CHAPTER I

INTRODUCTION

"The destiny of the whole world depends on the little children. If you want to see the silver lining on the horizon it is not you and me, but the children who have to be spiritualized". (Swami Sathyananda Saraswati, 1977)

The educational scenario in India is meretricious. Everyone speak of education for all; but in reality a majority of the students remain academically backward. Their number is alarmingly high at all stages of education. In higher education, especially in professional courses, where there is much competition, the low performing students are pushed out. Education is, thus, the monopoly of a handful of able students. The low performing students labeled as the learning disadvantaged or learning disabled become ossified.

1.1 LEARNING DISABILITY

Learning disabilities is a general term that describes specific kinds of learning problems. Learning disability varies from person to person. Until now in India, there is no practice in general education to identify the learning disabilities and to provide special assistance. Unlike other disabilities, learning disabilities, is the hidden invisible handicap, which cannot be spotted until child enters the formal schooling. This is because school focuses on the various things that may be difficult for the child- reading, writing, and mathematics, listening, speaking and reasoning. The children are expected to be high scorers in school. Poor marks in examinations indicate that the children suffer from a learning problem and they are labeled as underachievers. Some underachievers have emotional or behaviours problems and

may not ne keen to make an effort to get good marks. Some others on schools are unable to produce good marks because of their physical or intellectual impairments. But, a large number of children have normal or above IQ, yet cannot get good marks. This discrepancy between the children's good intelligence and their poor academic performance is the nucleus of the matter in learning disability. Many educators and personal are still confused about the concept of learning disabilities. They do not see it as a neurological disorder. Poor academic performance of the child in school is related to organic and biological factors, genetic factors and environmental disturbances. Thus, poor marks as one of the symptoms in identifying learning disorder and should be analyzed scientifically to discover its underlying cause and a remedy to enable the child to perform better.

Children with learning disabilities find seemingly natural, everyday skills such as dressing, buttoning, tying, labeling objects, noticing things in the environment, difficult to learn, even with good stimulation. They often need additional training in basic skills such as reading, spelling, language and arithmetic, but the regular curriculum focuses more on various content areas that demand the application of basic academic skills rather than their acquisition. The learning disabled do not profit from the experiences and guidance provided by parents, pre-school teachers and others because they have difficulty in processing certain types of information. Yet, children with learning disabilities are not delayed in all aspects of development. In fact, many do as well as or better than their peers in certain areas.

The learning disabled shows a discrepancy between the school performance expected of them on the basis of their potential and the performance they actually produce (Ross, 1977).

A learning disability doesn't disfigure or leave visible signs that would invite others to be understanding or offer support. It is a disorder that affects people's ability to either interpret what they see and hear or to link information from different parts of the brain. These limitations can show up in many ways-as specific difficulties with spoken and written language, co-ordination, self-control and / or attention. Such difficulties extend to school work and can impede learning to read or write, or to do mathematics. Learning disabilities can be lifelong conditions that, in some cases, affect many parts of a person's life, school or work, daily routines, family size & sometimes even friendships and play. In some people, many overlapping learning disabilities may be apparent. Other people may have a single, isolated learning problem that has little impact on other areas of their lives.

All students learn from experience. Those with learning disabilities need to exercise their judgment, make mistakes, self- identity them and correct them. Learning new information in a new setting, such as a college classroom or dormitory, can be frustrating. Set-backs are an inevitable part of the learning process, but these can impair self-esteem, which is essential to take responsibility for one's life. Self-esteem is built slowly. Students need explicit strategies to monitor and restore their self-esteem. Some students have difficulty in understanding or making themselves understood by their peers, families and instructors e.g. some learning disabilities may affect timing in conversations or decisions about when to study and when to socialize. Students need to really think about how motivated they are.

Children with learning disability are the children with special needs. Once learning disability is identified, three categories of assistance such as psycho-social, technological and educational are to be provided (Sandra, 1998).

From the point of view of education, the phrase learning disability can be defined as a kind of behavioral deficit almost always associated with academic performance that can be remedied by precise individual instructional programming. Educationally a learning disabled is one whose achievement is less than his expected level of achievement.

Factors to rule out learning disorder are considered to be low intelligence, physical difficulties such as poor vision or hearing problems, insufficient knowledge of a language, as in the case of an individual whose native language is not English, inadequate development of pre-reading skills (e.g. letter knowledge, letter sound correspondences) prior to entering school. (Manivannan, 2008)

1.2 . MEANING OF LEARNING DISABILITY

'Learning disability' is not a diagnosis in the same sense as "chickenpox" or "mumps". Chickenpox and mumps imply a single, known cause with a predictable set of symptoms. Learning Disability is a term that covers a pool of possible causes, symptoms, treatments and outcomes. Partly because learning disabilities can show up in so many forms, it is difficult to diagnose or to pinpoint the causes. And no one knows of a pill or remedy that will cure them.

The term learning disability (LD) is used to refer to a range of neurological conditions that affect one or more of the ways that a person takes in, stores, or uses information. Learning disabilities are specific, not global, impairments. For example, a person could have a learning problem which inhibits her ability to understand written information though the same information when delivered orally, might present no problem.

"LD is used to describe a specific type of exceptional child. It is not a generic term for all chinches who have learning problems in school. They explain various terms associated with it:

- Learning disability refers to one or more significant deficits in essential reading process requiring special education techniques for remediation.
- Children with learning disability generally a discrepancy between expected and actual achievement in one or more areas such as spoken, read or written language, mathematics and spatial orientation.
- The learning disability referred to is not primarily the result of sensory, motor, intellectual or emotional handicap or lack of opportunity to learn.
- Significant deficits are defined in terms of accepted diagnostic procedures in education & psychology.
- Essential leaning processes are those currently referred to in behavioral science as involving perception, integration and expression either verbal or nonverbal.
- Special educational techniques for remediation refer to the educational planning based on the diagnostic procedures and results. (Myers and Hammill, 1969)

All involved in the field of Learning Disabilities do not come for consensus in existing definition of learning disability. Interestingly, there is no clean and widely accepted definition of Learning Disabilities. Because of the multidisciplinary nature of the field, there is ongoing debate on the issue of definition and there currently at least 12 definitions that appear in the professional literature. However, most definitions describe learning disabilities as a group of disorders that affect of the

ability to acquire and use listening, speaking, reading, writing, reasoning, or mathematics skills (National Adult Literacy and Learning Disabilities Center, 1995)

These difficulties vary in severity. Learning Disabilities may persist across the life span. Such conditions may affect one or more areas of a person's life, including learning, work, social and emotional functioning.

Federal regulations for implementing the Rehabilitation Act and the Americans with Disabilities Act use term "Specific learning disabilities"-disorders in one or more central nervous system processes involved in perceiving, understanding , and using verbal or nonverbal information "Specific" indicates that the disability affects only certain learning processes. Although persons with Learning Disabilities consistently describe themselves as being labeled stupid or slow learners they usually have average or above average intelligence. (Gerber and Reiff, 1994),

1.3. DEFINITIONS OF LEARNING DISABILITY

There are many definitions prevailing in the field of Learning disability and a few definitions are presented for our clear understanding.

Ross (1976) has given the following definition of learning disability."A learning disability is present when a child does not manifest general mental subnormality, does not show an impairment of visual or auditory functions, is not prevented from pursuing educational tasks by unrelated psychological disorders and none the less, manifests an important impairment in academic achievement."

Bateman (1965) defines

That a child with learning disabilities is "one who manifests on educationally significant discrepancy between his apparent capacity for language behaviour and his actual level of language functioning."

Kirk (1963) defines,

"A learning disability refers to a specific retardation or disorder in one or more of the process of speech, language, perception, behavior, reading, spelling, writing or arithmetic."

The Learning Disabilities Act of 1969 (US) defines,

Children with special (specific) learning disabilities exhibit or a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic."

The Federal Register (1977), US, published the following definition

"Specific learning disability means is 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 differ 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 asphasia. The term does not include children who have learning problem which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage."

1.4. TYPES OF LEARNING DISABILITIES

1.4.1. Arithmetic disorder

Arithmetic Disorder (Dyscalculia) is generally characterized by difficulty in learning or comprehending mathematics. It affects a person's ability to understand and manipulate numbers or understand numbers themselves.

1.4.2. Writing Disorder

Writing Disorder (Dysgraphia) is generally characterized by distorted writing in spite of thorough instruction. A student with writing disorder might experience some of the difficulties like inconsistent and sometimes illegible writing; for example mixing print and cursive, upper and lower case, irregular sizes, shapes or slant of letters ,inconsistent positioning on the page, with respect to lines and margins skills.

1.4.3. Reading Disorder

Reading Disorder (Dyslexia) is generally characterized by difficulties with the alphabet, word recognition, decoding, spelling, and comprehension. A student with reading disorder might have difficulty in, naming, learning the sequence of or printing the alphabet , memorizing non-phonetic words ,reading numbers and confusing math symbols .

1.4.4. Spelling Disorder

Spelling disorders (Dysorthographia) are generally characterized by difficulties with spelling. They stem from weak awareness or memory of language structures and letters in words. A student with a spelling disorder might present some of the difficulties, often in conjunction with poor skills in reading and / or arithmetic.

1.4.5 Auditory Processing Disorder

Auditory processing disorder describes a variety of disorders that affect the way the brain processes or interprets what it hears even though the student might have adequate hearing.

A student with an auditory processing disorder might have difficulty in listening, particularly where there is background noise or when attention is divided, understanding what is said ,recalling what they have heard or following a sequence of directions .

1.4.6 Visual Processing Disorder

A visual perception disorder involves difficulty making sense of what is seen, even though vision is intact. A student with visual processing disorder might find the following tasks challenging: Recalling and using visual information, differentiating colours, letters or numbers that are similar , recognizing objects or parts of an object, fine motor tasks, such as writing or copying ,writing within margins or on lines, or aligning numbers in math problems and so on.

1.4.7. Sensory Integration (or Processing) Disorder

Sensory Integration Disorder is associated with the ability to integrate information from the body's sensory systems (visual input, auditory input olfactory input, taste, tactile input, vestibular input (balance/movement), and proprioceptive input (position). Information from the senses are not interpreted in ways that it can be used efficiently by the brain.

1.4.8 Organizational Learning Disorder

An organizational learning disorder is a type of learning disability related to challenges with executive functions and frequently accompanies other learning disabilities. Organizational learning disorder might include difficulties in handling too much stimuli or information at one time, thinking in an orderly and logical way, distinguishing direction, or organizing materials and time.

A student with a sensory integration disorder might present some of the following difficulties:

- Extremely over- or under-reactive to senses, such as touch, sound, light, smells or anything put into the mouth
- Knowing how much physical pressure to apply to something
- Unusually high or low activity level, or rapidly moving from one to the other

- Calming oneself or unwinding
- Being easily distracted

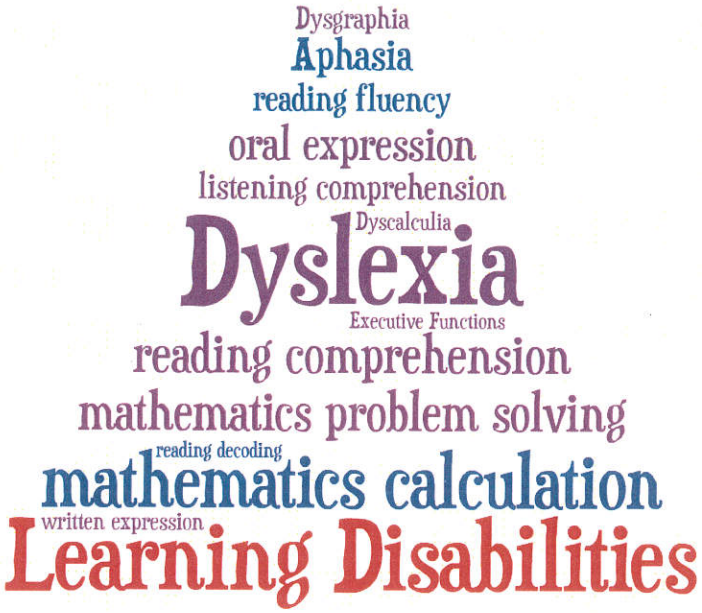
1.5. NON-VERBAL LEARNING DISABILITIES (NVLD)

Children with this disorder are unable to recognize and translate nonverbal cues, such as facial expressions or tone of voice, into meaningful information. This causes the children to be mislabeled as emotionally disturbed because of their inappropriate responses to nonverbal stimuli. It is a neurological disorder, which originates in the right hemisphere of the brain, causing problems with visual-spatial, intuitive, organizational, evaluative, and holistic processing functions.

Nonverbal learning disabilities can be tricky to recognize and diagnose. The neuropsychological characteristics of individuals with the non-verbal learning disabilities profile include deficits in tactile perception, psychomotor coordination, visual-spatial organization, nonverbal problem solving, and appreciation of incongruities and humor. Children with non-verbal learning disabilities also exhibit well-developed rote verbal capacities and verbal memory skills. They however face difficulty in adapting to novel and complex situations, and over reliance on rote behaviors in such situations, relative deficits in mechanical arithmetic as compared to proficiencies in single word reading, poor pragmatics and prosody in speech, and significant deficits in social perception, social judgment, and social interaction skills. There are marked deficits in the appreciation of subtle and even fairly obvious nonverbal aspects of communication, that often result in other person's social disdain and rejection. As a result, individuals with non-verbal learning disabilities show a marked tendency toward social withdrawal and are at risk for development of serious mood disorders. (www.google.com)

Figure 1

Types of learning disabilities



1.6. INCIDENCE AND PREVALENCE OF LEARNING DISABILITY

Estimates of the prevalence of children who suffer from learning disability vary ranging from 1 – 30% of the school population depending on the criteria used to determine the disability (Lerner ,1985),. In India, no nationwide survey on learning disability is available. However about, about two decades ago, Dr. Chawla from the All India Institute of medical sciences, conducted by the National Institute of Medical Sciences, conducted a study in some primary schools In New Delhi and found that 6% children had characteristic of brain injury resulting in a variety of learning problems.

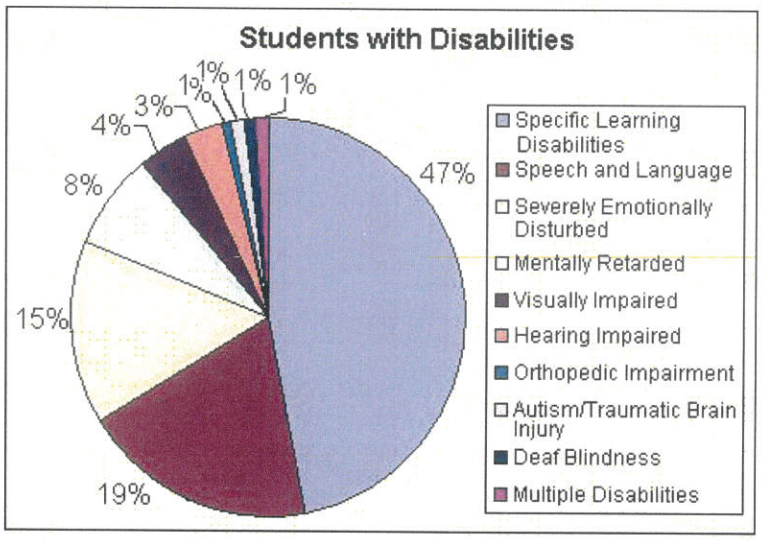
A few studies done on learning disability have shown the prevalence rate to be between 4-11%. For example, a study conducted by the National Institute of Neurology, Kerala (1997), revealed that 10% of children in the area were learning disabled. This survey was conducted in six districts of the Kerala. A survey conducted in Bangalore revealed that the 20-25% of school children had problems with academics.

It is generally agreed that 10-15% OF Children receiving elementary education have this difficulty in one or more areas of learning, constituting the major chunk of school drop-outs.

Similarly in other parts of India no systematic attempt as been made to estimate the prevalence of learning disabled children in primary schools. But considering the socio- economic status population in the rural areas, their child-rearing pattern and system of education, the percentage of learning disabled children at the primary level would not be less than 15-20. (Chadha, 2004).

Figure 2

PREVALENCE OF DISABILITIES AMONG STUDENTS.



1.7 IDENTIFICATION OF CHILD WITH LEARNING DISABILITY

The early warning signs of learning disabilities

- Delayed milestones
- Poor adjustment to environmental changes
- Excessive variation in mood and responsiveness
- Failure to see consequences of his actions

- Excessive movement during sleep
- Hyperactivity general awkwardness
- Difficulty in discriminating size, shape and colour
- Easily confused by instruction
- Low tolerance for frustration
- Overly excitable during play
- Poor social adjustments

The Child:

- Find it difficult to organize his work and is often late in submitting class work class work.
- Seems dull and slow in responding to others
- Cannot correctly recall oral instructions when asked to repeat them.
- Does not seem to listen or to understand instructions given at home or in the classroom.
- Shows excessive inconsistency in the quality of performance from time to time seems to be bright in many ways, but still does poorly in school.
- Gets easily distracted even by a slight disturbance
- Confuses between left and right.
- Gets so excited that the he cannot sit still in the classroom even for a short period.
- Does not write the appropriate letters when given the sounds.
- Does not write the appropriate letters when given the sounds.
- Does not pick out letter of the alphabet when name of the letter is called out.
- Does not match the letters when asked to do

- Finds difficulty in academic subjects. (Manivannan 2008)

1.8 SYMPTOMS OF LEARNING DISABILITY

Sometimes he is deficient in only one subject or a combination of subject. When considering these symptoms it is important to remain mindful of the following:

- No one will have all these symptoms
- Among Learning Disabilities populations, some symptoms are more common than others.
- All people have at least 2 to 3 of these problems to some degree.
- The number of symptoms seen in a particular child does not give an indication as whether the disability is mild or severe. (Manivannan 2008)

1.9 CAUSES OF LEARNING DISABILITY

No one knows what causes learning disabilities as of now. There are too many possibilities to pin down the causes of the disability with certainty. It is believed that multi various causes manifest learning disabilities. Children with learning disabilities are affected with one or more of characteristics such as hyperactivity, hypo activity, lack of motivation, inattention, over attention, perceptual disorders, lack of co-ordination, and memory disorders. By understanding the causes of LD, can go for prevention, early detection and clinical treatment. Further it would help the teachers to develop individual remedial instruction and adaptive techniques teaching and learning process. (Manivannan 2008)

1.9.1 ETIOLOGIES OF LEARNING DISABILITIES:

- Influences the neural, chemical, and functional aspects of the body.
- Accounts for traits and conditions which are hereditary.
- Are transmitted to the child from the mother and the father.

Examples of hereditary: schizophrenia, depression.

1.9.2 BIOLOGICAL INFLUENCES OF LEARNING DISABILITIES:

- Prenatal: maternal drug/alcohol use, disease, maternal poor nutrition
- Perinatal: brain damage from anoxia
- Postnatal: brain damage from accident or shaken severely, lead poisoning, and encephalitis (Manivannan 2008)

1.9.3 NEUROLOGICAL CAUSES

Efforts have been taken to identify the functions of various parts of the brain so to better understanding language and speech dysfunctions since 1900. The definitions of learning disabilities specify that ''these disorders or intrinsic to the individual presumed to be due to central nervous system dysfunction''.

- According to Lenneberg (1967), the child's language development until thirty months of age involves the entire brain, with left hemisphere dominants for language being. Damage to the left- hemisphere causes language problems.
- The structural brain differences, especially in areas of the brain involved in language processing, are associated with some is tances of dyslexia. Usually the hemisphere is. Dyslexia may be slightly larger than the right hemisphere. There may be a variation in dyslexic.
- There are three areas in brain cortex involved ing the production of speech and language i.e. two in the frontal lobe and one in the temporal lobe. Damage to any of these areas affects person's ability to use speech and language (Penfield and Roberts,1959)
- The new methods of visualizing the brain viz. computed tomography (CT) scanning and Magnetic Resonance Imaging (MRI). Evidenced no

manifestation of baring damage for dyslexic cases. This implies that dyslexia is a developmental disability which is not manifested due to brain defect.

- Several problems associated with learning disabled children considered to have "minimal cerebral dysfunction'' have been linked in the theory to the parietal lobe. The critical parietal areas referred to in descriptions linking the brain to behavior are the supramariginal and angular gyri of the dominant left hemisphere. One example is Gertmann's syndrome, the symptoms of which include dysgraphia, dyscalculia and left- right confusion.
- Electroencephalogram (EEG) linked with computer is used to record of brain wave activity. The drain's electrical activity is not differing for both dyslex and non- disabled at rest. But during language tast, the brain of dyslexic showed less electrical activity. (Bryan and Bryan,1986)

1.9.4 GENETIC CAUSES

Genetic factors are responsible for left handedness, immune disorders and learning disabilities. A few researches done on dyslexic indicate that genes play some role in many causes of dyslexic. Extra chromosome or effective chromosome may cause learning disabilities. Dyslexia may be associated with a defect on chromosome 15. A very few researches have been carried out in this area of genetic influence on learning disabilities. A lot more contributions of genetic knowledge to the field of learning disabilities will be expected from future researches.

1.9.5 TERATOGENIC CAUSES

Teratogens are toxic agents which affect fetus of the mother. Intake of anything during pregnancy passes through the placenta to the fetus. All fetuses

exposed potential teratogens will show developmental abnormalities The severity of birth defect is based on the amount of teratogens period.

a) Alcohol

Alcohol is suspected as one of the tertogens. Recent researches establish the relationship between material intake of alcohol and learning disabilities. One research suggests that drinking by pregnant women can be harmful to the fetuses they are carrying. The main symptom of 'fetal alcohol syndrome' is mental retardation in the child born of a drinking mother. If the child is not affected seriously, then the child will be affected by loss of memory and behavioral disorders. Thus, the child develops learning disability.

b) Smoking

Smoking of pregnant women affects the fetal growth. Smoking emits nicotine and carbon monoxide which are toxic agents. Nicotine and carbon monoxide reduces fatal breathing.

c) Lead

Lead exposure is another important tetragon responsible for learning disabilities. Research studies have shown that important biochemical changes will be occurred even by lower levels of lead exposure can result in altered neuropsychological behaviours, which may be exhibited themselves as attention disorders, emotional disorders of learning disabilities. High amounts of lead indoor paint and living in high lead environments (pollution) are responsible for high doses of lead exposure. Even low-level chronic exposure to lead during early life may be responsible for hyperactivity.

d) N-nitroso compounds

N-nitroso compounds are pervasive in our environment. They are found in cosmetics, urban air, car exhaust, cigarette smoke and several industrial settings, including the rubber and plastics industries. They are also suspected to be responsible for learning disabilities.

e) Radiation

According to Sparks (1984), the major physical agent that can cause birth defects is radiation. Radiation during critical periods changes the chemical properties of the atoms and molecules within living cells and results in birth defects. Some of these defects may lead to learning disabilities.

1.9.6 NUTRITIONAL INFLUENCES

It is believed that an improper diet can adversely affect central nervous system functioning Many physicians suggest that vitamin deficiency may be a cause learning and behavioural disabilities, and megavitamins have been recommended as a mode of treatment According to some investigators, deficiencies of essential fatty acids which are obtained from cold- pressed vegetables, oils plus associated deficiencies of vitamins and minerals, may also lead to hyperactivity and disordered behavior.

Widespread systematic and nervous system illness, including hyperactivity and disturbed behavior, can occur through colonization with candida albicans, a fungus in the gastrointestinal track. This can be checked by putting patients on a yeast-free, sugar-free diet with some restrictions of other carbohydrates. In addition to this patients should be orally nystatil, an anti-fungal agent.

1.9.7 OTHER CAUSES

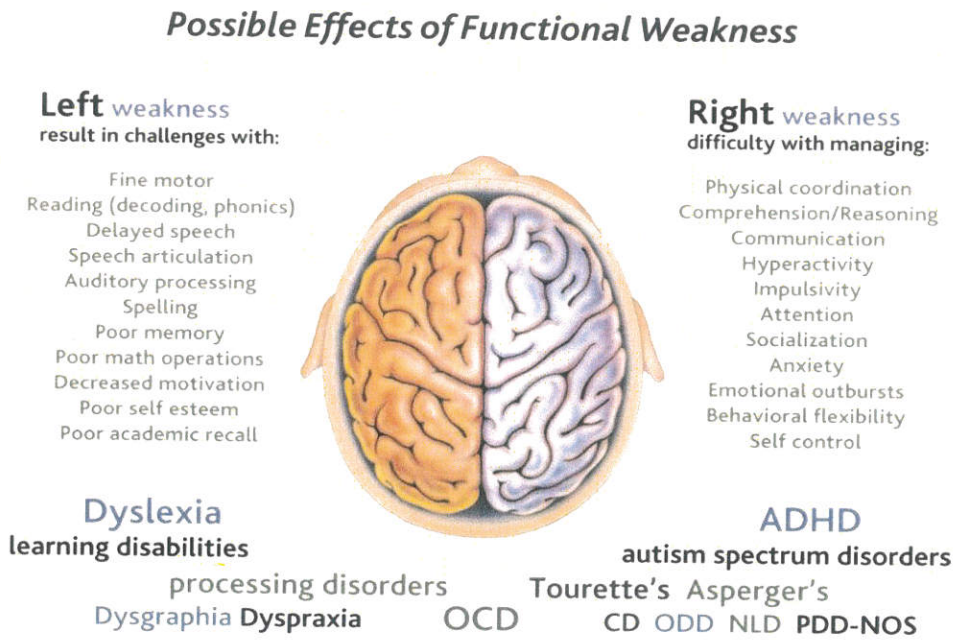
Maturational lag: some children develop and mature at a slower rate than other in the same age- ''maturational lag''.

Nervous system disorder: some children with normal vision and hearing may misinterpret everyday sights and sounds because of some unexplained disorder of the nervous system.

Gender difference: learning disabilities are more common in boys than girls possibly because tend to more slowly

Premature and injuries: children born premature and children who had medicals problems soon after sometimes have learning disabilities. Injuries before birth or in early childhood probably account for some later learning problems. (Manivannan 2008)

Figure- 3



1.10 YOGA

Yoga is not an ancient myth buried in oblivion. It is the most valuable inheritance of the present. It is the essential need of today and the culture of tomorrow (Swami Satyananda Saraswati, 1998).

It is an Indian spiritual path aimed at achieving the union with the Supreme Consciousness. Some yogis go beyond it and aim at the spiritual transformation of the entire human nature and obtaining immortality even for the physical body. A practitioner of Yoga is called a Yogi (male) or Yogini (female). Outside India, yoga is mostly associated with the practice of asanas (postures) of Hatha Yoga or as a form of exercise.

Many Hindu texts discuss aspects of yoga, including the Vedas, Upanishads, the Bhagavad Gita, the Yoga Sutras of Patanjali, the Hatha Yoga Pradipika, the Shiva Samhita and various Tantras.

Classified by the type of practices, the major branches of yoga include: HathaYoga, Karma Yoga, Jnana Yoga, Bhakti Yoga, and Raja Yoga. Raja Yoga, established by the Yoga Sutras of Patanjali, and known simply as yoga in the context of Hindu philosophy, is one of the six orthodox (astika) schools of thought.

The power of concentration is the greatest strength to awaken the mind and animate the body. When properly directed, it illuminates facts for us and brings the desired results. There is no limit to the power of the human mind. The more concentrated, it is the more power is brought to bear on one point. The powers of the mind are like rays of light dissipated; when they are concentrated they illumine said Swami Vivekananda (SriAnanda1980)

1.11. YOGA AND PHYSICAL HEALTH

Yoga is a complete science of health, which deals with the appropriate coordination between them, along with the healthy functioning of our mind. The techniques of yoga are designed in such a way that they not only maintain but also enhance the potentiality of body part, which yield good health, variety and disease – free and lasting youthfulness. In natural state, if all components of the body perform their functions adequately, that will be termed as state of health. In case of any disorder and abnormality every such part works to restore the health. A device that promotes such restoration phenomena may prove to be of great importance. Yoga is foremost of them.

There are three major subdivisions in the structural organization of the body. First subdivision, known as infrastructural group, includes skeleton, muscular and integumentary system; the second sub-division, known as control group, includes nervous and endocrine system and the third subdivision is termed 'Maintenance group' which includes the remaining system, viz. Respiratory system, digestive system, excretory system, cardiovascular system, immune system, lymphatic system and reproductive system. In the state of health, in spite of a number of variations in their structure, all these systems work in very balanced coordination. Yoga works systematically on all these systems to keep them functioning in better balance and perfect condition. Thousands of diseases and disorders have become common in the modern human age because of disorderly thoughts, actions and improper diet. Nature has provided a brain to human things. The function of the joints is to move, brain is to contemplate, to think and reflect. After death, begins are complexly deprived of this ability. It is this logical thinking that makes man extraordinary.

Many physical benefits of the yoga are to strengthen the body and make it more flexible, as well as awaken the spirit-in effect, to provide a physical, mental and spiritual system of health, yoga improves posture; increases the intake of oxygen and enhances the functioning of the respiratory, digestive, endocrine, reproductive and elimination systems. It does this through physical poses (asanas), breathing techniques and mediation practice. It is a very profound subject and although the exercises are hard work, yoga is gentle because your mind and heart are involved. When the exercises and postures are practiced regularly; it tones muscles and improves posture, movement and balance. Yoga can help reduce blood pressure and improves the efficiency of the lungs. People of all ages can do yoga, and the asanas can even be adapted for people with disabilities or special needs. Almost anyone can benefit from yoga, including the elderly, children, pregnant women and those with chronic health problems. However, people with health problems should not perform certain movements.

Much of the illness and loss of vitality are the result of bodily abuses, which we undertake knowingly or unknowingly. In today's mechanized life we spend long hours without proper air, sunlight, adequate sleep, adequate relaxation and stretching various body parts, imbalanced diet and unplanned activities, which lead to unending series of troubles and ailments. Yoga can do much more restore normal biological, biochemical and mechanical activities of body system, even after quite unhealthy life style for years together.

1.12. YOGA AND MENTAL HEALTH

Regular practice of yoga not only to keeps the body healthy and fit, but also prevents either of the physical, mental and emotional imbalances due to various reason in our day-to-day life.

Yoga and mental health are closely interrelated. Persons practicing yoga experience tremendous changes that result in a deep effect on their mental health. Reduction of tension and restoration of flexibility are some of the mental health benefits derived from yoga. Yoga helps in freeing the mind from mental disturbances. Yoga also steadies the mind. Decrease in nervousness, irritability and confusion, depression and mental fatigue are some of the other mental health benefits experienced from practicing Yoga. The benefits acquired through Yoga differ from person to person as the degree of involvement differs.

Restoration of pliability is another advantage of Yoga. Yogic exercises help in renewal of mental agility. Yoga possesses the magical power to review the capacity for alertness, attention and willingness to tackle problems. Through generation of boundless energy Yoga rekindles enthusiasm in us almost throughout the day. Yoga provides a backdrop or mood of well-being and assurance that one naturally enjoys. Thus, Yoga possesses a great healing power which proves beneficial for physical as well as mental well being of the individual.

The mental benefits of Yoga include. It increases body awareness; relieves chronic stress patterns in the body; refreshes the body by reliving muscle strain; relaxes the mind and body; centers attention; sharpens concentration; and frees the spirit. (Yoginder 2015)

1.13. YOGA FOR CHILDREN

The practices of yoga not only to keep the young body strong and supple but also incorporate mental activities, disciplines that help to develop attention and concentration, and stimulate the creative abilities that are latent within the child. Imagination in children under six is usually expended on toys and fairy tales, but we also give them real things to imagine, putting them in a more accurate relationship

with their environment, making them capable of dealing with this real world. The young child is more intuitive and less conditioned than an adult and is therefore quite open, forthright, creative and, above all, capable of learning. Yoga physiology suggests this is because the pineal gland has not started to degenerate due to calcification and that yoga practices aid in the delay of this degeneration. As the child grows older and enters school, these same yoga practices augment his learning abilities at school, and the regular discipline helps the growing child to channel and direct his emotional energies in a constructive manner.(www.google.com)

1.14. YOGA IN SCHOOLS

The main purpose of education is not only to impart knowledge but also to tap the hidden talents and potentialities of the students by helping them to develop physically intellectually morally & spiritually. Yoga can help a lot by providing holistic education & keeping the body & mind healthy and free from diseases both physically & mentally yoga creates a healthy interaction and balances the various aspects of human personality. School is the best place where systematic education in yoga can begin. Yoga aims at bringing about an equilibrium of not only all systems of the body but also between mind & body. It brains both the mind & body to cope with new situations and circumstances & helps to cultivate the power of adaptation and adjustment yoga lays emphasis self- discipline and self-training which helps in raining social & spiritual values in an individual and imparting a positive attitude towards life. Regular yoga practice enhances the ability of students to concentrate to deal with impulsive behavior & to think more clearly. It offers an excellent means of physical education & exercise as well as offers students a safe & balanced way to explore their body, mind and feelings. It gives students self confidence & self discipline & the students become aware. This awareness brings about changes and growth in new &

positive directions & can blossom. This allows their activity to flow, their fears, anger and sadness to release and their trust in their inner self to shine.

Yoga develops better awareness, self control, flexibility and co-ordination. It has shown to help the hyperactive and attention deficit child. Yoga teaches students to develop a mind body connection. It will help them to their lives from a place of inner wholeness and balance, relying on themselves for strength guidance & support throughout their lives, to be able to stand on their own two felt without support.

Yoga is an important science to help evolve & transform the personality. It is beneficial for those who start early. Try incorporating yoga in school, children become better 7 more balanced individual & more balanced individual & the whole world benefits, we always hear that children are the future . (Balwant Singh ,2015).

1.15. MANTRA AND MEMORY

Memory is a great problem for children, i.e., the problem of encoding, storage and retrievel. All these process combined are known as memory. Once the problem of memory is solved the greatest problem in education is solved . If a method to improve the child's memory is found ,one can introduce something true revolution into the educational system. in order to develop the memory, children have to be guided through the path of mantra. The mantra works immediately on the subconscious and unconscious planes. With the help of mantra, Antar mouna and Yoganidra a very clear memory can be developed in children.

1.16 ASTANGA YOGA

Yoga is more than just a physical discipline. It is a way of life a rich philosophical path. Yoga has its roots about 5000 years BC as described in Vedic Philosophy and Tantras. Patanjali, great sage composed this path into a Darshan (Philosophy) in his Book Patanjal Yoga Sutra.

In Sanskrit "Ashta + anga" is Ashtanga. "Ashta" means Eight and "Anga" is limbs so it means Eight Limb path, ashtanga yoga is based on Yoga Philosophy of Patanjali.

Patanjali's yoga is known as Raja yoga, which is a system for control of the mind. Patanjali defines the word "yoga" in his second sutra (Yoga Sutras 1.2). Patanjali's writing also became the basis for a system referred to it as "AshtangaYoga" (Eight-Limbed Yoga). This eight-limbed concept derived from the 29th Sutra of the 2nd book became a feature of Raja yoga, and is a core characteristic of practically every Raja yoga variation taught today. The Eight Steps of Yoga should be accomplished sequentially.

Yama or Restraints.

There are five Yamas:

1. Ahimsa (non-violence): Ahimsa means causing no harm to any living being, including one-self, in thought, word, or deed. Non-violence is the basis of all the other yamas and niyamas. True non-violence is love.
2. Satya (truth): Satya means not only obtaining from falsehood, but also seeing the inherent good in everyone. Whenever possible, practicing periods of silence will greatly support you in this yama. Try, perhaps, to be silent one morning or even one day a week. If that is not possible, create times where social interaction is minimized, in which you speak only when necessary, with truth and sweetness.
3. Asteya (non-stealing): Asteya also means releasing the desire to possess that which belongs to another.
4. Aparigraha (non-possessiveness): We all need certain possessions. Many of us, however, not only accumulate more than we need, but continually desire

even further luxuries. Thus engaged, we disturb our peace of mind. The more simply we live, the more energy can be devoted to our spiritual practice.

5. Brahmacharya (continence, celibacy): Volumes could be said about this yama alone. Through brahmacharya in all areas of life, a seeker saves, and thus accumulates, great energy that can be channeling into his or her spiritual unfoldment. This practice is imperative for those wishing to embark upon the path of higher sadhana

Niyama or Observances.

There are five Niyamas:

1. Shaucha (purity): an impurity is anything on the physical, mental, emotional, or spiritual level that obstructs our optimal functioning. It is our impurities that stand between us and the highest realization. All the practices of yoga are designed to remove these impurities.

   Some simple examples are the various cleansing regimens of hatha yoga that help purity the physical body, and mantras that help cleanse the mind and other subtle vehicles. Again, the more work a practitioner has put into willful cleansing disciplines, the easier, swifter, and more successful is his or her spontaneous practice later on.

2. Santosha (contentment): santosha is the art of being happy with whatever life brings you. It is learning not to expect or desire more than what you need.
3. Tapas (transformative spiritual practices or austerities): we eat gold ore to burn off the dross and produce pure gold. Tapas creates the heat that purifies and strengthens our bodies our bodies and minds to make them fit vehicles for self-realization.

4. Svadhyaya (spiritual study): This is not study in the usual sense, but a deep contemplation in which this deeper knowledge is revealed to the seeker from within himself or herself.
5. Ishvara pranidhan (dedication of all one's thoughts and actions to God): This is the practice of "not my will but thine be done, O Lord." Actual practices can include any type of devotional worship, singing of devotional songs, repetition of mantras (names of God), etc. These practices purify that heart and mind. (Swami Rajarshi Muni,2006).

Asanas or Postures

Twisting, bending stretching is commonly associated with yoga and these serve a number of purposes. Postures prepare the body to sit for long periods of time in meditations and enable the overcoming of the boredom reflex. Postures stimulate the endocrine system. This system affects our emotions as well as physical needs.

Pranayama

Prana is the most important factor of the human body & which is metabolized from the foods we eat. The ability of the body is improved by this exercise. It also affects the emotions, regularize it and refines it Pranayama is a bridge between the voluntary and involuntary functions of the body. Yogis claims to be able to control metabolism reflex, and brainwave activity, events slow or virtually stop the heartbeat.

Pratyahara

A yogi at this stage is able to use the power of concentration to withdraw attention & input is blocked or ignored through an effort of will. One only hears the pounding of the heart and this explains why a yogi might want to slow or stop the heartbeat in order to establish true peace and quiet and facilitate inwardness.

Dharana

This means fixation of mind body and spirit an a common focal point. In this here, the image of the third eye is invoked to suggest the strengthening of spiritual vision to the point where it is capable of sustaining a single object for long period of time. For ex: An eye staring at an object

Dhyana

It refers to meditations or a sense of radical self-awareness to return to the metaphor of the third eye, once it has been trained to stare unblinking by at a single object for a long period of time it then turns inward upon itself, watching itself. This awareness takes place without judgement or evaluation and drives a wedge between our experience and our self. We watch or witness our own experience as through it were only virtually real, as through it were a drama or play.

Samadhi

In this condition one nor longer identifies with one's body or ego. The actions are selflessly motivated and non karmic. It guarantees that liberation will occur with death and this will take place once the consequences of past karmic action have been borne. (Balwant Singh (2015).

1.17 THE EIGHT LIMBS OF YOGA, AND HOW THEY WORK TOGETHER

The first limb consists of a set of ethics, which ensures that the yogi interacts in a harmonious way with the surrendering community. The ethical percepts are: not harm others, to be truthful, not to steal, to engage in intercourse only with one's partner and to abstain from greed

The second limb consists of observances, which ensure that body and mind are not-polluted once they have been purified. Purification in yoga has nothing to do with

Puritanism. Rather it refers to the 'Stainability' of body and mind. 'Stainability' is the propensity of the body/mind to take on a conditioning or imprint from the environment. The observances are physical and mental cleanliness, contentment, simplicity, study of sacred texts and acceptance of the existence of the Supreme Being. The first two limbs are initially implemented from the outside, and they from a platform from which practice is undertaken. Once we are established in yoga they become our second nature: they will arise naturally.

The third limb is asana. Many obstacles to knowing one's true nature are manifested in the body, for example disease, the sluggishness and dullness. The body profoundly influences and, if in bad condition, impinges on the functioning of mind and intellect. Through the practice of yoga asanas the body is made 'strong and light like the body of a lion' to quote Shri K. Pattabhi Jois. Only then it will provide the ideal vehicle on the path of yoga.

As the Yoga Sutra explains, every thought, emotion and experience leaves in a subconscious imprint (samaskara) in the mind. These imprints determine who we will be in future. According to the Brahad Aranyaka Upanishad, a long as liberation is not achieved, the soul, like a caterpillar that draw itself over to a new body in a new life.

This means that the body we have today is nothing but the accumulation of our past thoughts, emotions and actions. In fact our body is the crystallized history of past thoughts. This needs to be deeply understood and completed. It means the asana is the method that releases us from past conditioning, stored in the body, to arrive in the present moment. It is to be noted that practicing forcefully will only superimpose a new layer of subconscious imprints based on suffering and pain. It will also increase identification with the body. In yoga, identification with anything that is impermanent is called ignorance (avidya).

This may sound rather abstract at first, but all of us who have seen a loved one die will remember the profound insight that, once death has set in, the body looks just like an empty shell left behind. Since the body is our vehicle and the storehouse of our past, we want to practice asana to the point where it serves us well, while releasing and letting go to the past that is stored in it.

Yoga is the middle path between two extremes. On the one hand, we can go to the extreme of practicing fanatically and striving for an ideal while denying the reality of this present movement. The problem with this that we are only ever relating to ourselves as what we want to become in the future and not as what we are right now.

The other extreme is advocated by some schools of psychotherapy, which focus on highlighting past traumas. If we do this, these traumas can increase their grip on us, and we relate to ourselves has we have in the past, defining ourselves as we have in the past, defining ourselves by the 'stuff that's coming up' and the 'process that we are going through'. Asana is an invitation to say goodbye to these extremes and arrive at the truth of the present moment.

How do past emotions, thoughts and impressions manifest in the body? Some students of yoga experience a lot of anger on commencing forward bending. This is due to past anger having been stored in the hamstrings. If we consciously let go of the anger, the emotion will disappear. If not, it will surface in some other form, possibly as an act of aggression or as a chronic disease. Other students feel like crying after intense back bending. Emotional pain is stored in the chest, where it functions like armour may be dissolved in back bending. If we let go of the armour, a feeling of tremendous relief will result, sometimes accompanied by crying.

Extreme stiffness can be related to mental rigidity or the inability to let one self be transported in to unknown situations. Extreme flexibility, on the other hand,

can be related to the inability to take a position in life and to set boundaries. In this case, asana practice needs to be more strength- based, to create a balance and to learn to resist being stretched to inappropriate places. Asana invites us to acknowledge the past and let it go. This will in turn bring us into the present moment and allow us to let go of limiting concepts such as who we think we are.

The fourth limb is pranayama. Prana is the life force, also referred to as the inner breath, pranayama means extention of prana. The yogis discovered that the pulsating or oscillating of prana happens simultaneously with the movements of the mind (Chitta vriti). The practice of pranayama is the study and exercise of one's breath to a point where it is appeased and does not agitate the mind. (Gregor Maehle, 2006).

1.18 SUPER BRAIN YOGA - A Simple Exercise to Maximize Brain Power

Super brain Yoga is a scientifically validated method that will help to energize the brain and enchants its sharpness and clarity. It's a simple technique which purposes to increase intellectual capacity and sharpen both memory and concentration.

This practice is based on the principles of subtle energy and ear acupuncture. Basically, Super Brain Yoga allows energy from lower chakras—or energy centers—to move up to the forehead and crown chakras. When this happens, this energy is transformed into subtle energy, which is utilized by the brain to enhance its proper functioning.

Super Brain Yoga is essentially a form of acupressure and breathing technique used to balance both hemispheres of the brain. (www.google.co.in.)

1.19 SUPER BRAIN YOGA- A Tool to Fuel the Brain

Super Brain Yoga is a simple, effective technique that Integrates and balances the brain through activation of energy pathways throughout the body. These energy channel or meridians provide subtle "energy fuel" to energize the brain.

Academic Performance After Super Brain Yoga Practices

- Increased Standardized Test Scores.
- Advanced to Higher Performance Levels.
- Increased Cognitive Skills.

Behavioral Performance After Super Brain Yoga Practices

- Significant decrease in disruptive behaviors.
- Improved emotional control.
- Improved socialization skills.
- Improved self-esteem and self-confidence.
- Increased receptivity in learning and succeeding.
- Improved levels of self awareness and accountability.

"The Body is a living battery that requires constant recharging. This is done through different means, especially through the transference of Life Energy". (Master Choa Kok Sui,2005).

Recent research highlights that the success of the yoga practice stimulates acupuncture points on the ear. The ears are a major pressure point that stimulates the mouth, eyes, temples, testes, ovaries, forehead and brain. The idea behind stimulating the earlobes is that energy within lower extremities becomes stagnant and trapped. With super brain yoga, the energy takes a direct vertical line up the center of the body through the heart, then the throat, passes the tongue to the mouth and lastly the brain.

Science behind brain health shows that the brain hemispheres are oppositely, and unilaterally stimulated from the right ear and left ear. So the right ear stimulates the left brain and the left ear stimulates the right brain. When each earlobe is simultaneously stimulated, both the left and right side of the brain hemisphere becomes synchronized producing powerful brain activity

A study conducted amongst 56 middle school students experiencing academic and behavioral problems participated in the practice of Super brain yoga a minimum of twice a week. Academic performance increased by more than 21%.

Results of the study found that the practice reduced frustration in students, improved class participation, lowered anxiety and fear, improved standardized test scores, and increased collaboration with peers. Teachers observed a significant shift in student's ability to show compassion, kindness, and generosity

1.20 FUNCTIONAL ANATOMY OF THE BRAIN

The Human Brain has the following parts. 1.Cerebrum, 2.Cerebellum, 3.Brain Stem, Consists of Pones, Medulla Oblongata. Each has its own functions.

The cerebrum, which does the functions like, thinking, learning, creativity, five senses, memory, emotion, problem solving, and decision making.The cerebellum, receives messages from most of the muscles in our body. Then it communicates with other parts of the brain and then sends messages about movement and balance, back to our body. The brain stem, which regulates the heart rate, breathing, swallowing, blinking, digesting and more, it controls the basic functions of the brain.

The right and left hemispheres of the brain appear to produce different brain functions. The left hemisphere is active in linear, logical, practical, rational and time oriented activities. The right hemisphere seems to be much more spatial, creative, analogical, holistic and non-logical. The brain a masterpiece of God's creation, as an

inherent electrical potiential, which is generated within itself and distributed throughout the body.

1.20.1 BRAIN WAVES

The electrical potiential generated by the brain is measured by specialized equipment called, "Electro- encephalograph".

The EEG. Shows four types of patterns which are called the brain waves. These waves are rhythmic in nature. They occur independently on each sides of the brain waves are in synchronization makes;

- Much more brain power available.
- Learning large amounts of information very quick.
- High creativity.
- Self control over all emotions.

1.20.2 FOUR TYPES OF BRAIN WAVES

1. Beta waves,
2. Alpha waves,
3. Theta waves,
4. Delta waves.

Beta waves, which occurs at a frequency of 13 to 25 cycles per second. It is mainly seen in intense mental activity like, talking, speaking, doing work, solving problems, etc. It is also seen during tension.

Alpha waves, which occurs at a frequency of 8 to 22 cycles per second. It is a state of quiet and resting alertness. It also indicates relaxation. These waves forms at the diffuse thalamo-corticol system in the Mid-Brain, mostly these areas have the

functions of learning, memory, consciousness and abstract thinking, etc., Most intensely recorded in the occipital region of the brain.

Theta waves, which occurs at a frequency of 4 to 8 cycles per second. It is commonly seen young children. During emotional stress in adults, particularly during disappointment and frustration. It occurs in many brain disorders, most frequently recorded over the parietal & temporal regions of the brain.

Delta waves, which occurs at the frequency of 0.5 to 4 cycles per second. It is a state of deep sleep. It is also seen in very serious organic brain diseases. It strictly occurs in the cortex region of the brain.

1.20.3 BENEFITS OF ALPHA WAVES

- Benefits are more, if more Alpha waves are generated.
- There is a relaxed concentrated state of mind which makes a person are alert.
- There is a synchronization of the Right and Left sides of the brain.
- An increase in Alpha waves helps relieve anxiety and reduces stress related disorders.
- It strengthern the immune system, thereby improves the ability of the body to heal faster.
- This is effective for reprogramming our inner conscious levels.
- It is a state of high Creativity, which leads to peak performance.

Super brain Yoga practiced regularly, coordinated actively of the Left & Right sides of the Brain in a regular practitioner of Super brain Yoga, indicating Balance & Synchronization of Brain Waves.

After an interval of 15 minutes we recorded the brain waves again and found significant increase in brain wave activity, especially Alpha Wave activity. Also observed that, by doing Super brain Yoga practices, Brain waves have improved their coordination and balance between the right and left sides.

1.21 BENEFITS OF SUPER BRAIN YOGA

- It energizes and activates the Brain.
- It increases the inner peace.
- Reduces psychological stress and gives greater psychological stability.
- Grater intelligence and creativity.
- Regulates the sex drive.
- Partial cleansing and energizing effect on Chakras and Auras.
- Transformation of the lower energies into higher energies.
- Proper functioning of the brain.
- It increases the flow of Pranic energies within the body.
- Prolonged practice makes the practitioner in general, smarter and psychologically balanced.
- Spiritual growth. (Master Choa Kok Sui,2005).

Super Brain Yoga, enhanced Alpha waves in the brain and Synchronized left and right brain hemispheres Increase in Alpha waves in the brain indicated that the body has become relaxed and thus countered anxiety caused by Mathematics in the group. In addition Super Brain Yoga also synchronized left and right hemispheres of the brain and made the brain integrated. As, students having integrated brain are efficient in solving Mathematical problems by using resources of both left and right hemisphere.(Oliver, Erin Michelle, 2009).

Thus practicing Super Brain Yoga every day helps to alleviate Mathematical Anxiety and also increases scholastic performance of the students in Mathematics exam by enhancing the integration of the brain.

1.22 URBAN AREA

An 'urban area' or a city or a town, emphasis is given to the size of population, density of population and nature of work of majority of the adult males. Louis Wirth (1938:8) has said that for sociological purposes a city may be defined as 'a relatively large dense and permanent settlement of socially heterogeneous individuals'.

In India, the census definition of 'town' included (1) collection of houses permanently inhabited by not less than 5,000 persons, (2) every municipality/corporation/notified area of whatever size, and (3) all civil lines not included within the municipal units. In 1961, certain tests were applied for defining a place as 'town'. These were: (a) a minimum population of 5,000, a density of not less than 1,000 persons per square mile, (b) three- fourths of its working population should be engaged in non-agricultural activities, and (c) the place should have a few characteristics and civic amenities like transport and communication, banks, schools, markets, recreation centers, hospitals, electricity, and newspapers etc. After 1991 census, for defining towns, areas with population between 5,000 and 20,000 are called considered as small towns, those populations between 20,000 and 50,000 are considered as large towns, those with population 50,000 and 1 lakh are considered as big cities, those with more than 50 lakh people are megacities. (Ram Ahuja ,2007).

1.23 TEMPERAMENT

With flourishing support from temperament, neuroscience, genetics, developmental psychopathology and behavioural research in development, the twenty-first century promises to offer a unique new understanding of the pathways of individual growth. Temperament and personality represent two distinct but interrelated approaches to studying individuality. It is defined temperament as constitutionally based individual differences in emotional, motor and attentional reactivity and self-regulation, showing consistency across situations and relative stability over time (Rothbart and Derryberry 1981).

Rutter (1987) describes personality as the cognitive and social elaborations of temperament as they are expressed in the course of social development. By defining personality and temperament in this way, it is possible to (a) specify the domain of temperamental study, (b) differentiate it from other aspects of personality, and (c) study how temperament and experience together 'grow' personality.

(Philip J. Corr and Gerald Matthews 2009)

1.24 EMOTIONAL STABILITY

Emotional stability is the capacity to maintain ones emotional balance under stressful circumstances. It is the opposite of emotional instability and neuroticism.

Individuals who score low in neuroticism are more emotionally stable and less reactive to stress. They tend to be calm, even- tempered, and less likely to feel tense or rattled. Although they are low in negative emotion, they are not necessarily high on positive emotion. Being high on positive emotion is an element of the independent trait of extraversion. Neurotic extraverts, for example would experience high levels of both positive and negative emotional states, a kind of "emotional roller coaster".

Individuals who score low on neuroticism (particularly those who are also high on extraversion) generally report more happiness and satisfaction with their lives.

(www.wikipedia.org)

1.25 CREATIVITY

Creativity involves producing something that is both original and worthwhile. Several factors characterize highly creative individuals. One is extremely high motivation to be creative in a particular field of endeavor. A second factor is both non-conformity in violating any conventions that might inhibit the creative work and dedication in maintaining standards of excellence and self-discipline related to the creative work. A third factor in creativity is deep belief in the value of the creative work, as well as willingness to criticize and improve the work. A fourth is careful choice of the problems or subjects on which to focus creative attention. A fifth characteristic of creativity is thought processes characterized by both insight and divergent thinking. A sixth factor is risk taking. The final two factors in creativity are extensive knowledge of the relevant domain and profound commitment to the creative endeavor. In addition, the historical context and the domain and field of endeavor influence the expression. (Robert J. Sternberg & Karin Sternberg, 2012)

1.26 STUDY SKILLS

Studying is a skill. Being successful in school requires a high level of study skills. Students must first learn these skills, practice them and develop effective study habits in order to be successful. Very often the study habits and practices developed and used in high school do not work for students in college. Good study habits include many different skills: time management, self discipline, concentration, memorization, organization, and effort. Desire to succeed is important, too. (Mayland Community College, 2002)

1.27 ATTENTION

Attention is the behavioural and cognitive process of selectively concentrating on a discrete aspect of information, whether deemed subjective or objective, while ignoring other perceivable information. It is the taking possession by the mind in clear and vivid form of one out of what seem several simultaneous objects or trains of thought. Focalization, concentration of consciousness are of its essence. Attention has also been referred to as the allocation of limited processing resources.

The vast majority of current research on human multitasking is based on performance of doing two tasks simultaneously, usually that involves driving while performing another task, such as texting, eating, or even speaking to passengers in the vehicle, or with a friend over a cell phone. This research reveals that the human attentional system has limits for what it can process: driving performance is worse while engaged in other tasks; drivers make more mistakes, brake harder and later, get into more accidents, veer into other lanes, and/or are less aware of their surroundings when engaged in the previously discussed tasks. (Kathleen M. Galotti, 2004)

1.28 MEMORY

There are three types of memory that instructional designers should be aware of:

- **Sensory Memory**

When our senses are triggered by a stimulus, our brains briefly store the information. For example, we smell freshly baked bread and can only remember its scent for a few seconds before it vanishes. Even though the bread is no longer in front of us, our mind's still hold onto its impression for a short period. The brain then has the option to process it through the memory banks or forget about it. In eLearning, sensory memory is triggered by a visually compelling image, background music, or any other element that utilizes the senses.

- **Short-Term Memory**

A process that falls under the purview of working memory, which temporarily stores information when it is triggered by stimuli. Short-term memory can only hold a maximum of 7 items at one time. It also has a time limit, which is usually between 10 seconds to a minute.

- **Long-Term Memory**

After passing through the short-term memory, relevant information is moved to long-term storage. At this stage, the brain is less likely to forget important details. However, even the long-term memory can diminish over time if we don't refresh our knowledge Balance refers to an individuals ability to maintain their line of gravity within their Base of support(BOS). It can also be described as the ability to maintain equilibrium, where equilibrium can be defined as any condition in which all acting forces are cancelled by each other resulting in a stable balanced system. (Kathleen M. Galotti, 2004)

1.29 ATTITUDE

The study of attitudes has been of fundamental concern to social psychologists throughout the history of the field. Other issues may come and go, dictated by fashion in theory and research and influenced by current events, but interest in attitudes remains. This pre occupation with attitudes is easy to understand. The concept of attitudes is central to explaining our thoughts, feelings, and actions with regard to other people, situations, and ideas.

Attitudes vary along numerous dimensions, or characteristics, that have significant implications for information processing, persistence, and behavior. A continuing issue in the literature on attitude has been the relations among these dimensions; some researchers have argued that the various characteristics are distinct

and should be treated as independent, but other researchers have argued that the characteristics are interdependent and should be treated as manifestations of a smaller set of constructs. In this section, we briefly describe these dimensions and address the controversy surrounding the interrelations among them. (Melvin J. Lerner,2003)

1.30 SOCIAL ADJUSTMENT

It is general psychology and the Study of Adjustment Psychological investigation is much the same regardless of the ·field of study we happen to be interested in at the moment. There are some variations in aim, in point of view, and, at times, in methodology; but on the whole these variations are subordinate to the general interest and orientation of the psychologist, which may be stated most simply as knowledge of human nature or personality. In every investigative branch of psychology, as distinct from those that are practical or applied, we are always trying to find out more about human beings: how they act, why they act that way, what their characteristics are, how they can be changed, and so on. To this general rule, the psychology and mental health is no exception. There is no great difference, therefore, between this field of study and general psychology, which may easily be slanted toward the problem of human adjustment, as was done in the author's Introductory Psychology. Yet there is a way of emphasizing certain aspects of personality, or of mental life and behavior, that gives rise to a new point of view and a separate field of study. In general psychology, we study human personality by analyzing the behavior and mental life of man; here we are interested in what human beings are like, they perceive, think, feel, and behave. (Schneiders,1960)

1.31 INTERPERSONAL RELATIONSHIP

It is a strong, deep, or close association or acquaintance between two or more people that may range in duration from brief to enduring. This association may be based on inference, love, solidarity, regular business interactions, or some other type of social commitment. Interpersonal relationships are formed in the context of social, cultural and other influences. The context can and may and perhaps vary from family or kinship relations, friendship, marriage, relations with associates, work, clubs, neighborhoods, and places of worship. They may be regulated by law, or mutual agreement, and are the basis of social groups and society as a whole.

(www.wikipedia.org)

1.32 REASONS FOR THE SELECTION OF TOPIC

Learning disability is a general term that describes specific kinds of learning problems. Learning disability varies from person to person. Until now in India, there is no practice in general education to identify the learning disabilities and to provide special assistance. Unlike other disabilities, learning disabilities, is the hidden invisible handicap, which cannot be spotted until child enters the formal schooling. The low performing students labeled as the learning disadvantaged or learning disabled become ossified. So the researcher preferred to contribute to the children with learning disabilities and hence took the topic impact of Astanga Yoga with and without Super Brain Yoga on selected behavioural, cognitive and socio-psychological parameters among urban school boys with learning disabilities.

1.33 REASONS FOR THE SELECTION OF VARIABLES

The variables like behavioural parameters (temperament, emotional stability and creativity) cognitive parameters (study skill, memory and attention) socio-psychological parameters (attitude, social adjustment and interpersonal relationship)

are very common for students and play vital role in determining the mental health and personality traits. So the above mentioned variables were considered for the study.

1.34 OBJECTIVES OF THE STUDY

The objectives of the study were

1. To find out whether there would be any significant difference on selected behavioural parameters due to the practices of Astanga Yoga with and without Super Brain Yoga among urban school boys with learning disabilities.
2. To find out whether there would be any significant difference on selected Cognitive parameters due to the practices of Astanga Yoga with and without Super Brain Yoga among urban school boys with learning disabilities.
3. To find out whether there would be any significant difference on selected Socio-psychological parameters due to the practices of Astanga Yoga with and without Super Brain Yoga among urban school boys with learning disabilities.

1.35 STATEMENT OF THE PROBLEM

The purpose of the study was to find out the impact of Astanga Yoga with and without Super Brain Yoga on selected behavioural, cognitive and socio-psychological parameters among urban school boys with learning disabilities.

1.36 HYPOTHESES

1. It was hypothesized that there would be significant differences between Astanga Yoga with and without Super Brain Yoga and control group on selected behavioural, cognitive and socio-psychological parameters among urban school boys with learning disabilities .
2. It was hypothesized that there would be significant differences between Astanga Yoga with Super Brain Yoga and Astanga Yoga without Super Brain

Yoga group on selected behavioural, cognitive and socio-psychological parameters among urban school boys with learning disabilities.

1.37 SIGNIFICANCE OF THE STUDY

1. This study would be helpful for the middle school students to understand their behavioural, cognitive and socio-psychological parameters.
2. The students would be benefitted by identifying their own learning ability that will help to improve their study skill.
3. This study would be helpful for the students/ parents and also the school, by improving their learning abilities.
4. This study would be helpful for understanding the further need of teaching and training programs to improve socio-psychological and behavioural parameters through the yogic practices.
5. It would help to plan the relevant teaching and wellness program for the school students with Learning disabilities.

1.38 DELIMITATIONS

The study was delimited on the following aspects

1. This study was conducted only on urban school students with learning disabilities.
2. The subjects for the study were 90 students from schools in Chennai region.
3. The age of subjects ranged from 10-13 years only.
4. The independent variables selected were Astanga Yoga and Super Brain Yoga only.
5. The dependent variables for the study were behavioural parameters (temperament, emotional stability and creativity) cognitive parameters (study

skill, memory and attention) socio-psychological parameters (attitude, social adjustment and interpersonal relationship) only.

6. The experimental period was delimited to five days per week, minimum 60 minutes to maximum 90 minutes per day for a period of 16 weeks only.

1.39 LIMITATIONS

1. Factors like personal habits, life style, diet modification, daily routine and climatic condition that may have influence on cognitive, behavioural and socio-psychological parameters were recognized as a limitation.
2. The heredity and previous experience of the subject were not considered in this study.
3. Sociological aspect of their day-to-day life, interaction with their environment was not considered.
4. Though the subjects were motivated verbally no attempt was made to differentiate the motivation level during the period of testing.
5. Other means of training and therapies underwent by the subjects were not taken into account.

1.40 MEANING AND DEFINITION OF THE TERMS

1.40.1 LEARNING DISABILITY

Learning disability is a term that denotes a group of disorders manifested as difficulties in the acquisition and use of abilities such as listening, reading, writing, reasoning, spelling, and arithmetic or of social skills (Gerber and Reiff, (1994).

1.40.2 ASTANGA YOGA

Patanjali, the great ancient exponent of raja yoga wrote the path of enlightenment embraces eight stages, which is called as "AshtangaYoga" (Eight-

Limbed Yoga). This eight-limbed concept derived from the 29th Sutra of is a core characteristic of practically every Raja yoga variation taught today. The Eight Limbs of yoga practice are: Yama Niyama Asana Pranayama Dharana Dhyana. Samadhi.(Swami Kriyananda,2003)

1.40.3 SUPER BRAIN YOGA

Super Brain Yoga is a technique which enhances Alpha waves in the brain and Synchronization of left and right brain hemispheres (Sui, 2005).

1.40.4 URBAN AREA

An 'urban area' or a city or a town, emphasis is given to the size of population, density of population and nature of work of the majority of the adult males. It is defined city in terms of factors like: size of population, density of population, main economic system, type of administration, and some social characteristics. (google)

1.40.5 TEMPERAMENT

The synonyms of temperament are disposition, nature, character, personality, Make up constitution, complexion, temper, mind etc., "In psychology temperament refers to those aspects of an individual personality. Such as intervention or extraversion that we often regarded as innate rather than learned". Activity level intensity, regularity sensory threshold. Approach or withdrawals adaptability, persistence mood. (Kamlesh,2009).

1.40.6 EMOTIONAL STABILITY

"Emotional stability" refer to a person's ability to remain calm or even keel when faced with pressure or stress. Someone who is emotionally unstable is more

volatile, which means the person faces an increased risk of reacting with violent or harmful behaviors when provoked. (www.google.co.in)

1.40.7 CREATIVITY

Creativity is the act of turning new and imaginative ideas into reality. Creativity is characterized by the ability to perceive the world in new ways, to find hidden patterns, to make connections between seemingly unrelated phenomena, and to generate solutions. (Kamlesh ,2009).

1.40.8 STUDY SKILLS

Study skills or study strategies are approaches applied to learning. They are generally critical to success in school are considered essential for acquiring good grades and are useful for learning throughout one life. (Birsh, Judith R, 2005).

1.40.9 ATTENTION

Attention is the focusing or concentrating of psychological activity on a specific object. People see different things even when looking at the same thing. (Kamlesh,2009).

1.40.10 MEMORY

The ability to retain and revive impressions, or of recalling and recognizing past experiences. (Vivek Kumar Singh,2015).

1.40.11 ATTITUDE

An attitude is a readiness, inclination, or tendency to act toward inner or external elements in accordance with the individual's acquaintance with them. An attitude grows out of an individual's understanding and appreciation of a situation and his emotional response to it. Inner stimuli are involved. The extent to which these

inner stimuli encourage or inhibit behavior in a particular situation may be considered one's attitude toward the situation. (Lester D. Crow, Alice Crow. ,2006).

1.40.12 SOCIAL ADJUSTMENT

Social adjustment can be defined as a psychological process. It frequently involves coping with new standards and values. In the technical language of psychology, getting along with the members of the society as best as one can is called 'adjustment.'(www.google.co.in).

1.40.13 INTER-PERSONAL RELATIONSHIP

It is a strong, deep, or close association or acquaintance between two or more people that may range in duration from brief to enduring. This association may be based on inference, love, solidarity, regular business interactions, or some other type of social commitment. Interpersonal relationships are formed in the context of social, cultural and other influences. (www.google.co.in).