (Scholes, 1993)

Perceptual Disorders: problems include the inability to recognize, discriminate or interpret information especially visual and auditory stimuli (Eruickshank 1990) maintains that perception and neurological involvement are the key factors in LD
Meta cognitive Deficits: It consists of two factors namely an awareness of skills, strategies and resources that are needed to perform a task effectively and the ability to use self regulatory mechanisms like planning moves, evaluating effectiveness, and checking outcomes of effort (Ellis, 1991)

Socio- emotional Problems: Frustrated with repeated failure despite efforts these children develop secondary difficulties like poor self esteem and other behavioral problems.

Motor disorder: In the initial years children may exhibit difficulties with tasks like skipping or hopping or involving fine motor skills like using a 2 Scissor, buttoning, tying laces and writing.

Attention Problems: Research indicates that nearly more than 17 percent of children suffer from attention deficit disorders (Lahey, Schaugency and Strauss, 1985). They are unable to screen out extraneous stimuli and maintain thought on relevant classroom tasks (listening to a lecture, writing a test, reading etc.)

Directional Problems: This difficulty may take a number of forms like inability to distinguish between left and right or even reading a map.

It is a widely accepted fact that is dyslexic’s brain cells are arranged differently and function differently from a normal person’s (Miles, 1970). These brain abnormalities are produced by genetic and environmental factors. The Dyslexic boys out number
girls in the ratio three to one. The vulnerability of male suggests that genes carried on the X chromosome play a part, but other genes also contribute (Selikowitz, 1993)

Problems such as viral infections, use of drugs, and malnutrition during pregnancy problems during labor and delivery and complications after birth could result in an insult to the brain resulting in deficits in information processing lending to various learning disabilities (Larmazza, 1992)

Learning disability children are intelligent but are unable to perform well in school. Their overall brain development is normal but miniscule brain areas that are concerned with skills of reading, writing, spelling, language or arithmetic have not developed adequately. Although the intelligent child understands what he is taught, he is unable to express in writing due to his deficits in reading, writing or spelling. Learning disability is a major under recognized cause (John, 1993)

Assessment is basically a process of measuring and understanding the performance of students as they function in their learning environments. The ultimate goal of assessment is to improve instruction, to indicate problems and to lead to treatment. The assessment data is to be used to improve instruction. The only way to determine the effectiveness of instruction is to collect data (Mercer and Mercer, 1993)

Crystal (1980) in his work "Introduction to language Pathology" finds out that the classification in terms of dyslexics only serves to show the influence of the study of adult brain damage in the field of children's disorders. According to him, the
children who have problems in language would have problems with auditory.

Owen, Adams, Forest Stolz and Fisher (1971) in Monograph of the society of research in child development looked at the number of children aged, Five to fifteen years who needed remedial help and found that it was 2% of the total population of school children, but within this group the majority (67%) were in the age range eight to eleven years.

Pringle (1966) in his work states that between 13% and 15% of seven- year- old children are in need of special education. The 13% is the figure given by head teachers as an estimate of the number of children who could, with some advantage, have been given special educational help in ordinary schools. In a follow- up study of all the children at age 16 years, 13% were receiving help in ordinary schools, 1.9% in special school and 1.3% were estimated as being in need of special education.

The study of Steinmetz and Galaburda (1991) revealed that symmetry affects an individual's ability to compensate for the cortical anomalies. Symmetrical plana reduces or inhibit in some fashion the nature and amount of cognitive strategies available to an individual at risk for dyslexic. This view relegates symmetry or reversed symmetry to a variation that may exacerbate the role of cortical anomalies in acquisition and development of the linguistic and cognitive processes critical for fluent reading.

Satz and Sparrow (1970) have expanded the theory of maturational lay. They maintained that the slow development of cerebral dominance will be established in a four or five year old,
but not right-left awareness which normally develops at about eight or nine years of age. Maturational lay might show itself in mixed hand dominance in a young child, but not an older child with reading problems as he or she will have outgrown this area of difficulty. The older dyslexic child is likely to have more problems in the language and conceptual areas.

Rosen’s (1994) experimental evidence suggests that some of the cytoarchitectonic and morphologic anomalies may be due to the influence of traumatic events during neurological development and they may be related to deficits associated with language or reading impairment.

2.4 Studies on Language Difficulties

Hynd and Cohen (1983) in their research found that the evidence for left sided language dominance and its relationship to morphological asymmetries in the central language areas led to the idea that language and reading disorders result from mixed or several hemispheric specialization for language abilities.

Rosner (1985) considers children with math difficulties as disabled as individuals who are unable to read and write. A consequence of academic failure, non recognition of LD as a genuine deficit and poor self esteem could lead to emotional and behavioral problems Seafontein (1990)

Performance in most schools is evaluated on the Child’s written expression. Difficulty with spelling severely restricts child’s ability to show what they know in class and examination settings and their performance gets underrated (Carpenter and Miller, 1995)
Difficulties to reading and spelling are also termed as Specific learning Disability or Dyslexia in U.S and U.K (Joy Pollock and Elizabeth Waller, 1997)

Handwriting is a very complex skill that requires many of the systems to work well together. Dobbie and Askov (1995) described the process necessary for handwriting:

- Visual, auditory and vasomotor perception
- Gross and fine motor Co-ordination
- Directionality
- Sequencing skills
- Recall
- Letter Knowledge
- Tool hold
- Lines
- Sitting and Paper position
- Cursive Script
- Tracing and copying
- Joining letters
- Self- evaluation and
- Numerals.

Generally a person with learning disabilities experience difficulties in READING SKILLS: (Confusion of similar words, difficulty in using phonics, slow- rate learning WRITING SKILLS: (Difficulty with sentence structure, poor grammar, omitted words, frequent spelling errors etc) Difficulty in expressing ideas orally (ORAL LANGUAGE) that the student seems to understand , difficulty in describing events or stories in a proper sequence.
Reading is defined as a perceptual process; a skill or decoding process; a cognitive activity and a meaning oriented, language centered process. As a perceptual process, reading is defined as the meaningful memory and interpretation of visual (graphic) and auditory stimuli Dechant, (1964), Kirk, Kliebhan and learner, (1978)

When defined as a skilled process, decoding strategies of “sounding out” letters to pronounce words correctly often are over emphasized (Flesch, 1955, Fries, 1963). Other models of reading as a skill process place equal emphasis on the various word recognition, word analysis and comprehension skills (Ekwall, 1976). These skills are interrelated and part of a complex process.

The Durrell Analysis of Reading Difficulty (Durrell, 1955) measures oral and silent contextual reading and comprehension, listening comprehension, word recognition, alphabet knowledge, visual memory, phonics, Phonetic spelling, spelling, handwriting and learning rate.

Writing is an important skill particularly during the school years. Three major areas of written language are

1. Handwriting
2. Spelling and
3. Written Expression

These three areas have been recognized as areas of potential disability, since the early work of Strauss and Lehtinen (1947) and the later efforts of Johnson and Mykle bust(1967) spelling requires more auditory and visual discrimination, memory sequentialisation, analysis and synthesis and integration
simultaneously than perhaps any other skill (Johnson and Myklebust 1967). It is the most complex ability that requires a combination of skills and abilities that are not fully understood by most of the teachers who are responsible for teaching spelling. Knowledge of correct spelling is required for easy reading and writing.

Sivakami, R (1999) deals with the effectiveness of instructional strategies in her thesis on "Effectiveness of certain instructional strategies to overcome learning liabilities in English at primary stage". The major objective is on the remedial instructional strategies to be adopted for children with learning difficulties. The post test spelling achievement scores are higher than the pre test achievement scores. This threw light on the effectiveness of the remedial instructional strategies used.

Rama S. (1992) deals with different aspects of learning disabilities in her handbook on learning disabilities. The major focus is on enabling the teacher educator to develop proper insight to the teacher with respect to the nature of learning disability. The book provides procedures to identify and diagnose such disabilities and general principle and procedures in providing remedial help to learning disabled children, in regular classroom.

Ann B.D. (1994) studied the development and evaluation of a self concept enhancement programme for children with learning difficulties. This thesis addresses the topic of self concept enhancement in children with learning difficulties.

The purpose was to examine the characteristics of LD students, to investigate their achievement in reading during school year and to explore factors that influenced their academic progress in tight of the discrepancy assumption of the LD definition. The results showed that LD students exhibit distort characteristics that distinguish them from other low achievers.

Anne J.J. (1991) studies 'use of Irion coloured overlays with learning disabled students. The purpose of the study evaluate the effect of using Irion coloured overlays with learning disabled students in reading resources classes in elementary classes.

Reddy G.L., Ramar and Kusma (2000) presented a paper on 'Rate of Educational Technology in Learning Disability in which he highlighted the assertive technology of 'word processing', 'spell checking', 'proof reading programmes', 'Brain streaming', speech synthesis', 'word prediction', personal FM listening systems and talking calculator to circumvent the learning disabilities in children.

The major objective of the study is to study the impact of reading improvement programme on the reading comprehension of the students.

The major finding of the study is that the members of experimental group taking the reading improvement programme (RIP) treatment proved better in reading comprehension on the post test than the students in the control group.

Another study namely 'A critical study of Deprivation on Language Ability of children studying in a Municipal Corporation School in standard I: A comparison with children in a Private
School and a Village school’, was evaluated by Deshpande S.S. The main objective of the study is to study the relation of different factors of deprivation with the three components of language ability one of the major findings of the study is that the parental interaction and ways of bringing up the child are important factors facilitating the language development of the child.

2.5 Studies on Multi-sensory Teaching Learning (MSTL)

A few studies have been conducted to verify the effectiveness of MSTL as an instructional strategy. Such studies are listed below under the sub head.

Mohankumar (1999) made a study on the “Effectiveness of Multi Media on the Achievement of Learning Disabled Children in learning Mathematical concepts”.

The major objective of the study is as follows.

To find the significant difference if any in the achievement of learning disabled children in learning mathematical concepts through multimedia and conventional teaching methods.

The main finding of the study is:

The learning disabled children those who learned mathematical concepts through multimedia scored more than the conventional method of teaching group.


The major objectives of the study are as follows.
To identify the children with learning difficulties in the school

To find the significant difference if any in the achievement of children with learning difficulties in learning fundamental arithmetical concepts through multi-sensory and conventional teaching methods.

The major finding of the study is that the multi-sensory teaching strategy facilitated the children with learning difficulties in learning fundamental arithmetical concepts rather than the children who learned through conventional teaching group.

Suydan and Higgins (1977) found that is nearly half of the investigations reviewed, children who have learned with the aid of concrete manipulations had higher achievements than the children having no such aids in the development of the mathematical ideas and skills under investigation. The remaining studies typically showed no significant differences between groups using aids and groups not using aids. But rarely did the results of a study favour the group not using manipulative. This consistency of these findings, over all grade levels for children of varying ability levels, and for many mathematical concepts and skills suggests the necessity of concrete manipulative.


**The major objective of the study is:** To find the significant difference if any in achievement of learning disabled children in
learning science concepts through multimedia and conventional teaching methods.

**The major finding of the study is:-** The learning disabled children those who learned science concepts through multimedia scored more than conventional method teaching group.

Skinner E. Charles (1974) in his study revealed that motivation is the super high way to learning. The child is a total personality an integrated organized whole. Rewards and punishments should be applied within certain limitations and we should recognize that pleasurable associations are more effective and long lasting than unpleasant and painful experiences.

Findings of the study by Adele Eskels Gottfried, James S, Fleming and Allen W. Gottfried (1998) stated that there is a significant relation between cognitive stimulation in home and academic intrinsic motivation. Cognitive stimulation in home in the environmental domain examined in this research because of its conceptual relevance to academic intrinsic motivation. Availability of cognitive stimulation in the home, conceptualized as encompassing intellectually enriching experiences, such as exposure to learning oriented academic opportunities and activities, would be expected to stimulate children, orientation toward enjoyment of learning through engaging in as well as by vat Ming, each such activities. Hence it is reasonable to predict that cognitive stimulation in the home is positively related to children’s academic intrinsic motivation.

The Femold VAKT approach was developed through experience in clinic school at the University of California, Los
Angels. The Femold procedure requires “positive reconditioning” before actually starting a remedial programme. The four conditions that a teacher should carefully avoid in initiating and carrying through the remedial programme are

1. Avoid calling attention to emotionally loaded situation
2. Avoid using methods that previous experiences suggest are likely to be ineffective
3. Avoid conditions that may cause embarrassment
4. Avoid directing attention to what the child cannot do

George (1966) Golani (1982) Sastri (1982) have proved the effectiveness of audio visual aids on the achievement of students. They also pointed out that most of the teachers do not prefer to use audio-visual aids and lack the skill and special training. At the same time Edward SahayaRaj (1994), Shah and Gupta (1986) point out how it is possible to develop low cost teaching aids and how they are cost effective and time effective besides being effective in achieving the educational objectives.

Sharma and Githanjali (1994) report on attempts to implement a Teacher’s Educational Intervention Program (TEIP) for 42 teachers of an identified sample of learning disabled elementary school children from urban and rural areas. Attitude of teachers toward the learning disabled (LD) and non-learning disabled (NLD) children were assessed. Results indicate significant differences in the attitudes of the teachers of LD students and NLD students. The planning of TEIP took into account the social, emotional and educational needs of the children. Significant differences in the pre and post-intervention attitudes of the post-
intervention attitudes of the teachers were found. Significant differences were also observed in the pre and post-achievement tests of LD children. It was suggested that TEIP was useful in improving the academic performance of the LD pupils.

Natarajan N (1994) made a study on “Effectiveness of modular approach in learning English by the plus two higher Secondary students” with the following objective - To find out the achievement of Hr. Sec students in learning English grammar while taught through modular approach. The major finding of the study is that the modular approach significantly improved the achievement of the students.

Subramanian (1982) studied “the effectiveness of two different methods of teaching reading in primary schools” Standard III with 81 children was divided into three groups. Each group was given different instructional treatments.

a. Flash Cards
b. Collateral reading
c. Control group

The results show that the group subjected to flash cards performed better than the other two groups. It is therefore, concluded that flash cards are more effective than collateral reading method at primary level.

Anupama Shah and Shushmila Mandal (1993) made a study on effectiveness of three instructional strategies for higher education, Lecture cum live demonstration, video films and booklet where the strategies followed. They found that video film was the best strategy followed by lecture cum demonstration and book let
methods. They suggested that video technology should be made more available to the educational institutions.

Balasubramanian, N and Yoganandam, M (1994) made a comparative study for effectiveness in improving English Pronunciation – trained teacher vs technology with the following objectives

1. To develop an audio package for improving the pronunciation of English Vowels, diphthongs and consonants among Std V pupils.
2. To find out the relative effectiveness of the developed audio packages over direct teaching by trained teacher in the production of correct English sound by Std V Pupils.

The study concluded that the teacher and the technology should be complementary to teach other in any scheme of education. Technology can be used effectively as an aid in the classroom and the teacher’s involvement in it will make the teaching learning process more effective.

Girija (1990) attempted to study the learning process of English by higher secondary students. One of the findings of the study was that medium of instruction and socio-economic status of pupils affected their learning process. The students exposed to mass media like radio, television and news papers were found to be overconfident and in their cases the learning process of English was very smooth.

Purushothaman, Shanmuga Sundaram and Stella (1992) attempted to study the effectiveness of video assisted instruction in
improving the school pronunciation in English of school children. The subjects were in random groups treated with video assisted instruction, audio assisted instruction and traditional instruction respectively. The findings revealed that the video assisted instruction was still better than audio assisted instruction. The authors were of the opinion that the supremacy of video assisted instruction in the acquisition of pronunciation skill might be due to the fact that the lip movement were observable in the video format which added to meaningful learning.

Balasubramanian and Yoganandan (1994) studied the effectiveness of pre-recorded audio cassette as a supplementary device in teaching English pronunciation to school children. The findings revealed that while trained teacher was effective in improving the pronunciation of English vowels, diphthongs and consonants among subjects, pre-recorded audio-cassette as a supplementary device was effective in improving the pronunciation in respect of consonants only. Pre-recorded audio cassette as a supplementary device was as good as specially trained teacher in improving the pronunciation of English sounds among school Children.

Reddy and Ramar (1995) attempted to measure the effectiveness of multimedia based modular approach with special reference to low achievers at school level. The results showed that the media method, through audio, video cassettes was more effective than the traditional method and it enabled the low achievers to cope up with normal students to a great extent.
Radio as a medium of education remains a complementary aid of language teachers and it strengthens the teaching of English, especially in rural areas (Wad, 1984; Dhamija, 1985 and Girija, 1990).

Television is an effective medium for the purpose of distance education and adult education is an important finding of some of the studies in various contexts. (Seth, 1983; Lipsky, 1984; Monlina, 1984; Wiesher, 1986; Kapali, 1987; Douglas, 1988; Khaniyile, 1988; Suirya Wonyse, 1988; Van Anina, 1988; Lakshmipathy raju 1989; Learmont 1990; Hall, 1991; Libler, 1991 and Sahoo, 1995)


Proficiency in the case of non-native speakers has been found to increase with an increase in passive exposure to English through the use of Television and radio (Gras 1983). Visual contextual clues enhance beginner’s Comprehension of second languages listening (Mueller, 1980; O’Brien 1982; Aleata, 1985; and Corbett, 1985).

O’Brien Paula Sullivan (1982) made an attempt to investigate the role of the visual dimension for the teaching of foreign language and its need in the language laboratory for the learning of dialogues, vocabulary grammar and pronunciation. Two 20 minutes video lessons were taught to two groups of native speakers of Spanish who had then enrolled themselves in beginner’s English language class. The control group received simultaneous auditory and orthographic presentation of the lessons. The experimental group received simultaneous auditory, orthographic and pictorial presentation of video lessons. Results showed that the experimental group scored significantly better in the post-test.

Gras, Steven Michael (1983) examined difficulties in second language learners experience in comprehending formal speech. Informal speech was hypothesized to be more difficult to comprehend than formal speech. His subjects, 79 Korean students completed two attitude questionnaires, one assessed integrative orientation and listening comprehension tests which measured their
proficiency and formal spoken English. It was found that informal style was more difficult to understand than formal style. Syntactic, phonological and lexical features of informal style hindered second language learner comprehension. Another major finding of the study was that proficiency increased with an increase in passive exposure to English through the use of Television, Radio etc.

Alagheely, Abdul Lazis. M (1984) investigated the factors affecting teacher's utilization of language laboratories in secondary schools in Saudi Arabia. The findings revealed that 95% of the sample agreed that the main purpose of the lab was to aid teaching and an almost equal percentage felt that a language laboratory should be an essential part of the school system. Almost all the subjects agreed that, of they could design their own teaching methods; the language lab would be more useful.

A study namely 'An investigation into the effect of Reading Improvement programme in Gujarath for pupils of class V of Sabarkantha District in the context of different variables', was conducted by Kachhia, M.J (1986)

The major objective of the study is to study the impact of the reading improvement programme on the reading comprehension of students.

The major finding of the study is that the experimental group taking the reading improvement programme (RIP) treatment proved better than the control group.

A study namely 'The English language Achievement of Shivaji University Arts Graduates' was conducted by Patil D. k (1985)
One of the major objectives of the study is to evolve a comprehensive language testing based on different theories of language.

One of the major findings of the study is that the urban group performed better than the rural group.

A study namely “Development of Instructional Material for Teachers Teaching Science to class VI in Rural areas of M.P.” who conducted by Lambhate, M.V. (1987).

The major objective of the study is to develop a Science Teaching Competence Scale to find out the effectiveness of the developed instructional materials in the terms of teacher’s science teaching competence.

The major finding of the study is to use of experimental instructional material by the teachers of the experimental group contributed towards the improvement of their performance.

Verma, M.S. (1986) conducted a study namely “Construction of Diagnostic Test in Chemistry and Preparation of Remedial Measures”

**The major objectives of the study were**

1. To prepare remedial measures in chemistry
2. To find out the effect of remedial instruction at different levels of intelligence.

**The major finding of the study was as follows**

The effect of remedial measures on the experimental group even at different levels of intelligence was significant at 0.01 level.
A study namely “To develop a learning package on population education and to study its effectiveness” was conducted by Nanavati, U.R (1981)

**The major objectives of the study were**

1. To develop a multi-media package on population education
2. To find out its effectiveness in terms of achievement.

The major finding of the study was as follows

The results clearly indicated that the learning package was more effective than the traditional method in teaching the content of population Education to the pupils of Class IX. The strategy if planned effectively, resulting in both qualitative and quantitative improvement.

**2.6. Studies on Reading disabilities/ difficulties and effectiveness of certain instructional strategy**

Learning disability permanently affects all the skills that are needed for a child to perform well in school. The ability to read is vital to nearly all areas of the curriculum. Poor reading skills inhibit independent learning and make them hopelessly dependent on parents, elder siblings or even tutors. Reading difficulties are the principle cause of failure in school (Rourke 1983).

Clark (1970) in his study of nineteen children of normal intelligence, who were severely backward in reading, found out that twelve showed poor auditory discrimination and ten had associated speech difficulties. In his work stated that children who have speech and articulation difficulties beyond the age of seven or
eight years also have problems with the discrimination of speech sounds (auditory discrimination) this is reflected in poor reading.

Pushpalatha (1991) made an attempt to study the learning process of English as a second language at the higher secondary level. Her findings showed that phonological errors affected the comprehension skill of the pupils. The errors in vowels included change of vowels, substitution of vowels, omission and replacement. Similarly in the case of consonants, the errors were due to replacement, substitution, addition and consonant clusters.

A study was conducted by Rao, Srinivasa, R. (1986) on Nature and Incidence of Reading Disability among school Children.

**The objectives of the study were**

1. To examine and analyze the reading disability cases
2. To identify the reading disability cases in a typical school population
3. To examine the relationship between language deficiency and reading disability in school children

**The major findings were**

1. Reading disability was found in about 20 percent of students in the primary schools.
2. The reading disability was closely related to language deficiency in school children.

A study namely impact of reading Improvement Programme in Gujarati on Reading Comprehension of pupils of
class VI of varying intelligence and coming from different SES was conducted by Shelat M.H. (1984)

**The objectives of the study were**

1. To prepare a reliable and valid tool to measure reading comprehension in Gujarat for pupils of class VI.
2. To prepare a reading improvement programme (RIP) in Gujarati for pupils of class VI.

**The major findings were**

The experimental group showed a better performance on the reading comprehension test after taking RIP than the control group.

The programme was found to be effective for improving reading comprehension of pupils of class VI.

The pupils of experimental group also showed better improvement in the speed of reading than the pupils of the control group.

A study namely “Development of Strategies for improvement of reading skills in English at Middle School level”, was conducted by Skanthakumari, S.K. (1987).

**The main objectives of the study were**

1. To identify the tasks involved in reading and comprehension
2. To develop strategies which would help the students to perform the tasks involved in reading and comprehension.
3. To find out the effectiveness of strategy by an experiment.
The major findings of the study were:

1. The intervention strategy helped to improve the reading ability of the students.
2. The increase in the achievement of reading ability as a result of intervention strategy was significantly high.

A study namely A Diagnostic study of Reading Comprehension of the undergraduate students studying English under part II in colleges in Coimbatore” was conducted by Sundarsanam, R. (1980).

The main objective of the study was to construct a diagnostic test of reading comprehension for undergraduate students and to develop a suitable approach for remedial instruction.

The major finding of the study is that

The remedial programme suggested was effective in significantly raising the comprehension scores of the experimental group students.

Roy, J. (1987) conducted study on the topic “A study of some correlates of Reading ability amongst Primary School Children of Delhi”.

The main objectives of the study were as follows

1. To ascertain the relationship between reading ability and academic performance.
2. To ascertain the correlates of reading ability.
3. To ascertain whether improvement in reading ability led to improvement in the academic performance of the students.
The major findings of the study were as follows

1. Reading ability was influenced by a number of factors such as personality, traits, intelligence, phonic ability, reading habits of students, reading interest of students, health of students, availability of reading materials at home, parent’s education, parent’s occupation and reading habits of parents.

2. Reading ability was positively and significantly correlated with academic achievement.

3. Reading ability was positively and significantly correlated with home-background.

4. Improvement in reading ability led to better academic performance amongst students.

2.7 Studies on Writing disabilities/difficulties and Effectiveness of certain instructional strategy.

Subramanian (2002) has evaluated the linguistic skills of the graduate students in English. He has evaluated all the four linguistic skills, listening, speaking, reading and writing. However, he has dealt with in detail only the writing skill of graduate students. He has identified in his study the phonological, grammatical and orthographical errors in productive skills and in the comprehension skills he has identified the recalling ability of words and sentences. Moreover he recommended that the group discussion and language games should be encouraged in the class hours and introducing the audiovisual instrument for language teaching would be good and wise at collegiate level.

Wallace and Kaufman (1978) observed that “Cursive writing should not be taught to children who are still experiencing
difficulties with manuscript writing in all likelihood children who experience extreme difficulties with manuscript will also experience failure with cursive writing”.

Mann, Suiter and Mc Clung (1979) suggested that the following method for traditional writing: the word is printed in manuscript, the letters are connected with a dotted line in a colored pencil: The student traces over the manuscript letter and connecting dotted line to form the cursive writing.

Gleason (1982) observed that students are asked to write about a topic but not much time is given to them to think about that topic. He suggested that writing can be taught in three stages. 1) The Pre-writing or reflective period, when time is given to mentally think about a topic. 2) The writing stage. 3) The editing or revising stage.

Gleason (1982) prepared the student to write; show an object to the student and ask him to describe all the various aspects of that object. Group the details in categories of appearance, use and even color coding the main points, the ideas should be ordered in sequence in which they will be written: let the student write out first draft with the teachers assistance; type the first draft for the student, making basic corrections in grammar and spelling, since the focus here is an organization of ideas and not on spelling; ask the student to make other correction, retype the second draft.

Enstrom and Enstrom (1970) emphasize teaching sequence of strokes which help to prevent reversals mirror writing and inversions. Their programme emphasize the following
1. Basic- left- to right movements which will help to form e, f, t and so on.

2. Top down strokes which are referred to as building a fence.

3. The umbrella top which is used to make letters of the round family ( T, C,G) and ‘Seven e’ S’ family.

Ellis (1982) in his study states that the children with writing problems or developmental dysgraphia are really not different from normal children and adults who also have ‘slips of the pen’. Their problems are only perhaps more severe, but no different in kind.

He classified the various types of writing errors as follows:

a. Reversals (Eg) good for gods


c. Contaminations- the fusion of two adjacent letters, which is seen in adults when writing quickly and slovenly eg. ‘ing’ for ‘ing’ “O’ for ‘from’

Other forms of contractions, (e.g) Kiten for kitten, telesion for television

Preservations eg. ‘bananana’ for ‘banana’

Strauss and Lehtinen (1947) agree in their study that children with learning disabilities should be taught cursive writing, because the rhythm involved in cursive hand writing lends itself to the production of automatic skilled movements. It also helps to hold words together in units and as such, there will be few transportation errors (e.g. grill for girl)
Spalding and Spalding (1969) found out only six basic strokes were needed for lower case letters. 

Brown (1982) modified the Fernold approach and found success with children with learning difficulties of a variety of ages. In one of the first teaching sessions with the student, the teacher asks the student to identify five words are written on cards. After writing each word the teacher and the student discuss the word and its meanings. During the discussion the teacher leaves the word in plain sight. When the next word is being written or discussed, the previous words are not within the student’s vision.

Polloway and Smith (1982) suggested that, in addition to simplified motor movement, the advantage of typing include faster speed, the highest degree of legibility and inherent motivation.

Thurber (1983) noted that many learning students find it difficult to make the transfer to cursive writing if they have first learned to manuscript writing.

Macleod and Proctor, (1979) conducted computer aided programme to develop handwriting skill. They developed a programme that allowed three students (aged 13-14) who previously could write their names in script to sign their names in a DIGIVUE display computer screen with a nylon pen connected to the computer. A blinking light gave immediate feedback about the pen’s movements. The programmer was highly successful, mainly because the feedback given to the students was visual, and tightly controlled. Incorrect writing was disregarded, and only positive feedback was given.
Lerer et al, (1979) examine the influence of the drug Ritalin on the handwriting of fifty learning disabled students, (aged between 8.5 years and 12.8 years)

The findings are

➢ 26 Children (52%) showed improvement after being treated with Ritalin
➢ But the greatest movement was observed in those students with the worse handwriting patterns

Early, Nelson, Klebar, Treegoob, Huttman and Cass (1976) in an American study compared 5 year old children who had been taught manuscript (Cursive handwriting is the style which is taught predominantly in schools in U.S.A) Though there was no significant difference in IQ between the groups at the beginning of the year, by the end of the year the children who had been taught cursive writing were superior in the Stanford word Reading and Spelling Tests and showed fewer reversal and transposition errors in writing.

Frosting and Horne (1973) and Kephart approaches emphasize fine motor skills which is essential for writing. The Frosting and Horne (1973) battery emphasize five areas which are visual-motor co-ordination, figure-ground, perceptual constancy, position in space and special relationship. While these areas may not represent discrete abilities, training in them could be useful. To give an example: position in space is the ability to discriminate position and to differentiate letters such as ‘d’ and ‘b’, ‘W’ and ‘m’, ‘n’ and words such as was and saw. In the test, children have to
find out the form which is rotated, or find the form which is like the first one in a row.

Frosting suggests that many exercises besides paper and pencil can help to develop this skill. For example the child could be trained in copying various positions. Other examples include training in finding and drawing mirror images.

Johnson and Myklebust (1967) advocated teaching of many script writing largely because the movements are simpler than those in cursive writing and there are fewer changes in letter forms. For example, the ‘O’ in ‘ON’ is different from the ‘O’ in ‘NO’ in cursive writing. In addition the form of manuscript writing is much closer to the script seen in reading books.

Kephart's (1970) work is rather more extensive as he emphasized gross motor and fine motor skill development. In the context of perceptual motor development, his ideas on the development of the motor match are highly relevant. He believed environment for the purpose of attaching meaning to the incoming perceptual information. For young child, the visual stimulus does not correspond to the feed back from the motor- area, creating a mismatch (eg. The feel impression which may be a <> ) By careful graded activities, the child's visual image could be made to match the motor feed back so that, at first, the eye follows the hand, later the hand follows the eye. On the blackboard, the child would be encouraged to make large movements, first in terms of a general suitable and then in terms of large hand in all cases. Later, a definite form would be imposed for example, a circle but often a template would be used for the initial teaching of this. Such motor
exercises will directly feed back the child’s visual perceptual skills.

A study was conducted by Misra, Shubhra, (1985) on “An Analysis of Errors made by a Group of under graduate students of Madhya Pradesh and its Pedagogical Implications”- The major objective of the study was to make an error analysis of major errors committed by first year students in written English and to suggest remedial measures.

The findings of the study were

1. The major errors committed by the subjects were spellings (16.50%) , lexis (10.56%), verb form and pattern (7.27%) auxiliary (6.72%) tense (5.66%), preposition (9.78%) adjective and adverb (2.97%) number (6.8%), pronoun (4.41%) generative suffix (2.4% articles (7.37%) Omission of major constituents (3.19%), syntax (4.40 %) subject verb agreement (4.62%), connectives (2.95%) and miscellaneous (3.34%)

2. Hierarchy of errors based on frequency of recurrence was

1. Verb phrase
2. Spelling
3. Lexis
4. Preposition
5. Articles
6. Number
7. Subject- Verb agreement
8. Pronoun
9. Syntax
10. Miscellaneous errors
11. Omission of major constituents
12. Adjectives and adverbs
13. Connectives
14. Generative Suffix

Remedial measures suggested to improve written English were

1. The language exercises should be designed in a framework which encourages the use of standard form.
2. The emphasis in the materials should be on the creative use of L₂ for the purpose of live communication.

A study namely “A comparative study of the Effect of the use of Bamboo Pen, Pen Holder and Pencil on handwriting in Hindi” was conducted by Vajpayee, A.B (1968).

The objective of the study was to rank the improvement in handwriting in Hindi through the use of Bamboo pen, Pen holder and pencil.

The study revealed the following.

From the point of view of neatness, legibility, space between letters, curves, angles and lines, the first place in handwriting was secured by users of pen followed by those of pencil holder and bamboo pen.

In speed the order of merit was pen holder, pencil and bamboo pen.

2.8. Studies on Spelling Disabilities/ Difficulties and Effectiveness of Multimedia instructional remedial strategy.

Glisan, Eileen. W (1984) studied the effect of Word order on listening comprehension and pattern retention of second language learners. The findings indicated that word order significantly, the degree of comprehension of L₂ learners. Word order and sentence
position were found to significantly affect the surface retention of the learners. It was an indirect evidence to support TG theory indicating that an aural processing strategy to converting pattern to the basic word order might have been utilized by the learners.

The children with auditory difficulties cannot translate the sounds they hear into the right letter. This is because of lack of auditory discrimination and poor auditory memory and that the child cannot recall the sound letter association. They tend to omit sound units (com for come) or to add unnecessary sounds (looker for look). Jordon (1977) believes that omitting sound units within multi syllabic words is one of the most significant indicators of a spelling disability.

Children certainly do learn to spell by eye. The effective use of visual perception builds up a memory store of visual images of words, sentences etc. One of the most common problems exhibited by any dyslexia students is an inability to analyze words they hear in terms of syllable units and separate phonemes Clark (1992)

While spelling a word, it is a complementary association between auditory perception and visual perception. The process of unfamiliar words requires the child to identify the common sound unit within the word and match these sound units to letter clusters stored as visual images which is termed ‘Orthographic memory (Jorn- 1983)

When the sound values and sound units are identified, visual perception is automatically used to check the word. As Nichols (1985) pointed out that, “Spelling is remembered best in your hand, it is the memory of your fingers the pencil to make a word that
makes for accurate spelling.” The process of building up orthographic image in memory facilitated the study of word familiar with common letter sequence. (Varahangen and Das, 1992 Templeton 1992, Gunning, 1995)

It is not feasible for the tea for the teacher to implement the remedial instructional strategy individually when the class has variety of students with different components of specific difficulties. To cater every child’s need, a comprehensive remedial instructional strategy VAKT – (Visual Auditory Kinesthetic and Tactile Approach) is highly advisable.

“The contention that learning to spell should primarily take place through incidental learning from reading and writing is highly questionable for students with special needs as well as for many normally achieving students in our opinion, advocates of incidental learning in spelling are overly optimistic”. (Graham and Harris, 1994: 283)

Spelling actually involves the coordinated use of several different complementary process and strategies, including listening carefully to the component sounds and syllables with the word and by developing kinesthetic images of the most commonly written words (Weckert, 1989 and Berien (1992). Hence teaching should be on strength while remediating the auditory visual and motor areas of weakness.

It is clear that, one of the most common problems exhibited by many dyslexic students is, an inability to analyze words by hearing in terms of syllable units and separate phonemes (Clark 1992) The process of writing an unfamiliar word refuses the child
to identify the common sound units within the word and to match these sound units with the appropriate letter clusters stored as visual images. (Jorm. 1983)

Gillingham and Stillman's (1960) "Simultaneous Oral Spelling" is generally based on visual, Auditory, Kinesthetic and Tactile senses which overcomes spelling errors. This approach has been greatly applied by Bryant and Bradley (1985) for remediation of spelling problems. This approach involves five steps:

1. Select the word you wish to learn and have the teacher to pronounce it clearly
2. Pronounce the word clearly yourself while looking carefully at the word
3. Say each syllable in the word (break a single syllable word into onset rime.)
4. Name the letters twice
5. Write the word, naming each letters as you write it.

This approach has the combination of all senses to function intact.

Spelling requires more auditory and visual discrimination, memory and visual discrimination, memory sequentialisation, analysis and synthesis, and integration simultaneously than perhaps any other skill (Johnson and Myklebust 1967)

Writing facilitates reading and promotes spelling. Cursive writing is an important aid to the development of reading and spelling skills. In aid to Reading and Spelling Kaufman and Biren (1979) state that the striking simplicity of cursive writing for the spatially disoriented child has been fully recognized. They believe
that a programme they espouse which depends heavily on accurate cursive writing, can help learning disabled children with a number of different types of basic learning deficits and should be more appreciated and utilized.

Andriana Kasriks (1993) the Greek researcher in his M.Phil dissertation "The Diagnosis of Developmental Dyslexia in Greeks" underwent few experiments to find out whether there was evidence for dyslexia in Greece. This enquiry involved the testing of children on a Greek version of the Bangor Dyslexia text. This would comprise comparisons between a test group, controls matched for chronological age and controls matched for spelling age. Detailed examination of the results of the spelling test support to the idea that all or most of the poor spellers in the test group were dyslexic in the required sense, since difficulty in learning sound-symbol associations is agreed to be a common characteristic of dyslexia. It can be claimed that not only that dyslexia exist in Greece but that a Greek version of the Bangor Test differentiates dyslexics both from age-matched controls and from younger children matched for spelling age.

Bradley (1983) advocated the remedial technique of simultaneous oral spelling. The technique is broadly similar to Gillingham and Stillman’s (1956) method but Bradley used words for the children’s own vocabularies, whereas Gillingham and Stillman advocate lengthy particular sounds in sequence. The method can be described in five steps.

1. The student proposes the word he wants to learn
2. The word is written correctly for him (or made with plastic letters).
3. The student names the word.
4. He then writes the word himself saying the alphabetic name of each letter of the word as is written (copy).
5. He names the word again and checks that it is written correctly.

This sequence is repeated 2 or 5 times more with the student covering or disregarding the structure word as soon as he feels he can do without it. The procedure takes about 30 seconds per word and uses visual, auditory and kinesthetic senses.

Englert, Hebert and Stewart (1985) investigated the effects of teaching LD student to spell new words by using spelling patterns from known words- that is the analogy strategy, their training sequence had four steps:

1. Identify a known word that rhymes with the new word.
2. Identify portions of both words that are spelled the same.
3. Spell the new word using the rhyming element of the known word.
4. Apply the new skill to complete the cloze sentences requiring the use of transfer words that rhyme with common words.
Their results indicated that the experimental group, which had received instruction in the strategy was significantly superior to a control group in spelling high frequently sight words.


Balu and Loveless (1982) developed a multi-sensory method called Specific Hemispheric Routing – TAK/V to teach spelling to dyslexic children. This approach involves the following procedures.

a. The teacher teaches tactiley using the left hand with the student blindfolded.

b. The teacher teaches uses large three-dimensional letters placing them in the hand of the subjects in proper sequence. He names the letter in order and pronounces the word before and after the sequential placement of the letters in the children’s hand. The student is instructed to repeat the letters and the word after the teacher in a sort of echo manner.
c. After three such sequencing runs the letters are scrambled and the student is instructed to restore them to the proper sequence. The student names both the letters and the word as they are placed in sequence. This is done three times.

d. The student remains still blindfolded and the teacher guides his hand to writing paper and instructs him to write the word as he can. This is also done three times.

e. Lastly the blindfold is removed and the student is instructed to write the words from memory with each word covered as soon as written to avert copying. In the above process if errors are made at any point the entire process is repeated.

The main objective of this process is committing the word to memory, starting the tactile, auditory, kinesthetic approaches, with the visual abilities blocked and using the left hand. Theoretically this memorization takes place in the right hemisphere.

2.9 Summary of the Researches Reviewed

A critical review of studies covered in this chapter the adequate studies have been made for learning disabilities in foreign countries. But in Indian context, the studies conducted so far or highly inadequate when compared with foreign studies. A meticulous scan of the studies reviewed and reported in this chapter discloses a few characteristic patterns. Quite a number of studies are survey studies dealing with either the personality characteristics or the causes of learning disabilities (Rama S. 1992, Reddy G.L., Ramar and Kusma (2000), Beauty, H.H, (1995). Also there are studies which focus on the children with learning difficulties in

Some studies focus on teaching strategies designed for children with learning difficulties. They establish the effectiveness of MSIS. There are few studies on foreign context and a few studies in Indian context with regard to MSTL as an instructional strategy. Some of these studies conducted by Anupamasha and Sushmita Mandal (1994), Mohan Kumar Selvaraj and Rajaguru (2004) and Schuster and Pigge (1965) established the effectiveness of MSTL as an instructional strategy in teaching special children like low achievers, slow learners, learning disabled etc.

Though their studies have established a good result, still more number of studies should be carried out for arriving at still broader and deeper conclusions.

Dutta. A conducted a study on “Learning Disabilities in the reasoning power of the students in Geometry Diagnosis and promotion”

**The major objectives of the study are as follows**

1. To diagnose the major patterns of disabilities in a specific area of geometry with the help of tools specially developed for the purpose
2. To try out experimentally teaching methods this would prevent development of learning disabilities in the area under study.

**The findings of the study are as follows.**

1. Thirty-three major patterns of disabilities were identified.
2. The experimental groups taught by audio-visual materials and techniques achieved significantly more than the controlled groups taught by conventional methods.

Another study was conducted by Gill P.S. An Investigation into the impact of ‘Teach English- Learn English Radio Programme on Listener Teachers and Pupils English in Gujarat’. The main objectives of the study are as follows:

1. To construct the tools, to measure the impact of Teach-English- Learn English (TELE) Programme,
2. To measure the impact of TELE series on the learning of English

Major findings of the study are as follows

a. The impact of the TELE series on the teachers own English was positive and it was in favor of listener teachers. The listener teachers clearly gained from the broadcast.

b. The teachers did gain the specific areas, viz. listening, Comprehension, pronunciation, vocabulary and grammar.

c. The impact of the TELE series was even greater than the listeners of English

d. TELE proved to be a useful source for teachers and learners regarding the natural and appropriate use of English

e. The TELE series contributed to the development of general awareness in teachers and learners of English. The series also make teachers in touch with recent trends in English language teaching.

Kudesia U.C. conducted a study namely, “An Experimental comparison of Discussion Method and Lecture Method in
The major objectives of the study are

To find out if instruction through the discussion method was feasible in teaching English to the first year student of the polytechnics and

To compare the effectiveness of two methods of instruction i.e. The lecture method and discussion method, in learning Technical English.

The findings of the study showed significantly better results on the achievement test for the group which was taught through the discussion method over the group which was taught through the lecture method, which showed that discussion method of teaching was significantly more effective in learning Technical English than the lecture method of teaching.

A study namely “Effects of maximizing contextual clues: A pragmatic study” was conducted by Datta.C. (1985). The major objectives of the study were as follows

1. To derive insights into the pragmatics of classroom interaction, and to contribute towards developing a pedagogical theory of second language (L2) Learning in a multilingual situation.

2. To identify interpretive strategies and to explore means of manipulating contextual constrains by maximizing contextual clues to activate meaningful interaction in the classroom.
Some major findings of the study were as follows

1. The strategies facilitated the process of the learning

2. Contextual constraints that restricted the scope of classroom interaction could be manipulated by maximizing contextual clues in instructional stimuli to activate meaningful interaction conductive to L2 learning

3. Maximizing contextual clues helped participants to jointly develop a multi source model of the TH that provided opportunities for teaching/learning the language as a system as well as a form human behavior.

A study namely “A study of Reading Ability in relation to certain cognitive and no cognitive factor” was conducted by Agarwal, V.R. (1981)

**The major objective of the study** was to examine the role of some personal, cognitive and non-cognitive factors in reading ability.

**The major finding of the study was as follows**

The personal and cognitive factors were more meaningful in the context of reading ability scores than the non-cognitive factors considered in the study.

A study namely “A study of the factors that affect the orthography in Hindi and Diagnosis of spelling mistakes in writing of class V students of Hindi Medium Schools of Delhi, along with a Remedial programme” was conducted by Anand, V.S. (1985)
The major objectives of the study were as follows

1. To diagnose spelling errors in Hindi made by class V students of Hindi medium schools of Delhi
2. To study the factors responsible for those errors
3. To develop a programme of remedial instruction and to demonstrate its effectiveness.

Major findings of the study were as follows

1. The largest numbers of mistakes were made in respect of the use of matras, closely followed by the use of incorrect words.
2. Most of the spelling errors were due to inadequate mastery of the most basic tasks in the process of spelling
3. A large number of student were not able to learn till class V the sound letter association required for correct spelling

Use of the teaching learning strategies which involved oral-aural visual and motor experience the word was most suitable for improving the spelling ability of the students.

A study namely ‘Studies on the Basic Vocabulary in Hindi for English Standard Non-Hindi speaking students of Karnataka’, was conducted by Sarasamma.S

The main objective of the study was to find out the basic Hindi Vocabulary (Compulsory language) of children of standard VIII. One of the major findings of the study was Boys and Girls exhibited the same standard in performance.
A study namely ‘A Study of Child’s learning of Kannada Morphological Rules’ was conducted by Sridhara. A. One of the major findings of the study was that Boys and Girls do not differ significantly in their performance.

A study namely “Effect of parental Deprivation on Personality Adjustment (with special Reference to denotified tribes of U.P)” was conducted by Khan, M.A. (1976)

**One of the main objectives of the study was as follows**

To assess the effect of parental deprivation on personality adjustment among deprived and not deprived children.

The major finding of the study was as follows

There was a significant differential effect of parental deprivation on the level of adjustment

From the above review it is very clear that adequate studies have not been attempted in Indian setting. Only few studies have been undertaken so far. They are related to personal characteristics or causes of learning difficulties. Very limited experimental studies have been attempted so far. Even there studies also have not thought of all possible dimensions. With regard to specific learning difficulties such as language learning difficulties and mathematics learning difficulties. It warrants a great deal of research to be undertaken in the area of specific learning difficulties in Indian context. Therefore the investigator has made an earnest effort to establish MSTL in teaching of teaching, writing and spelling concepts of English language to the children with learning difficulties in the above concepts and also to assess the effectiveness of MSIS on the achievement of children with learning
difficulties in learning English language reading. Writing and spelling concepts in standards 4 and 5 in Coimbatore English Medium Schools. In the next chapter the details of procedure adopted for the study is presented.