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CHAPTER I

INTRODUCTION

1.1 LEARNING DISABILITY

Poor scholastic performance in a child has sadly been neglected in the past. Only recently there has been a growing awareness and concern regarding the causes that contribute to poor scholastic performance in a child. There appears to be no one reason for poor school performance. Academic backwardness is due to a heterogeneous group of reasons comprising of medical, developmental, behavioural, emotional, environmental and various other reasons.

Learning disability is one of the prime causes for poor scholastic performance in children. Specific learning disability is an educationally significant discrepancy between estimated intellectual potential and actual level of school performance which is not primarily due to visual or hearing or motor handicap, mental retardation, emotional disturbance or environmental disadvantage.

Specific learning disability is characterized by significant delays in one or more areas of the learning process in a child of average or above average intelligence. These children experience disabilities in the acquisition and use of the skills of reading, writing, spelling, arithmetic or language. Some children may experience impairment in only one of these areas, whereas in some others several of these areas may be impaired despite of normal intelligence, leading to serious difficulties in academic performance.

A learning disability is a "disorder" in one or more of the basic processes involved in understanding spoken or written language. It may show up as a deficiency in listening, thinking, speaking, reading, writing or spelling or a person's inability to do math, despite at least average intelligence. Learning disability affects children and adults of all ages. Both males and females can have a learning disability. There
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is approximately 10-20% of the population who has some sort of learning disability.

The term learning disability was first coined by Kirk in 1963 and it refers to the children attending school who have trouble in learning despite the fact that they have no apparent physical, sensory, intellectual or emotional defect. Such children had for years been ignored, misdiagnosed or mistreated by terms such as hyperactivity, hyperkinetic syndrome, hyperactive child syndrome, minimal brain dysfunction, learning disorder, learning difficulty and minimum brain damage.

In the beginning, the researches in the field of learning disabilities were concerned with the inappropriate behaviour of learners. They identified them as brain injured. This was objectionable to parents and teachers. Hence, the term was later replaced by Minimal Brain dysfunction (MBD) which implied a link between brain injury and learning disabilities.

Unlike other terms such as minimal brain dysfunction, "learning disabilities" is a purely descriptive term and carries no implication about a cause which has not been established. Furthermore, by emphasizing that these children have trouble in learning, the term places the responsibility for helping, such children squarely in the realm of education and not, as do references to brain functions into the field of medicine.

As a label for individual child, the term "learning disabilities" is more equivocal. Like all other labels in use in the realm of psychological disorders, it is only a description and not an explanation of the problem one has observed. If a child has trouble learning and some one labels him or her learning disabled, there is always a danger that having found an impressive sounding label for that child, efforts at providing help will cease because the label is viewed as an explanation for the problem. When used in this manner, the term "learning disabilities" is clearly objectionable. On the other hand, if
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A child is in an educational system where specialized teaching efforts are undertaken for children who fall in category "Learning disabled", the label when correctly applied, can open learning opportunities that might otherwise remain unavailable.

The term learning disability is meant to identify children with a severe discrepancy between ability and achievement.

A learning disability refers to one or more significant defects in essential learning process requiring special educational techniques for its remediation. Some chief learning disabilities include difficulties in communication skills, reading comprehension, speech, writing, spelling, arithmetic and these disabilities can be found in large number of children who may otherwise be with in normal range of intelligence.

Learning disability is a disorder that affects ability to either interpret what they see and hear or to link information from different parts of brain.

These limitations can show up in many ways; specific difficulties with spoken and written language co-ordination, self control or attention, such difficulties extend to school work and can impede learning to read or write or to do maths.

According to Kirk (1962), learning disability refers to retardation, disorder or delayed development in one or more of the processes of speech, language, reading, spelling, writing or arithmatic resulting from a possible cerebral dysfunction and / or emotional or behavioural disturbance and not from mental retardation, sensory deprivation or cultural or instructional factors.

According to Bateman (1965), learning disabled children are those who manifest an educationally significant discrepancy between their estimated intellectual potential and actual level of performance related to basic disorders in the learning process, which may or may not be accompanied by demonstrable central nervous system
dysfunction and which are not secondary to generalized mental retardation, educational or cultural deprivation, severe emotional disturbance or sensory loss.

The definition of learning disability adopted by Federal Government in December (1977) "Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing or motor handicaps or mental retardation, or of environmental cultural or economic disadvantage".

According to Hammill et al (1981) "Learning disability is a generic term that refers to a heterogenous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g. sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g. Cultural differences, insufficient/inappropriate instruction, psychogenic factors), it is not the direct result of those conditions or influences."

Kirk (1978) emphasized that learning disabled child displays developmental discrepancies in ability, has a specific problem that is not a correlate of other primary handicapping conditions and displays behavioural deficits.

Vaughen and Hodges (1973) reported that there are 38 different state definitions. Mercer et al (1976) also found considerable variation in accepted definitions of learning disability. However, there is a general agreement about some of the basic dimensions related to the
disorder. These dimensions have been summarized as follows (Berdine and Blackhurst, 1985).

Discrepancy: There is a difference between what these students should be able to do and what they are actually doing.

Deficit: There are some tasks others can do that a learning disabled cannot do such as listen, read or do arithmetic.

Focus: The child's problem is centered around one or more of the basic psychological process involved in using or understanding language.

Exclusion: These problems are not direct result of poor vision or hearing, disadvantage or retardation but these students still are not learning.

There are some elements which commonly exist in almost all the above stated definitions. Hallahan and Kauffman (1976) have listed five such major points to decide whether: the learning disabled child, has central nervous system dysfunctioning
- has an uneven pattern of development.
- has academic retardation.
- does not owe his learning problems to environmental disadvantage, and
- does not owe his learning problems to mental retardation or mental disturbance.

1.2 CHARACTERISTICS OF THE LEARNING DISABLED

Learning disabilities are not physically apparent. These children look like all other children. Unlike other disabilities such as paralysis or blindness, a learning disability is a hidden handicap. It doesn’t disfigure or leave visible signs that would invite others to be understanding or offer support.

Learning disabled children have following characteristics:
i) Learning disabled child has average or above average intelligence, adequate sensory acuity but is achieving considerably less than a composite of intelligence, age and educational ability would predict (Gearheart, 1973).

ii) Learning disabled child has specific difficulty in acquiring and using information or skills essential to problem solving (Valett, 1969).

iii) L. D child has integrity, emotionally, motorically, sensorially and intellectually, but despite these integrities, cannot learn in the usual manner (Johnson and Myklebust, 1967).

iv) L.D. child displays developmental discrepancies in ability, has a specific problem that does not correlate with other primary handicapping conditions and display behavioural deficits. (Kirk, 1972).

v) Learning disabled child exhibits an educationally significant discrepancy between apparent capacity and functioning (Bateman, 1964).

Traver and Hallahan (1976) identified following characteristics of the learning disabled:

1) Hyperactivity
2) Perceptual motor impairments
3) Emotional lability (ups and downs, moodiness, anxiety)
4) General coordination deficits
5) Disorders of attention (distractibility)
6) Impulsivity
7) Specific academic problems in reading, writing, spelling, and/or arithmetic
8) Disorders of memory and thinking
9) Disorders of speech and hearing (language problems)
10) Equivocal neurological signs
1.3 THEORETICAL FRAMEWORK

Following is an account of various developments in the field of spellings deficiency.

A theoretical model, ‘A model for the Analysis of spelling Behaviour’ (Personke and Yee, 1966), presenting a systematic description of spelling behaviour would be most helpful to educators, curriculum writers, and researchers in describing all steps in the various patterns comprising total spelling behaviour. This model postulated in 1966, is an information processing system that consist of 5 logical phases.

1) Initial input
2) Information processing prior to deciding what course of action to consider and take.
3) Decision making as to what information is available and acting through chosen channels.
4) Execution of selected behaviour spelling a word.
5) Feedback of information through internal or external sources.

Assumption underlying this model is that all spelling behaviour is initiated by the need to spell a word, then two input mechanisms are available to perform the task correctly internal & external. Internal mechanisms entail learned responses: the ability to generalize phonological rules, word attack skills, attitudes and habits of proof reading. External mechanism is not enough and this is asking advice from others, use of dictionaries, books and charts.

This model indicates that instruction in spelling should include the mastery of all channels of processing and skill at choosing the most suitable channel for the particular situation.

to word form. One assumption is that there are numerous abilities and skills that must be integrated before efficient spelling ability can be obtained. Teacher must explore the diverse skills necessary for proficient spellings.

According to Wallace and Larsen (1978) to understand the nature of spellings; one must become familiar with the alphabetic principle that underlies spelling. This principle states that each phoneme in a language has its own unique graphic counterpart. In languages in which there is one to one correspondence between a sound and its letter symbol, the task of learning to spell is simple and straightforward.

They believed that a student attempting to spell in an alphabetically consistent language needs only

1) To determine which sounds are present in a word and the order in which they occur.
2) To know what grapheme represents each sound.
3) To write the grapheme in the same order in which the sound can occur in the word.

In English language this is not possible as there are 251 ways of graphically representing the 40 + English phonemes.

1.3.1 English Orthography

Orthography is the study of the nature and use of symbols in a writing system. It also refers to correct or standardized spelling according to established usage. The basic unit of spelling, of course is the word.

Spelling is one curriculum area in which neither creativity nor divergent thinking is encouraged; only one pattern or arrangement of letters can be accepted as correct. The written form or orthography of English language has an inconsistent pattern; that is, it does not have a complete one to one correspondence with the oral or spoken sounds of English. Therefore, spelling is not an easy task even for children.
who are not afflicted with learning disabilities. Spelling a word is much more difficult than reading a word.

Recognizing a word in print is a decoding task and is a reading situation there are many clues to aid the reader in word recognition, including context, phonics structural analysis and configuration. Reproducing a word, however, is an encoding task and the opportunity to draw upon peripheral clues is greatly reduced. Many children who are poor in the ability to reproduce words in spelling are skilled in the ability to recognize them in reading. However, the child who is poor in decoding words in reading is almost always poor in spelling as well.

While English spelling corresponds more predictably than commonly assumed to its sound system or phonology, it also represents quite predictably the meaning (semantic) system in language. This is because spelling (or orthographic) system has to do more than simply record speech sounds; ultimately the written representation of a language for the eye rather than ear. (Bradley, 1919; Chomsky and Halle, 1968; Craige, 1927; Francis, 1958; Hockett, 1956; Scrugg, 1974; Vachek, 1989; Venezky 1970, 1999).

Examples of irregular relationship between phoneme (the spoken sound) and grapheme (the written symbol) are easy to cite. George Bernard Shaw, an advocate of spelling reform, is attributed with the suggestion that the word "fish" can be spelled as ghoti: gh as in "cough"; O as in "women"; ti as in "nation". Following phonic generalizations, the word natural could be spelled pnatchurile. Many inconsistencies exist in English spelling.

Horn (1957) found pupils spelling of the word "awful" was varied, including: offul, awful, offel, and offle. Each is an accurate phonetic transcription of the oral sounds of the word. With the orthography of English, a child could conceivably think of the following rules to spell the word "post": P as in psychology; O as in ouija board, S as in sugar, and t as in themselves.
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1.3.2 Spelling Subskills

The subskills in spelling may be grouped into five major components with numerous tasks comprising each component.

The first subskill is basic words that consist of high frequency and grade-level words. An important but overlooked component of spelling is the development of adequate readiness skills for formalized spelling instruction. The development of readiness skills in spelling is as crucial as developing readiness skill in other subjects areas. There is disagreement, concerning the best means for developing readiness skills. Lerner (1985) and Tiedt and Tiedt (1987) recommend developing spelling readiness through discrimination training, memory training, sound blending and auditory closure. Reid and Hresko (1981) suggest the best spelling readiness system is a language development program that integrates reading, writing, listening and speaking. The dependence of spelling readiness on the development of reading and writing readiness skills cannot be overestimated. The development of visual and auditory discrimination skills required in reading are also necessary for developing good spellers. The writing skills important to spelling are fine motor coordination and writing manuscript or cursive letter legibly. Because of the importance of readiness to spelling it is identified on the curriculum chart as the second subskills area with reference to word recognition and handwriting.

The third subskill of spelling, auditory recognition of phoneme is closely related to reading but moves on step beyond to actual formulation of the letters represented by phonemes. The specific tasks require auditory recognition of consonants, both in initial and final position, digraphs and vowels. Grapheme representation of phoneme comprises the fourth sub skill component. This includes single consonants, two three letter blends, digraphs, variant consonants, vowels (long and short), r-controlled vowels schwa, and variant vowels.
The final component presented on the chart is structural analysis. This sub skill includes inflectional suffixes, derivational suffixes, prefixes, and word forms.

1.3.3 Spelling Development

While spelling is certainly not the most important element in writing, good spelling skills can be beneficial in helping the writer express ideas more freely because more of the writers attention can be directed to the ideas and less to figuring out how to spell the words. Poor spelling distracts the reader or audience, makes the written product appear to be of poor quality, and is in general associated by society with lack of education. As Gerber (1984) has pointed out, good spelling is accorded unusual value in our society (e.g. much-publicized spelling bees) and the difficulty of becoming an excellent speller is well recognized.

The learning disabled population has frequently been described as being especially poor in spelling (Poplin et al., 1980. Boder, 1971). Boder emphasized a relationship between poor spelling and subtle neurological damage or minimal brain dysfunction often cited at that time as being typical of learning disabled populations. Research has supported the interpretation that poor spelling ability in LD youngsters is related to an immature cognitive developmental level in their knowledge about spelling (Graham and Miller, 1979; Gerber, 1984a) In other words, rather than being aberrant or idiosyncratic spellers, LD students perform similarly to younger normal children in spelling, and the type of errors LD children make in spelling are typical errors for their developmental stage. There are five stages of spelling development.

- Prephonetic: Children use invented spellings. e.g. rb for bat or even O for tree!
- Semiphonetic: realize some connection between letter sounds and words – but ignore words e.g. dog= dg, come= cm.
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- Phonetic and letter name: e.g. cot-cat, vowels appear in their spellings, interchangeably.
- Transitional stage: Realize that sounds are represent by chunk of letters eg ‘ion’ 'ing' etc.
- Conventional stage: have stabilized knowledge of regular and irregular words-final stage where most spellings are written automatically.

There is typical sequence of spelling development that Gerber (1984b) has organized into a classification system with five levels or categories.

1.3.3.1 Levels of Spelling Development: Development of the word monster is exemplified herewith –

<table>
<thead>
<tr>
<th>Classification</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preliterate (pgr 2L)</td>
<td>Unintelligible symbol mixing letter and nonletters.</td>
</tr>
<tr>
<td>2. Prephonetic (mn)</td>
<td>One or more, but not all, phonemes are plausibly represented</td>
</tr>
<tr>
<td>3. Phonetic (mn str)</td>
<td>All phonemes are represented but correspondence is based upon articulation of letter names ( eighty might be spelled &quot;at&quot;)</td>
</tr>
<tr>
<td>4. Transitional ( m on st or )</td>
<td>All phonemes are represented legally; knowledge of orthographic marking system is demonstrated.</td>
</tr>
<tr>
<td>5. Correct ( m on Ster)</td>
<td>Conventional spelling is produced.</td>
</tr>
</tbody>
</table>
According to Lydiatt (1984) five levels of spelling development are important to be kept in mind while teaching spellings. These are as under.

- **Pre-communicative level**–the student gives random strings of letters of the alphabet when asked to spell a word.

- **Semi-phonetic level**–the student gives some letters which represent only some of the sounds in a word.

- **Phonetic level**–The words are spelt as they sound. The students miss silent letters and vowels.

- **Transitional level** – the visual configuration of the word (ascending/descending letters and word length) is evident

- **Correct spelling.**

Spellings produced by students can be codified according to these five levels, which help the teacher to evaluate a given student’s spelling ability on the cognitive development continuum. It is then, possible to determine what type of spelling knowledge the child possesses and what type of spellings are still (Pte for peecked) needed. Clearly a child who spells the word peeked as peecked knows much more about English orthography than one who spells it as pte, both rendering are “wrong” but the later is “wrogner”⁸. The spellers who produced peecked knows about ck spelling as the K sound, about ed as the traditional way of writing the past tense ending, and also knows that all sounds in the word must be represented somehow. This spelling would be graded as being at the “transitional” level. The spellers who produced pte would be at a “pre phonetic” level: some, but not all, phonemes are represented. Clearly, he knows something about spelling but not nearly as much as the first speller (Gerber, 1984a). From this perspective, it becomes teacher’s task to help students build from their present knowledge level vis-a-vis spellings to reach higher levels of spelling knowledge.

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⁸ The rendering “wrogner” is a playful misspelling, used here to illustrate the concept of phonetic spelling and the importance of recognizing and addressing such errors.
Zutell's (1980) study led to the conclusion that "learning to spell is not simply a matter of enough drill work and/or rote memorization. The development of spelling proficiency seems to involve both cognitive and linguistic processes and, as such, it requires the active exploring participation of the learner".

1.3.3.2 Phonology And Spelling Development

If the child understands that print represents speech, there remain difficulties with regard to the speech to print translation process. The perception of a particular phoneme in a word often depends on the context in which the phoneme occurs, for example on the surrounding phonemes. Another factor is intrinsic difficulty of the individuals phoneme-grapheme mappings themselves. Some phoneme-grapheme mappings are harder to learn and use than others. e.g. a child named Christopher might learn how to spell his own name and word dad, He observes that the printed word Dad has fewer letters than the word christopher. Thus the child is forced to give up the idea that printed words are direct representations of meaning and begins to learn that print represents speech.

1.3.3.3 Orthography and Spelling Development:

In the process of selecting the appropriate graphemes to represent the phonological structure of words, the child is faced with many choices.. For example, some consonant sounds have more than one possible spelling and the correct choice often depends on such factors as the position of the phoneme in the word. e.g. ck may occur in the middle and at the ends of English words as in packet the pack. This two-letter sequence or diagraph does not occur at the beginning of the words. The nonoccurrence of initial ck is an orthographic feature of English. Other orthographic patterns involve doublets, or two letter spellings in which the two letters are identical. Certain letters may occur as doublets, such as double e of peel and double l of ill. Other letters, such as v and i rarely double. Doublets typically occur in the middle and at the end of words, as in supper and inn; they rarely
occur at the beginning of words, (Vanezyk 1970, for a description of a number of such orthographic patterns). Treiman and colleagues (e.g. Treiman, 1993; Cassar and Treiman, 1997) found that children exhibit this type of knowledge at an early age.

As development proceeds and children gain more experience of reading and spelling, they acquire a larger knowledge base from which to extract the statistical relationships between phonology and orthography (i.e. probability or predictability of phonology-orthography relationships). This knowledge, once implicitly embodied in the system, can then be used when spelling a word (Nation, 1997).

Although Nation’s study does not speak to the issue of the special role of rime units per se (e.g. she did not examine the impact of CV units frequency on spelling performance), the rime, frequency effect underscores the importance of linguistic differences in spelling development. The child’s superior spelling performance for sake verses safe reflects the properties of the English language that have been encoded in the child’s spelling lexicon. From a more practical standpoint, it also is worth noting that knowledge of rime units can be built into the child’s spelling repertoire through extensive training. Brown, et. al (1996) demonstrated that integrating rime analogy training (e.g. practicing spelling for a number of ick words such as pick, lick and trick) into a second grade reading/language arts program led to significant gains in spelling performance. This approach is similar to a number of early reading education paradigms (Levy et. al 1999) that provide the child with systematic and efficient way to encode spelling sound mapping into memory.

1.3.3.4 Morphology and Spelling Development:

The examination of children’s spelling provides an excellent means by which to understand their perceptions of phonemes in spoken words (i.e. the segmentation process) and their knowledge of how to represent these phonemes in a manner consistent with orthographic conventions (i.e. the selection process). Another
important factor that must drive the selection process is knowledge of how the English spelling system reflects the language's morphological structure. For example, rain has one morpheme and rained has two. In English, a morpheme is often spelled the same way across different words, even when its pronunciation changes. For example, the past-tense morpheme is pronounced differently in rained, jumped, and painted, but it is spelled alike in all cases.

Several studies have shown that young normally developing children do use morphology, to some extent, to aid their spelling. Treiman et. al (1994) examined children’s use of morphology in the spelling of alveolar flaps. When a word such as duty is pronounced in American English, it does not contain a clear “t”. Rather, the tongue taps rapidly against the top of the mouth to produce what is called a flap. Flaps are voiced, and as such are more similar to /d/ (voiced) than to /t/ (unvoiced). The middle consonant of study is also pronounced as a flap. Thus, the middle sounds of duty and study are indistinguishable in terms of their pronunciations. However, one is spelled with t and the other with d. Several studies have shown that young American children have difficulty spelling flaps (Read, 1975; Treiman, 1993). Children may misspell duty as “dudy”. It appears that d spellings of flaps are more common than t spellings because of the voiced nature of flaps. The preference for d shows the influence of phonology on spelling. An awareness of linguistic basis of misspellings can help researchers and educators better understand young children’s performance.

Whether misspelling of flaps are less common when there is a root word that could help children to select the correct spelling of flap than when there is no such root. For example, dirty is derived from the root word dirt. The stem dirt, as pronounced in isolation, does not end with a flap. If children can use the stem to aid their spelling of the flap, they should be less likely to misspell the middle sound of dirty
with a 'd' than to misspell the middle sound of duty with a 'd'. The result of the study showed such a difference even among kindergarten and first grade students. The children did not use their knowledge of stems as much as they could have, in that spelling of dirty with a t were less common than spellings of dirt with a t. However, morphology had begun to play a role in spelling, in that spellings of dirty with a 't' were more common than spelling of duty with a 't'. The results support the idea that the use of morphology in spelling begins to emerge early in the course of development.

### 4.3.4 Spelling Disability

Language is, today an inseparable part of human society. Human civilization has been possible through language. It is through language only that humanity has come out of the Stone Age and has developed science, art and technology in a big way. We know that as language develops it plays an important role in thinking process. Words become the symbols for objects and classes of objects, and for ideas.

Language permits us to speak of things unseen of the past, and of the future. It is a tool that helps us to learn, retain, recall and transmit information and control our environment.

Language is a wonderous thing. It has been said that language is what makes man a Man. Language fulfills several functions: it provides the individual with a means of communication and socialize with other human beings; it enables the culture to be transmitted from generation to generation and it becomes a vehicle of thought.

It is through the language that we can store knowledge, transfer it to the next generation and yoke the present, past and future together. Elements of language are listening, speaking, reading, writing and spelling. All these elements (skills) are required for firm foundation (Integrated).
Poor spelling complicates the student’s effort in written communication.

A child learns to speak first; writing comes much later. Also, during his lifetime, a man speaks much more than he writes. The total quantum of speech is much larger than the total quantum of written materials.

Every language has its own sound symbol association system. English language does not have consistent sound symbol spelling pattern and many words will have to be taught as sight words, when the child is young. If children have also learned context clues, they will be able to recognize many new words in reading, partly through phonic analysis, partly through clues and partly through structural analysis.

Reading and spelling are both parts of general language ability. Even when copying from printed material the child pronounces words to himself.

Traditionally, reading and spelling have been considered as inter-related process with spelling receiving relatively little attention in its own right. Writing and spelling difficulties have been called dysgraphia or literally abnormal writing. Prior (1996) suggests that almost every child who has reading difficulties have similar or even greater problem with spelling.

Spelling is a good test of quality of representation. Examining student’s spelling can provide insight about the types of perceptual units engaged during word recognition in reading. If the full conventional orthographic representation of word, an individual can identify in reading, is not held in memory, then the way in which the reader spells the word provides insight into the type of orthographic knowledge he or she is using perceptually to process the word during reading.
Children learn to spell English directly by extrapolating new levels of order on the basis of words they know, use and examine. Learning to spell is an active process not an abstract one. Progress always entails words knowledge derived from reading and from applying the knowledge through purposeful writing; Spelling is thus pivotal for both reading and writing; in this sense it is central to the meaning and acquisition of literacy.

Almost all people with developmental reading disabilities or language disabilities have great difficulty in spelling. In the new definition of dyslexia, people with this condition are noted to have “conspicuous” problem with spelling and writing. People can also have a specific spelling disability—that is they can be poor spellers, even though they are pretty good readers. These problems are very common although no one has done an accurate estimate of the prevalence to date.

Spelling has always been one of the most difficult skills to teach to learning disabled students. Problem with auditory discrimination, auditory memory, sequential memory and even fine motor skills may interfere with the students ability to produce correctly spelled words.

Spelling difficulties among students with learning disabilities is a well documented problem. Historically, spelling has received much less attention in literature on learning disability as compared to reading instruction. In fact, spelling problem in students with learning disability may be more severe than reading disabilities and may have proved more difficult to remediate (Gerber and Hall, 1987; Gettinger et al., 1982).

Spelling as a school subject is and continues to be some what a mystery. It is perceived on the one hand by society an important social value and a symbol of literacy, on the other hand, many educators state spelling as a subject warranting modest priority in the curriculum (Graham, 1983; Hodges, 1982) As spelling seems to a major weakness in our schools, pupil should first learn to spell the
words they know and use in their writing. The spelling of infrequently used words can be secured from a dictionary.

Spelling ability requires use of letters to construct words in accordance with the accepted rules. Spelling has been defined by the dictionary of reading and related terms as the process of representing language by means of a writing system or orthography, or the study of writing words according to their correct letter order or grapheme orthography.

To spell correctly one must normally be able to hear speech to learn the written form, retain that in one's mind and then recall and reproduce it accurately. Each of these processes involves a number of stages and failure in any one of them will affect spelling performance.

Learning to spell is part of integrated language system and depends upon the child's activity as a reader, writer, speaker and listener in a purposeful environment of learning.

As early as 1953, Hanna and Moore reported that system of writing was basically alphabetic and for almost every sound there is a highly regular spelling. An analysis of 3,381 monosyllables and separate syllables of 2,396 polysyllables in word from the many spelling lists shows that the English language is 86.9% phonetic (Anderson and Lapp, 1988).

Spelling and reading have different roots in development (Bradley and Bryant, 1985). To spell a word correctly, the individual must not only have stored it in memory but also be able to retrieve it completely. Initially, spelling is primarily a phonological skill and reading a visual one. By the age of 7 & 8 years, the visual and phonological elements become fixed and the child uses both processes that is why at this stage spelling difficulties are noted.

Spelling problems like reading problems originate with language learning weaknesses. Spelling disability does not reflect a general visual memory problem but a more specific problem with awareness of
and memory for language structure, including the letters in words. People who are poor spellers typically have trouble analyzing the sounds, syllables and meaningful parts in words in both spoken language and written language. In addition, they often have trouble learning other types of symbolic codes such as math facts of math operation signs.

In the early grades, weakness in speech sound awareness (phoneme awareness) predict and are closely associated with poor spelling. In the later grades, difficulty understanding spelling rules, word structure and letter patterns are the hallmarks. The “visual memory” problems of poor spellers are specific memory problems for letters and words, so a better term for poor spelling is orthographic memory problems. A person may be a very poor speller but a very good artist, navigator, or mechanic; these professions require a different kind of visual memory.

There are many reasons why pupils fail to learn to spell, some of these play important roles in the case of one pupil but are unimportant in other case. The causes of spelling disability include a variety of physical, intellectual and emotional factors. Errors may be due to mispronouncing the words, poorly receiving words, inaccurately remembering the letter sequence in words, and to faulty training in phonics. Much disability is due to inadequate and poorly motivated practice.

In learning to spell a word, visual, auditory and kinesthetetic modalities should be employed. In general, it is preferable to have pupils write the words they are learning to spell, rather than to spell them orally. In life situation, word spellings are written not spelled orally, The Fernald tracing method can be used to advantage with pupils who have poor visual memories or who inaccurately perceive words.

Secondary schools are beginning to devote increased attention to the problems of poor spelling among their pupils. For this purpose,
numerous remedial procedures and programmes are being utilized. Evidence from these programs, as well as from case studies which have been made, clearly indicates that the spelling levels of pupil can be significantly raised when appropriate methods are employed.

Following is a brief overview of the phonological, orthographic and morphologic spelling patterns of individuals with spelling difficulties.

1.3.4.1 Phonology, Orthography and Spelling Disabilities

A central tenet of the phonological deficit view is that these individuals compensate for their phonological weakness by relying heavily on visual memorization of orthographic patterns as compared to younger spelling-matched controls. Individuals with spelling disabilities should produce a low proportion of spellings that reveal a sensitivity to phonological structural and a relatively large proportion of spellings that reveal sensitivity to orthographic structure.

There have been few in depth investigations as comparing individuals with spelling disabilities and spelling level controls on knowledge of different types of orthographic patterns. One of the most detailed study is that of Pennington et. al., (1986), who found that individuals with spelling disabilities were no better than spelling level controls in their knowledge of simple orthographic patterns (e.g. the beginning of cake cannot be spelled with ck), but were superior to controls in the knowledge of complex orthographic patterns (e.g. the correct doubling of the p in opportunity and the use of phys in physician).

1.3.4.2 Morphology and Spelling Disabilities:

In this view, individuals with spelling disabilities have particular difficulty in appreciating the morphological structure of English words and how this structure is represented in spelling morphology. The idea is that these individuals may progress in a qualitatively normal manner although slowly, in their ability to represent the phonological structure of words in writing. However, they come to an impasse when
they are faced with words whose spelling, in their repertoire of strategies does not include the morphological strategy that is available to normal children, or this strategy emerges much later for them than it does for normal children. As a result, children with spelling difficulties have extreme difficulty on certain types of words.

As children begin to grasp the alphabetic principle, their spellings reflect active (though often imperfect) attempts to symbolize the phonological structure of spoken words. With development, they incorporate knowledge of orthographic patterns and morphological information into their spelling repertoires. Knowledge of potential of understanding young children’s mis-spellings according to various linguistic influences can inform remediation approaches that target the child’s ability to segment spoken words into their phonemic component and select the appropriate spellings based on orthographic and morphological rules of the language. These skills can be taught through a linguistic task (e.g. phonological and morphological awareness task) that engage the child in reflection about language structure (Apel and Masterson, 2001; Treiman, 1998), and systematic exposure to common spelling-sound patterns of the language (Brown et al., 1996).

With in this approach, it is advisable to bear in mind that spelling development does not proceed in a homogenous fashion. For example, children who have mastered the names of letters’ sound with equal case, will spell some orthographic patterns (e.g. – ake as in sake) more readily than others ( afe as in safe) and will find certain morphological patterns (e.g. tuned) easier to spell than others (e.g. sign). In this sense, early spelling development is guided by linguistic factors. Moreover, fine-grained linguistic analysis of spelling errors can help one to understand the differences that may exist between normally developing children and children with spelling disabilities. Examination of the linguistic characteristics of the system enables practitioners to understand why developmental differences exist and to identify the “trouble spots” that will likely require particular
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attention in the remediation process. Thus, for example, phonological awareness training tailored to a given child’s specific obstacles (e.g. nasals in final consonant clusters) may be effective. It is this type of pattern based approach (Apel and Masterson, 2001) that may best equip the child with the skills required for maximum spelling performance.

1.3.4.3 Types of Spelling Disability


These are described as under:

DYSPHONETIC DYSLEXIA (PHONETICALLY INACCURATE SPELLINGS). These errors include the correct letters but the letters are placed in bizarre positions, such as ronaeg for orange; lghit for light; heows for whose. This type of error reflects a primary deficit in sound symbol integration. Students with this problem read and spell primarily through visualization (intervor for inventor and wirters for writers) This is also sometimes called “auditory” dyslexia because it relates to the way the person processes the sound of language.

These children have difficulty in phonetic analysis (difficulty in phonemic route), rely on visual sight vocabulary when reading, their spelling lacks phonetic regularity, their spelling has bizarre letter combinations and is unintelligible to the average reader (often make spelling reversals). Typically they often look at the first and last letter and the length of the word and then guess (monkey” for “money” or stop for “step”).
DYSEIDETIC DYSLEXIA (PHONIC – EQUIVALENT ERRORS)

These misspellings include mistakes such as lisn for listen, atenchen for attention, Pese for pease, det for debt and shofer for chauffer. This type of error reflects a primary deficit in the ability to perceive and recall whole word as gestalt. Students with this problem read and spell primarily through the process of phonic analysis. This type of dyslexia is also sometimes called ‘surface dyslexia’ or ‘visual dyslexia’.

These children usually have a very low sight vocabulary, poor visual memory, poor perceptual skills, letter and words reversals. (“dig” for “big”, saw for “was”), their spelling is highly phonetic, they have strength in phonic analysis, their misspellings are intelligible to the average reader and they have difficulty learning words visually.

This type of child is often a very slow reader who often will try to sound out familiar as well as unfamiliar words. They spell by ear and spell the words as it sounds.

Their spelling words while usually recognized (“tak “ for “talk”, “bisnis” for “business”).

DYSPHONETIC-DYSEIDETIC DYSLEXIA (MIXED, BOTH KINDS OF ERRORS)

Students with these error patterns make both types of errors and they are considered the most severe cases. The dysphonetic dyseidetic reader has a weakness both in whole word and phonic analysis. Their reading errors include wild guesses (“fish” for “father”) and word reversals “no” for “on”. Their spelling is usually phonetically inaccurate and often bizarre (‘rit’ for ‘faster’). (Lerner, 1985).

1.3.5 Spelling Instructions

Spelling instruction should be comprehensive, individualized and based on a foundation of research evidence. It is also critical to remember that the development of this skill is not an end, spelling is an integral part of writing process, not a discrete skill.
The language arts are highly interrelated and basic skill deficiencies in one area, for example, poor spelling often hampers student’s ability to communicate freely through the written words, thus students need considerable practice in applying their spelling skills by writing. A proposed spelling program should provide practice designed to ensure that skills learned in isolation can be used successfully during writing.

In spelling instruction as well as in instruction in other content areas, students are more often told what to study than how to study. Yet, it is becoming increasingly apparent that many students lack metacognitive knowledge of effective learning and study strategies (Brown, 1978; Duell, 1986; Flavel, 1985; Snowman, 1986). While learning and study strategies can probably be improved with training (Duell, 1986), educational research workers must first determine which strategies are effective for learning in a particular content area.

Spelling deserves to be taught in its own right not just as an adjunct to reading and writing. In fact, one can argue for the primacy of spelling knowledge in learning to read and write. If a child can spell a word, he or she can usually read the word, although being able to read a word does not necessarily predict accurate spelling. Why does spelling knowledge relate so well to good reading, but not the reverse?. The answer is simple as well as complex.

The simple answer is that correct spelling requires a complete representation of the sound letter connections in the word, whereas correct reading of words often can be based on a partial representation of letter-sound connections, partial because only the beginning and ending letters may be fully considered.

The complex answer is that spelling knowledge is an amalgam of orthographic knowledge (an understanding how one’s writing system works) and phonological awareness (an understanding of the sound structure of one’s language). Ehri (1992) explains the interdependence of spelling and reading in the following way: visual phonological
connections are made when letters in spelling are processed as symbols for phonemes in the pronunciations of specific words. As a result, spellings become amalgamated to pronunciations and are retained in memory as orthographic "images" of the words, that is, visual letter-analysed representations. These representations also become amalgamated to meaning in memory. It is this amalgam that is accessed directly when sight words are read and recognized via this connection. The English language has only 26 symbols (letters) to represent from 44 to 52 speech sounds called phonemes. The number of phoneme varies because vowels, in particular, are subject to regional, dialectal, and individual differences in speech production. The English orthography evolved by taking words from various historical times and changing them starting from the tenth century till it got standardized in the second half of the eighteenth century. We are thus faced with a diversity of spellings for the same sounds, and conversely, differing pronunciations for the same configurations of letters.

Many people think that spelling is memorizing all the words in a dictionary that would truly be a daunting task. However, we have a useful and efficient alphabet. In English, there are patterns, principles, and rules for organizing spelling words. Students can use these rules as an aid in spelling unknown words. For the progress of spelling instruction, it is best to start with the words that have one to one correspondence. By mastering these easily, students feel comfortable, confident and successful. And they are developing the knowledge with which to spell nearly half of the words they will encounter in English.

Focusing on word meaning is an important part of spelling instruction in the upper elementary grades. The way to unlock word meaning is by knowing a word's spelling. By knowing its spelling, students know its pronunciation how to read the word, and its meaning. To be a good reader, a student must first unlock the meaning of words because that unlocks the meanings of sentences,
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paragraphs and the whole text. So, through spelling instruction, teachers are helping students become independent readers by providing word study that enables them to venture independently into a broad variety of text reading.

Spelling instruction should emphasize these principles:

♦ Knowledge of sounds, letter sound association patterns, syllables and meaningful parts.

♦ Multisensory practice

♦ Systematic, cumulative study of patterns

♦ Memorizing a few “sight” words at a time

♦ Writing those words correctly many times

♦ Using the words in personal writing

(http://www.interdys.org)

Spelling instruction should be fun, it should not be dull. Students can become word pattern sleuths, investigating samples of words to form hypotheses about orthographic rules. They can develop knowledge through word sorts and spelling games; and master rigorous spelling rules and pattern through engaging activities that really make learning stick. The knowledge they gain through instruction enhances their reading and writing. By knowing how to represent the phonemes in speech with the correct orthographic symbols, students are able to automatically recognize words in text and effortlessly produce their spellings in writing. Spelling instruction makes for better readers and writers. (learning to read and write both are two sides of same coin. When student understand this, it reinforces their desire to learn more. It helps construct that all important learning cycle in which success breeds success.

4.3.6 Remedial Techniques

Pupils learn to spell by writing spelling. As with all other learning, however, pupils must be highly motivated if greatest
progress is to be made. Pupils should, therefore, be made aware of the social consequences which results from being unable to spell as well as rewards accrued to those who spell correctly. Pupil use four types of images in learning to spell a word as follows.

i) visual or the way the word looks

ii) Auditory or the way the word sounds

iii) Speech motor, or the way it feels when spoken.

iv) Hand motor, or the way it feels when written [Simmons and Bixler, 1940].

Some pupil rely more heavily or one type than on another. The remedial work should assist the pupils to use as many types as possible. In learning a new word, it is good to plan.

Spelling accurately not only enables the child to be a more proficient reader and writer, but also enhances that child’s self concept. Conversely, a child who has difficulty spelling also usually experiences difficulty reading and writing and may perceive himself as ‘not smart’. Spelling in fact has little, if any, correlation with intelligence. Spelling is, however, a developmental cognitive process.

When we observe the spellings of children with, learning disabilities, we usually notice that they are using early stage spelling skills. Spelling problems occur in children who, for whatever reason, have weak visual memory skills and delayed or poor sound symbol correspondence skills. Inability to read words correlates highly with inability to write those same words when dictated. Poor recall of the spelling rules, or generalizations, also significantly effects spelling sources. To assist children in growth in their spellings, teachers of children with special needs use many of the following techniques.

Reading and Writing: Children will learn to spell by reading and writing. When they are exposed to words over and over again, especially in a context, their recall of words spellings is generally improved. Children with learning disabilities need the same
opportunity, although their acquisition of accurate spellings, as seen in their spontaneous writing often takes longer to master, and there truly are some words that some children in this population may never master.

However, frequent interaction with words is the key and in a meaningful context is preferred.

**Drill:** We all recognize that there are so many words in our language that do not follow the rules of spelling. Children with learning disabilities in visual processing and memory have a particularly difficult time memorizing these words, many of which we refer to as "sight words". Repetition of visual input is essential to the acquisition of these words. This can be accomplished in many ways, and some of those ways are detailed below. While drill method (affectionately called "Drill and kill" by many teachers) does nothing to contextualize these words. It does provide an opportunity for additional exposure and practice for commonly misspelled words. It has its place in the ‘big picture’ but should never be used as the only method of teaching sight words. Drill is often done using flash cards of individual words. Expand the use of flash cards and trace over each letter with some glue. This provide a tactile input as well.

**Language Experience Approach:** Just as the child’s own language become his beginning reading material it also becomes his vehicle for acquiring proficiency in spelling and writing. Skills are taught in a context created by the child, which, as we know, is very likely to engage the child’s attention and interest in doing its work. In this approach a child dictates a story as the teacher scribes. The teacher encourages the child to participate in the writing by prompting the child with questions such as, “what letter would that word begin with?” and “Does this look like the way I should spell (dog)?” Eventually, the child will assume more responsibility for the writing of his own stories filling in letters, whole words, punctuation and finally, the entire text.
The completed text can be used further to improve spelling skills, for example, the child or the teacher could cut apart the story into sentences strips to be arranged in sequence to reinforce reading, and consequently, spelling. Cutting sentences into individuals words, and then, perhaps cutting some words into isolated parts (such as onsets and rimes, or blends, digraphs, root words with plural ending etc.) continues to provide students with the opportunity to practice spelling.

Always using context is key. Putting letters, words or sentences back together, rereading frequently, and self- monitoring and self correcting leads to further skill improvement.

(https://peakedu.com/primary PKSV2n4.htm)

**Teaching through familiar names and words:** This is a popular and useful approach to reinforcing spelling of phonics generalizations, such as short and long vowels, and consonant sounds. In this approach, the teacher would emphasize, for example, a vowel sound with in a childs name, such as the short /e/ in Debby when attention is called to the sound made by that vowel in Debby’s name. Debby would be able to use a familiar name (her own) to assist her in recalling which vowel makes that sound when she needs to spell other word with the same sound. The teacher would prompt her by saying for example how is that word (ten) like your name.

**“Words I can write” books:** Students are encouraged by their own progress in spelling when they can see how quickly their “words I can write “books grow during the school year. As a child masters a new spelling, he adds those words to his personal book, which is organized alphabetically. This student made resource can then also be used to assist the child in independent proofreading, too.

**The “word wall” and the Print- Rich Environment:** Structuring the classroom for success is a sign of an effective teacher. Students who have difficultly spelling use their environment to assist them in their reading, writing and spelling.
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A room filled with written language (labels, book titles, bulletin, a word wall, captions, maps, charts etc.) will provide students with the confidence to take writing and spelling risks more often.

Writing aloud: This non-threatening technique involves the teacher in writing in such a way that the students are listening to her decision making as she spells, writes on the board, for example, the teacher writes: “We will not have music today.” As she writes each word, she makes comments such as, “I will begin my first word with a capital because it is the first word in sentence. The word is ‘We’. The letter that makes the /w/ sound is W. The long/e/ sound is made by the letter e. I will have a space before I begin my next word, which is ‘will’. It also begins with a /w/ sound ........“

(http://www.googles.com)

Mnemonics, or “Tricky Ways to Remember stuff” Most of us learned something in our schooling using mnemonics, and for children with special learning needs, this is a very effective way to facilitate their learning. The limitations of mnemonics are only defined by the level of creativity of the teacher.

Surely you recall the “/i/” before /e/ rule” because someone taught you a variation of the following: /i/ before /e/, except after/c/, or when sounding like /a/ as in “neighbour” and “weigh”. Perhaps you learned to spell “arithmetic “by memorizing this silly sentence. “ A rat in the house might eat the ice cream” - and then piecing together the first letter of each word to get “a –r-i-t-h-m-e-t-i-c.” Children love to giggle and learn simultaneously!

Mnemonics such as these can be great fun.

• Jingles for spelling generalizations or rules, when /c/ is followed by /e/, /i/ , or /y/, it has the sound of /s/ .
• Songs and games: (“A my name is Alice my husbands name is AI. We come from Alabama, and we sell apples!”)

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- Silly sentences: ("George Evans' old grandmother rode a pig home yesterday." = geography)
- Multisensory Spelling Activities: Multisensory approach is based on Gillingham's VAKT technique (visual, auditory, kinesthetic, tactual); TAK/v; look, say and write method; write and say etc.
- Other Miscellaneous Techniques are:
  - Teaching rules: like prefixes, suffixes and other spelling difficulties for example where should 'i' come? before 'e' or after 'e' in the word receive?
  - Transcription: By making use of visual memory.
  - Dictation: of difficult words every day
  - Looking up Dictionary: which develops a good habit of consulting dictionaries to find correct spellings.
  - Preparing a spelling book: By keeping a family of words together e.g. Read, Reader, Reading, Readable etc. and Bed. Bedclothes Bedroom, Bed time etc.
  - Preparing list of words often misspelt:
    In this a list of words which are often misspelt is prepared, so that they can be repeated time and again through various activities.
    - Peer Tutoring: This means assistance provided by some bright children to those who need help and are not so intelligent.
    - Use of teacher assisted instructions: In this the teacher gives instruction in learning to form a new word or the which are often misspelt.
    - Use of Computer Assisted Instructions (C.A.I): These are widely used for various purposes. They can also be used for teaching spellings.
    - Mnemonic Devices and Discovery learning: This involves presentation of maps and charts and there are certain hidden parts in them, which the students have to discover and identify.
Spelling games: There are many spelling games which prove fun for the children and at the same time help in remediating spelling disabilities such as:

- Word building: From one word many words can be made.
- Spelling Bee: In this game class is divided into groups. Words are given to both and spellings are asked from each group.
- Completion game: In this game, class is divided into two groups. One group speaks out a letter, second adds another and so on. When a group fails to supply a letter, in their turn this group loses one point.
- Memory game: In this game teacher writes 5-10 words on black board and then reverses it and then asks the students to reproduce them from memory.
- Forming Associations: In this game a list of words is prepared which are often misspelt and then tests on these particular spellings are given or words having same type of speaking sounds like rat, cat, bat, etc.
- Look, say and write method: In learning a new word, it is good plan to have the pupil-
  - Look at the word
  - Say the word
  - Write the word while saying the letters.
  - Use the word in sentences.
- Spelling drills: In this spelling are repeated a number of times till they learnt. Drills can be oral, motor or visual.
- Use of flash cards: In this game movable strips are flashed for a very short time and students are asked to build words with the help of them.
- Identification of correct spellings: In this students find out the errors in the misspelt word and then they correct it.
- Jumble words: The game involves rearrangement of letters to form a proper word and then which can be appropriately used in a sentence. (Anagrams) for example MILES- SMILE.

- Cross Words: In this game clues are given to form a word on a check board.

- Adding missing letters: Here blanks are left in a word and the students are asked to add missing letters to form a complete word.

- Figure matching: Here the students match the figures with particular words.

- Letter cancellation: In this game a list of words is given to the students having some extra letters in them. Students have to cancel the extra letters and make the correct words.

- Free hand drawing: This involves kinesthetic ability of the students as they have to draw diagrams related to subject specific spellings.

- Clay letters: The student uses letters formed out of clay to make up reading words. The student should say the names and sounds of the letters as she makes them and then read the whole word out loud.

- Shaving cream writing: Put a dollop of shaving cream on a cookie sheet or pie pan. The student spreads the shaving cream over the surface of the container and then writes the reading words into the shaving cream. Again, she should say the names and sounds of the letters as she writes them and then read the whole word out loud. After reading the word, the student can erase it by rubbing her hand over it to get ready for the next word. Students can also do this with finger point on sand.
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- Sand paper words: The student places a thin strip of paper over some rough sand paper. Using a thick crayon, have the student write his word on sheet of paper. After he's written it, have him trace the word while spelling it out loud.

- Plastic Magnetic Letters: The student makes words with the plastic letters. To practice segmenting. She should say each letter sound in sequence as she selects the manipulative letters. Then, she should say the sound the ‘fast way’ to practice blending.

Multisensory method in spelling as suggested by Fitzgerald (1955): When the children are asked to study spelling lessons, they are frequently at a loss as to what to do. The following five steps are suggested by Fitzgerald (1955) as a multisensory approach that utilizes the visual, auditory, kinesthetic and tectile modalities.

a. Meaning and Pronunciation: Have the child look at the word, pronounce it correctly, and use it in sentences.

b. Imagery: Ask the child to “see” the word and say the word. Have the child say each syllable of the word, say the word syllable by syllable, spell the word orally, and then trace the word in air., or over the word itself, with a finger.

c. Recall: Ask the child to look at the word and then close his eyes and see the word in his mind's eye. Have him spell the word orally. Ask him to open his eyes to see if he was correct. (If an error is made he should repeat the process).

d. Writing the word: The child writes the word correctly from memory, check the spelling against the original to see if it was correct, and then check the writing too, to make sure every letter is legible.

e. Mastery: The child covers the word and writes it. If she is correct, she should cover and write it two more times.
• Auditory Perception and memory of letter sounds: Provide practice in auditory perception of letter sounds, strengthen knowledge of phonics and structural analysis and develop skills in applying phonic generalizations.

• Visual perception and memory of letters. Help the child strengthen visual perception and memory so that the visual image of the word can be retained. Materials should be clear and concise, and the child should be helped to focus attention on the activity. Letting the child use a pocket flash night might be helpful as an aid in focusing attention. To develop speed of visual recognition, a tachistoscope can be used to expose material from $\frac{1}{2}$ second to $\frac{1}{100}$ second, Flash card can be used as an aid in developing speed.

• The Test Study-Test vs. the “study test” method: In teaching spelling to a classroom, there are two common approaches: The “test study test” and the “study test” plans. The test study test method uses a pretest, which is usually given at the beginning of the week. The child then studies only those words that were missed on the pretest. This method is better for older children who have fairly good spelling abilities since there is no need to study words they already know. The study test method is better for the young child and the child with poor spelling abilities. Since too many words would be missed on a pretest, this method permits the study of few well selected words before the test is given.

• Listening centers and tapes: Spelling lesson can easily be put on tape. After the child has advanced to a level that would enable working by oneself, spelling lessons can be completed in a listening laboratory. The use of earphones allows for individualization of instruction and for many children the earphones provide an aid to block out distracting auditory stimuli.
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- The Bad spellers Dictionary: (Krevisky and Linefield 1963) It is useful for poor spellers, words are arranged alphabetically according to their common misspellings.

Initial spelling instruction (Dinsmore and Isaacson, 1986)

- Teach sounds of letters first and names later. Don't teach both at the same time
- When teaching letters, begin with dissimilar letters (e.g. m, t, not b, d)
- When teaching words, begin with dissimilar words (e.g. map, he; not saw, was)

1.4 RATIONALE OF THE STUDY

Language fulfills several functions: it provides the individual with a means to communicate and socialize with other human beings; it enables the culture to be transmitted from generation to generation; and it becomes a vehicle of thought. Langer (1958) describes these qualities of language well:

Language is the most momentous and at the same time the most mysterious product of the human mind. Between the clearest animal call of love or warning of danger and man's least trivial word, there lies a whole day of creation- or in modern phrase, a whole chapter of evolution. In language we have the free accomplished use of symbolism, the record of articulate conceptual thinking; without language there seems to be nothing like explicit thought whatever.

Language makes use of words and words make use of alphabets. Spelling refers to the formation of words through a traditional arrangement of letters. In general spelling instruction is introduced at the beginning of grade two or at the end of grade.

The ability to spell is essential because it allows the child to read correctly what is written. A sequence of alphabets in a word, when arranged can produce a word that has a different meaning. A
particular word can have a sound similar to another one, with a different spelling and a different meaning e.g. soul, sole. Word represents an integral combination of sound and meaning. So spellings of a word sound can be different in different contexts. All the same, spelling sequence is important.

Spelling is one curriculum area in which neither creativity nor divergent thinking is encouraged. Only one pattern or arrangement of letter is accepted as correct, there is no compromise or leeway.

Spelling is such part of the school curriculum that is needed in all subjects and though the child may be knowing the answer but due to poor spelling may not be able to communicate effectively what and the way he wants to. So, remediating spelling errors for overall improvement is very important.

The children having problem in spelling will not be able to write correctly. They will not understand the context properly. Lack of spelling sense also makes reading difficult. Such children, hence, will lack, interest in the subject. Thus they will not be academically sound. Learning disabled students are likely to send and receive negative verbal messages more than their normal counterparts (Bryan and Bryan, 1978). Since the problem of making mistakes in spelling pervades all areas of school curriculum, they receive these negative messages from many corners. Hence improving spelling will build up confidence in the child.

Various school teachers admit that spelling errors are very common among the children of lower classes. So, it becomes in the present context, even more important to investigate effectiveness of various techniques to improve spelling performance. Spellings knowledge will improve reading, understanding and hence gaining knowledge tremendously.
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Not many studies could be traced on spelling disabilities while scanning literature more so in Indian context. Thus the study of the present problem assumes importance.

1.5 STATEMENT OF THE PROBLEM

The problem is stated as under:

"Effectiveness of different remedial measures to improve spellings of fourth graders with learning disability".

1.6 OBJECTIVES OF THE STUDY

The study was carried out with the following objectives:

(i) To standardize spelling test to use in identification of spelling disabled children.

(ii) To identify spelling disabled children from regular school going children

(iii) To prepare remedial measures to reduce the spelling disability.

(iv) To administer remedial measures to the identified children.

(v) To study the effect of remedial measures to ameliorate spelling problems.

(vi) To compare the relative effectiveness of various measures in remediating spellings.

(vii) To assess the stability of gains due to experimental treatment via delayed post tests.

(viii) To examine whether anticipated changes due to remediation in spellings are transferred to performance in English.

(ix) To examine the difference in the number of trials taken to learn spellings of equal magnitude in three groups.

1.7 HYPOTHESES

i) There will be a significant difference in spelling performance of subjects at pre test and post test level in phonetic group.
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ii) There will be a significant difference in spelling performance of subjects at pre test and post test level in visual group.

iii) There will be a significant difference in spelling performance of subjects at pre test and post test level in mixed group.

iv) There will be no difference in gains at post test level for the three groups i.e. phonetic, visual and mixed.

v) There will be no difference in performance at post test level and delayed post test levels.

vi) There will no difference in achievement in English in general before and after the treatment.

vii) There will be no difference in the number of trials taken to learn the spelling task of equal magnitude in the three groups.

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i) The present study was delimited to CBSE schools.

ii) Due to the elaborate identification procedure sample size was limited to 39 students.

iii) The study was limited to geographical area of Chandigarh only.