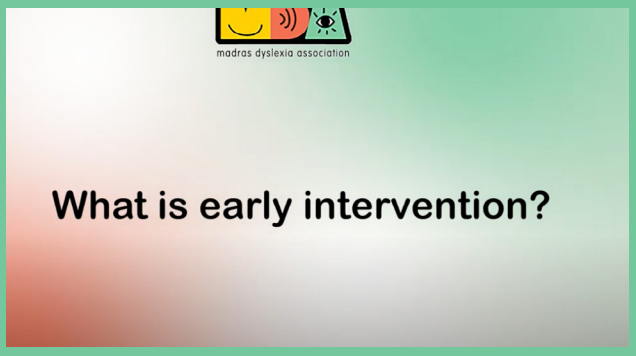
An MDA Publication

Vol 35. Issue 3. January 2023

NEWSLETTER

Table of Contents

Understanding Early Intervention for Specific Learning Disability



YouTube

Walk for Dyslexia

Madras Dyslexia Association participated in Walk for Dyslexia, a dyslexia awareness event organised by GOLD (Gift of Learning Differently) Parent Support Group and Rotary Club of Chennai Utsav. It was organised on 6 Nov 2022, Sunday. The chief guest for the event was Dr Sylendra Babu, DGP Tamil Nadu. The event was flagged off by Ms Usha Kakarla Education Secretary, Government of Tamil Nadu. Ten organisations in Chennai, which work in the area of Specific Learning Disabilities participated. Successful people with dyslexia were honoured by the chief guest. School and college students carried placards and slogans to spread awareness about dyslexia. In all 500 people participated in the event.

FOLLOW US ON facebook

YouTube

Early Intervention

A first-hand experience

That early identification followed by early intervention in dealing with SLDs, is pivotal to its remediation is something we learnt firsthand. Having zeroed in on Sripathi's ADHD qualities as early as 10-11 months of age and therapy proper at 15 months of age, after a few misguided false starts in between, as parents Sathiyam and I could dedicatedly work on his strengths, spot his weaknesses and help Sripathi to level up to the standard growth parameters.

For a child who spoke at 8+, wrote at 12+, read at 16+ he completed his Ph.D at 28+, pursuing a career of his choice, living and managing on his own in Delhi since he completed his M.Phil, all of which was possible largely because he was trained to think on his feet, deal with livelihood issues by himself, marry his Higher Order Thinking skills with the mundane everyday essentials, right from the beginning. This happened because of early identification, early intervention, along with unconditional acceptance of the issues involved, in this case primarily ADHD and later dyslexia.

It is happenstance that the child has these problems but that is not the end of the world. With the innumerable avenues of help, the choice of myriad career opportunities, the right mix of nurturing and guidance children with ADHD and SLD can be as successful and compulsive achievers as any other.

The key lies in early identification of the condition, both casually and clinically. An alert, observant and informed parent can largely do so with not much difficulty. Once done, accepting the child for what they are and not be in denial is the fulcrum on which the future rests. With acceptance, remediation follows, with the various tools of therapy. Therapy, is not a one size fits all and a switch that works as a magic pill. No, it needs to be tailored to the needs of the individual child, tweaked and innovated as one goes on this path, entails persistence, perseverance, patience and more patience.

Early identification and remediation certainly helps the child cope better. Not having formed compensatory strategies makes remediation that much easier and being challenged to perform in an appropriate manner early is a great motivation that aids learning.

Yes, theoretically it sounds esoteric but in practical terms it is a huge game changer. That all of it works is not a myth. Sripathi is proof of it. In his case, therapy for ADHD was largely Occupational Therapy. Things like stringing coloured beads, arranging blocks according to size, colour, shape etc., sorting mixed coloured beads, solving puzzles, doing simple handwork with strings like macramé were the primary activity. Innovating on this at home, in tasks like dusting, sorting and arranging the books on the book shelves, curios in the curio cupboard, vessels, cutlery and crockery in the kitchen, the groceries accordingly, folding clothes and keeping them away, counting notes and coins and putting them in place in the wallets and loose change pouches and more were a counterbalance. This way he not only did not find therapy tedious but also learnt life skills and rudimentary housekeeping as well. This has stood his stead till today. Similarly, early intervention enthused Sripathi to learn to ride the bicycle when he was barely 4 years old, to skate, to play the mridangam (that he dropped off later) to burn out the high energy that characterises these children. He underwent coaching for cricket, tennis and table tennis in order to reign in and regiment his multisensory processing.

Early intervention helps the family cope with the situation better. They learn to work around, with and for the issue at hand. This takes away the strain of the process even when that is the focus. Early intervention helps the child devise their own approaches to a situation that suits them best.

Early identification of SLDs can be done for language development and multisensory processing. This leads to early intervention where teaching then is tweaked in terms of individualised lesson plans and teaching methodologies account for the SLDs and blend it with that which needs to be taught.

Children with SLD are intelligent, with their absorption capacities and understanding no less than their compatriots but where they differ is that they process information differently. They need to be taught in way they can learn and not taught in the way we teach them. Learning is the operative word.

Dhanalakshmi Ayyer
Editorial Team

Early Intervention and Role Played by Care Givers

Yashodhara Narayanan

Swetha Krishna

Sanskriti Shah

Early Intervention Team, Madras Dyslexia Association

Early intervention is a term that refers to the array of activities designed to enhance a young child's development. Pre-primary education is defined as the initial stage of organised instruction, designed primarily to provide a bridge between home and a school-based atmosphere. Eventually, it lays a foundation for formal future learning.

Learning is automatic. Despite exposure and reinforcement, if a lag is observed over a period of time, it is likely to hamper future learning. At this stage, intervention is vital to fill in the gaps. Learning differences show subtle warning signs. However, they may be observed from a very early age.

Ideally, early intervention starts with a comprehensive assessment of the child's background, strengths and needs. It extends through the provision of appropriate support, guidance, active monitoring and re-evaluation as the child grows.

Early intervention, thus, creates a system of recognition and response to enable and empower children and parents.

The role of pre-primary education is to ensure that all children are able to develop their cognitive, linguistic, motor, social, emotional, sensory and physical skills to the best of their abilities. This is a time where the pre-skills for reading, writing, numeracy, etc., are mastered in a concrete form, setting a base for future abstract learning.

It is often said that it takes a village to raise a child. While the parents are the primary caregivers and are ultimately responsible for the wellbeing of their child, the role of the paediatrician is significant, especially in the early years. The paediatrician is primarily responsible for guiding the physical and nutritional health of the child. The paediatrician is also the first person a parent reaches out to when they need any help with the child. It then becomes very essential for the paediatrician to be aware of neurodiversity and what the early indicators for each type are. Very often they only look at the child medically and ignore developmental red flags, if any.

The next important group of people in the life of a child is teachers and educators. Children, by the time they are in primary school, end up spending more of their waking day with teachers in school, than with their parents. It is very important then for this group to be well aware of developmental milestones and

what differences in them could mean. They have to be alert and observant as, in most cases, they will be the ones who spot developmental differences in the child.

Finally, the role of the parents is most critical. They provide the child with everything that is required for their development across all areas. The execution of the health and nutritional needs of the child are entirely in the hands of the parent. Ensuring the child gets enough sleep, eats healthy, nutritious food, has opportunities to play, is provided a nurturing environment conducive to learning, and finally in identifying and finding solutions to any problem the child may have, are all some of the primary responsibilities of the parent. Above all, the parent is the ultimate advocate of their child.

The contribution of each of these groups is critical to the proper development of the child.

Signs of Learning Difficulty at Various Developmental Stages

Dr Rema Chandramohan
Director, Institute of Social Pediatrics, Govt. Stanley Medical college Chennai

"No other disabling condition affects so many people and yet has such a low public profile and low level of understanding as LD". Washington Summit 1994.

What is a learning disorder?

A learning disorder is an information-processing problem that prevents a person from learning a skill and using it effectively. Learning disorders generally affect people of average or above average intelligence. As a result, the disorder appears as a gap between expected skills, based on age and intelligence and academic performance.

Common learning disorders affect a child's abilities in reading, written expression, math or nonverbal skills.

Becoming aware of the warning signs of learning disabilities and getting children the necessary help early on can be the key to a child's future. Although there has not been an exhaustive study, the incidence of LD in India is likely to be at least between 10 and 12 per cent of the school going population. This roughly means that in a given Indian classroom there are at least four children with LD. If not addressed, we stand to lose out on a significant chunk of the literate population from the future productive work force of the country.

One of the simplest and effective ways to expand and create awareness is by empowering teachers to be able to identify the early warning signs.

The earlier a learning disability is detected, the better chance a child will have of succeeding in school and in life. Parents are encouraged to understand the warning signs of a learning disability from as early as pre-school. The first years in school are especially crucial for a young child.

Many children and adults with learning disabilities remain undiagnosed and go through life with this 'hidden handicap.' The resulting problems can lead

to poor self-esteem, failure to thrive in school, and difficulty in the workplace. With early detection and intervention, parents can give their children the necessary skills for coping with and compensating for the learning disability. All children learn in highly individual ways. Children with learning disabilities simply process information differently.

Below are several early warning signs commonly associated with learning disabilities between the preschool years and fourth standard. Many young children may exhibit one or two of these behaviours. However, consistent problems with a group of behaviours is a good indication your child may have a learning disability.

Early warning signs: Preschool

- Late talking compared to other children
- Pronunciation problems
- Slow vocabulary growth, often unable to find the right word
- Difficulty in rhyming words
- Trouble learning numbers, the alphabet, days of the week
- Extremely restless and easily distracted
- Trouble interacting with peers
- Poor ability to follow directions or routines

Early warning signs: Kindergarten through fourth standard

- Slow to learn the connection between letters and sounds
- Confuses basic words (run, eat, want)
- Makes consistent reading and spelling errors including letter reversals (b/d), inversions (m/w), transpositions (felt/left), and substitutions (house/home)
- Transposes number sequences and confuses arithmetic signs (+, -, x, /, =)
- Slow recall of facts
- Slow to learn new skills, relies heavily on memorisation
- Impulsiveness, lack of planning
- Unstable pencil grip
- Trouble learning about time
- Poor coordination, unaware of physical surroundings, prone to accidents

Common learning disabilities include:

Dyslexia

A language-based disability in which a person has trouble understanding words, sentences, or paragraphs

Dyscalculia

A mathematical disability in which a person has a very difficult time solving arithmetic problems and grasping math concepts

Dysgraphia

A writing disability in which a person finds it hard to form letters correctly or write within a defined space

Auditory and Visual Processing Disabilities

A sensory disability in which a person has difficulty understanding language despite normal hearing and vision

Dyspraxia

People with dyspraxia have difficulty planning and completing intended fine motor tasks. Dyspraxia can affect different areas of functioning, varying from simple motor tasks such as waving goodbye, to more complex tasks like brushing teeth.

Nonverbal learning disabilities

These can be tricky to recognise and diagnose. Children with this disorder are unable to recognise and translate nonverbal cues, such as tone of voice and expressions. They will have problems with organisation, and at the same time may have assets which help them through early years in school like atypically excellent vocabulary and excellent memory.

What causes learning disorders?

Factors that might influence the development of learning disorders include:

- Family history and genetics. A family history of learning disorders increases the risk of a child developing a disorder.
- Prenatal and neonatal risks. Poor growth in the uterus, severe intrauterine growth restriction, exposure to alcohol or drugs before being born, premature birth, and very low birth weight have been linked with learning disorders.
- Psychological trauma. Psychological trauma or abuse in early childhood may affect brain development and increase the risk of learning disorders.
- Physical trauma. Head injuries or nervous system infections might play a role in the development of learning disorders.

- Environmental exposure. Exposure to high levels of toxins, such as lead, has been linked to an increased risk of learning disorders.

Teachers play a major role in early identification of this potentially remediable condition and the following screening tool can be used in the class room to pick up SLD and intervene early.
The following is the screening tool to be used by the teacher for early identification of LD:

Dear Teacher,
Have you observed in your day to day teaching that the student has some of the following difficulties?

Answer with X in appropriate columns

S.no	Statement	Never	Sometimes	Frequently
1.	Makes mistakes in reading like Omits words Substitutes words Skips lines Reads sentences repeatedly			
2.	Can answer questions orally but has difficulty in writing answers. Oral work is better than written work.			
3.	Writes or reads figures or letters in wrong way e.g. 15 for 51, 6 for 9 and b for d			
4.	Has difficulty in differentiating letter sounds for vowels and blends, for e.g. E for I and ch for sh			
5.	Has difficulty in rhyming words and repeating them			
6.	Reads in past tense while the text is written in present tense or vice versa e.g. replaces is with was			
7.	Changes the sequence of alphabets while reading for e.g. says 'neerg' instead of 'green'			
8.	Replaces long words with compact ones e.g. 'musim' for 'museum'			
9.	Has difficulty in taking notes or copying them from blackboard and books			
10.	Confuses mathematical symbols (+,-,x,./.) while solving word problems and mathematics computation			
11.	Has difficulty in spellings			
12.	Has difficulties with spatial orientation and direction for example confusion between left and right, east and west, up and down, etc.			
13.	Misplaces upper and lower case letters, for example, BeTTer, n for N, i for I			
14.	Writes in mirror images, for example, 'ram' for 'mar'			

Sometimes: up to 6-7 times in 2-3 months
Frequently: more than 7 times in 2-3 months
(Source: The Gazette of India: 04-01-2018)

Seeking help for learning disorders

Early intervention is essential because the problem can snowball. A child who does not learn to add in elementary school will not be able to tackle algebra in high school. Children who have learning disorders can also experience performance anxiety, depression, low self-esteem, chronic fatigue or loss of motivation. Some children might act out to distract attention from their challenges at school.

A child's teacher, parents or guardian, doctor, or other professionals can request an evaluation if there are concerns about learning problems. The child will likely first have tests to rule out vision or hearing problems or other medical conditions. Often, a child will have a series of tests conducted by a team of professionals, including a psychologist, special education teacher, occupational therapist, social worker or nurse.

The determination of a learning disorder and the need for relevant services are based on the results of tests, teacher feedback, input from the parents or guardians and a review of academic performance. A diagnosis of severe anxiety or attention-deficit hyperactivity disorders also might be relevant. These conditions can contribute to delays in developing academic skills.

Treatment options

If the child has a learning disorder, the child's doctor or school might recommend:

- Extra help. A reading specialist, math tutor or other trained professional can teach the child techniques to improve their academic, organisational and study skills.
- Individualised Education Programme (IEP). Schools are mandated to provide an individual education program for students who meet certain criteria for a learning disorder. The IEP sets learning goals and determines strategies and services to support the child's learning in school.
- Accommodations. Classroom accommodations might include more time to complete assignments or tests, being seated near the teacher to promote attention, use of computer applications that support writing, including fewer math problems in assignments, or providing audio books to supplement reading.
- Therapy. Some children benefit from therapy. Occupational therapy might improve the motor skills of a child who has writing problems. A speech-language therapist can help address language skills.
- Medication. Your child's doctor might recommend medication to manage depression or severe anxiety. Medications for attention-deficit hyperactivity disorder may improve a child's ability to concentrate in school.
- Complementary and alternative medicine. Further research is needed to determine the effectiveness of alternative treatments, such as dietary changes, use of vitamins, eye exercises, neuro-feedback and use of technological devices.

The child's treatment plan will likely evolve over time. If the child is not making progress, one can seek additional services or request revisions to an IEP or accommodations.

In the meantime, help the child understand in simple terms the need for any additional services and how they may help. Also, focus on the child's strengths. Encourage the child to pursue interests that give them confidence.

Together, these interventions can improve the child's skills, help them develop coping strategies and use their strengths to improve learning in and outside of school.

Speech Therapy for Delayed Speech Development

Sharanya Krishnan
Speech Language Pathologist and Audiologist Chennai

"Early is a priceless timepiece owned by the successful" – Johnnie Dent Jr.

The term early intervention describes the services that support and help an infant or a toddler with developmental delays. Early intervention can have significant impact on a child's ability to learn and master a skill. The first three years of life, when the brain is developing and maturing, is the most intensive period for acquiring speech and language skills. These skills develop best in an environment that is rich and stimulating with consistent exposure to the speech of adults. Early intervention capitalises on this critical period or golden period when language learning is robust. If the critical period is allowed to pass without exposure to language, it will be more difficult for a child to acquire speech. Thus, intervention is likely to be more effective when provided during the early years of life, by carving a suitable developmental path and catching up on delays in acquisition.

The human brain has the remarkable ability to learn language with amazing ease and processes language within fractions of a second before being used for communication.

Every child shows a unique pattern of development. However, it is necessary to know the general age range when most typically developing children reach their milestones. Once you are aware of the age-wise markers for language development, the next requirement is to create ways of improving the quality and quantity of communication experience that you give your child. Noticing deviations in your child's milestones is a reason to seek advice from a Speech Language Pathologist to identify red flags, if any.

Speech and language are very important parts of development as they help the child negotiate their social world. Language enables them to explain how they feel, ask for what they want, describe what they have been doing and share or exchange thoughts. It is good to have basic knowledge of speech and language deficits that are commonly prevalent in young children that may affect their learning ability to succeed in school:

- Receptive Language deficit: Struggle with understanding, decoding or extracting and interpreting the meaning from what is heard or seen.
- Expressive Language deficit: Specific difficulty in communicating thoughts or ideas
- Speech disorder: Articulation disorder- difficulty in speech sound production and clarity;
- Fluency disorder: Sudden repetitions or blocks in speech
- Cognitive: Communication disorder: deficits in organising, reasoning and judgemental abilities pertaining to language

Deprivation in language stimulation can cause a delay in speech and language skills. A child experiencing a delay in speech and language will have difficulty in understanding and processing information presented to them. This could significantly impact the child's ability to complete tasks and follow instructions especially when it is presented orally or has multiple steps. Studies have established a high degree of correlation between speech and language problems and learning difficulties. After all, reading and writing are language-based activities. Research evidence (Jane McCormack et al 2009) also suggests that speech impairment in early childhood may be

associated with activity limitations, less participation in groups, potential difficulties in learning to read, write, think and focus, communication and most importantly, coping with school education.

For most children, entering school life is a happy experience. However, it is during communication and interaction with peers that their speech and language difficulties show up, eventually making them self-conscious or withdrawn. The struggle to verbalise their thoughts, the constant pressure of trying to understand content and the urge to keep up with the classmates, impedes their learning process.

Children with such difficulties may be seen as being less intelligent than they really are. One of the key aspects of language intervention is to encourage everyone who is with the child to be sensitive to the way in which they communicate with the child. Speech therapy begins with a comprehensive evaluation of the child to understand where he or she stands. This enables a Speech Language Pathologist to create a road map and set goals.

Speech intervention requires active involvement of the parents/ caregivers to execute the tailor-made treatment programme designed for the child. It is imperative that parents engage with the Speech Language Pathologist and carryout all the practice activities at home. This helps the learned skill to be generalised and incorporated into the child's daily life. Taking time to identify ways in which one could improve one's style or the quantity of communication that one is giving the child will make a difference.

Repeating or presenting the information/instruction in an alternative way, could facilitate the child's performance and help them be on par with peers. A conducive ecosystem comprising of understanding teachers, remedial support from special education and speech therapy along with repetition and regular practice, constant reassurance and encouragement from loving parents at home will be the ideal support that a child could be given.

Occupational Therapy-Early Intervention Services to Help with Specific Learning Disability

N Rasu
Occupational Therapist, Madras Dyslexia Association

What is Occupational Therapy?

The term Occupational Therapy can often be confusing. It carries the misconception that the focus is on occupation and job training. Occupational Therapists promote skill development and independence in daily 'activities' in a broader sense. For an adult, this may mean doing the housework, going to the gym, going shopping, to work and so on. For a child, this includes playing, accessing learning and eating their meals. Occupational Therapists aim to help children develop skills and promote independence through the use of meaningful activities. They work towards enabling the child to practise skills in their daily activities in the settings and environments they need to do them in by working collaboratively with family and school staff.

Occupational Therapy focuses on promoting, maximising and maintaining the skills and capabilities of children with a wide range of

abilities and disabilities. An Early Intervention Service must address the following for children:

- Physical development
- Cognitive development
- Communication development
- Social or emotional development
- Adaptive development

What is the process involved?

To achieve enhancements in a wide range of aspects, Occupational Therapy is a multi-step process.

1. Evaluation - This includes screenings, formal and informal assessments. These are conducted in collaboration with the family and include parent/ family interviews.
2. Intervention - The programme comprises evidence-based practices. Data driven decision making process ensures that the needs are addressed. This is a collaborative process that includes the family as a team member.
3. Outcomes - The end goal is set to meet the family and child's goals and needs, and to promote viable functions.

So, Early Intervention Services Occupational Therapy include family training, counselling, and home visits, special instruction, screening/identification, and assessment services

How does the therapist understand the needs?

To understand the needs of a child the Occupational Therapist analyses the skills necessary for individuals to perform an activity by breaking the task down and identifying the areas of difficulty. Let us consider the activity of writing. To write, a child must have:

- Good sitting posture and balance, adequate joint stability and muscle strength.
- Good body awareness and motor planning.
- Good hand skills, mature visual perceptual and visual motor skills.
- Good attention and concentration skills and the cognitive ability to learn this skill.

Hence, if a child faces difficulty in writing, each of these areas should be observed in their everyday tasks in the classroom in order to identify the area of difficulty.

Intervention

Occupational therapy practitioners respect the unique interests, culture, needs, and priorities of the child and family and build on their strengths and abilities. Occupational therapy practitioners support and build the capacity of the family to care for their child. They modify activities or the environment so the child can participate. Emphasis is laid on:

- Team approach
- Family/child catered activities
- Natural environments
- Multidisciplinary approaches

Occupational Therapists support children and families to be successful in their everyday routines. For instance,

- Participation in Play Time increases social skills, enhances motor coordination and develops problem-solving abilities.
- Participation in Meal Time promotes independence in self-feeding, improves ability to eat a variety of foods and textures and creates family-friendly schedules.
- Participation in Bath Time addresses positioning needs, ensures safety during activities of daily living and promotes sensory rich experiences.
- Social Participation helps manage emotions, develop self-advocacy skills and strengthen family bonds.

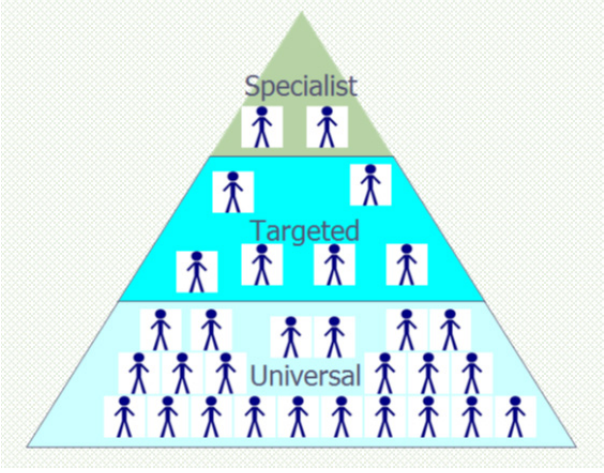
Occupational Therapists provide service in a variety of settings. In the day-care environment they not only coach day-care providers they also facilitate peer interaction and promote play skills in a child. In a familiar home environment, an Occupational Therapist helps establish healthy schedules for activities of daily living like sleep/nap, design safe play areas and provide support for family caretaking abilities.

How Occupational Therapy works within the school

Occupational Therapists in school are key contributors within the education team. They help to address both mental and physical health. They help children to fulfil their role as students by supporting their academic achievement and promoting positive behaviours necessary for learning. They

support academic and non-academic outcomes, including social skills, math, reading and writing, behaviour management, recess, participation in sports, self-help skills, pre-vocational and vocational participation, transportation, and more. Occupational Therapists analyse activity and environment, and particularly facilitate student access to curricular and extracurricular activities. They focus on the students' strengths, and can design and implement programming to improve inclusion and accessibility, such as Universal Design for Learning. Additionally, they play a critical role in educating parents, educators, administrators and other staff members. They offer services along a continuum of prevention, promotion, and interventions and serve individual students, groups of students, whole classrooms, and initiatives for the entire school. In this way, occupational therapy practitioners can contribute within both spheres of general and special education.

There are various ways the OT will provide a service to the school. This model may help to explain this:



Universal represents all the children in the school. They are all likely to have some need to improve their functional skills, but these needs can be met through the classroom /school environment.

Targeted-These children need some level of additional support to improve their function. The Occupational Therapist may carry out a class observation and an assessment giving strategies to the classroom staff.

Specialist -These children need specialist support from an Occupational Therapist. The OT will provide or co-ordinate support for the child.

Interventions include:

- Reducing barriers that limit student participation within the school environment
- Providing assistive technology to support student success
- Supporting the needs of students with significant challenges, such as by helping to determine methods for alternate educational assessment and learning
- Helping to plan relevant instructional activities for ongoing implementation in the classroom

They collaborate with a variety of partners, such as:

- Students - to help them to develop self-advocacy and self-determination skills in order to improve their performance in learning environ¬ments throughout the school (e.g., playgrounds, classrooms, lunchrooms, bathrooms); and optimise their perfor¬mance through specific adaptations and accommodations
- Parents - to support their engagement with school activities such as attendance in Individualised Education Programme (IEP) meetings with cultural sensitivity, or to assist in homework management issues by monitoring stress levels and volume of work
- Educators and other school support staff - to offer curricular modifications to support diverse learning abilities and to meet state learning standards
- Administrators - to provide training for students, staff, and parents, such as offering recess promotion strategies or contributing to anti-bullying initiatives, as well as to recommend equipment for schools and ways to modify exist¬ing buildings and curriculum to allow access for all

Occupational therapy services for students with special needs are determined through the IEP process. When the IEP team determines that occupational therapy is needed for a student to meet their annual goals, then it should be included in the student's IEP.

In conclusion, occupational therapy practitioners help promote healthy school climes that are conducive to learning. They offer other valuable services to meet broader student behavioural and

learning needs, along with systemic needs, by addressing students' mental health and participating in other school-wide initiatives such as positive behaviour supports, Response to Intervention (RtI), and Early Intervening activities. In addition, occupational therapy practitioners are active participants in developing curricula and programmes; addressing school health and safety; identifying assessment accommodations and modifications; developing violence prevention, anti-bullying, and other types of programmes. In this capacity, occupational therapy practitioners support the needs of all students, including those without disabilities. For example, many schools use the occupational therapist's knowledge and expertise to assist in curriculum development for handwriting and social skills, assignments that help all the students access and participate in school activities thus implementing universal design for learning, and to recommend modifications to design of classroom environments.

Early Birth Markers Which Indicate High-Risk for Developmental Delays

Dr Sharada Srinivas
MRCP (Paediatrics)
Consultant Peadiatrician and Neonatologist
Seethapathy Hospitals and Apollo Childrens' Hospitals

"The only special needs I have is to be loved and accepted just the way I am."

Global Developmental Delay, GDD, means that a child experiences delays in at least two areas as against Isolated that affects one area alone. GDD affects 1-3 per cent of the children below 5 years of age. The causes are mainly exogenous, metabolic, and genetic.

GDD can be classified as being

- Mild when it is less than 33 per cent below chronological age
- Moderate when it is less than 34-66 per cent chronological age
- Severe when it is less than 66 per cent chronological age

Whether Isolated or Global, developmental delay can be gross motor, speech/ language/communication, vision and fine motor, socio emotional or cognitive skills.

In the last two decades, there has been a steady improvement in the quantity of perinatal care in India. Yet, the incidence of chronic morbidity and developmental delays continue be high.
The neonate 'at risk' of neuro-developmental disability must be identified before discharge. Timely and appropriate screening /assessment should be offered even before symptoms /signs of disability appear.

A structured follow up plan by a multi-disciplinary team, which comprises of developmental paediatrician, physiotherapist, ophthalmologist, audiologist, dietician, social workers, parents is of crucial importance to minimise developmental delays.

The early markers for motor delay are indicated in identifying the risk factors by history taking at all stages.

Prenatal:

- Genetic disorders – Downs, fragile X, other chromosomal micro deletions.
- Cerebral dysgenesis – microcephaly, hydrocephaly, absent corpus callosum, vascular, haemorrhage, occlusion.
- Drugs – Anti epileptics, cytotoxics.

- Maternal infections - TORCH infections are the term given to a group of infectious diseases that can be passed to the baby during pregnancy, at delivery or after birth. TORCH stands for toxoplasmosis, rubella, cytomegalovirus, herpes and other agents.

Perinatal:

- Premature and extreme premature births, where births occur at less than 28 weeks of the 40-week term.
- Intra ventricular haemorrhage, which is bleeding into the fluid-filled areas or ventricles, surrounded by the brain.
- Low birth weight of less than 1kg.
- Perinatal asphyxia.
- Poor Apgar score at 5 minutes of birth, of being less than 3.
- Hypoxic Ischemic Encephalopathy (HIE) which is a type of brain dysfunction, brain injury that occurs when the brain experiences a decrease in oxygen or blood flow.

Postnatal:

- Neonatal illness like infection – meningitis, encephalitis, shock because of infection.
- Metabolic factors – Inborn error of metabolism, hypoglycaemia where the blood sugar drops to less than 25m/dl blood sugar or is around 5m/dl, electrolytes and calcium imbalances.
- Genetic disorders and syndromes.
- Major morbidities – chronic lung diseases that needs ventilation.
- Neonatal bilirubin encephalopathy.
- Abnormal neurological examination at discharge.

Identification of risk factors of developmental delay by examination

Neurological examinations are considered a vital tool of neuro-developmental assessment and follow up, complemented by various developmental and medical assessment.

Neurological examination includes:

- Apgar score at birth less than 3 at 5 minutes of age indicates a bad progress. This is assessed by colour, heart rate, reflexes, muscle tone, respiration
- Head circumference – microcephaly or hydrocephalus both predict abnormal brain growth.
- Weight chart and height – low birth weight is high risk for developmental delay. Poor growth is an indicator.

There are various tests that evaluate nerve function, movements, reflexes and reactions, posture, and tone and can help clinicians identify movement disorders. Abnormal tone of limbs, neck, trunk; diminished cry and activity on day one plus, weak or absent suck, need for gavage or tube feeds all indicate the level and extent of the impact on the child.

Similarly there are various conditions at birth which may lead to development delays in the child like:

Perinatal asphyxia or Hypoxic-Ischaemic Encephalopathy of the new-born (HIE), a syndrome caused by a lack of adequate oxygenation around the time of birth which manifests as altered consciousness, altered muscle tone, and seizures. Tests of tone, posture, reflexes and abnormal movements grade the level and extent of the impact on the neonate.

Preterm babies of 32-38 weeks
Neuro-behavioural assessment of preterm infants includes motor system examination and activity, scars signs, alertness/orientation, irritability, vigour, crying.

Red flag signs for motor developmental disorders:

- Truncal hypertonicity or abnormal truncal muscle tone is a useful early marker for developmental delay. Muscle tone is regulated by signals that travel from the brain to the nerves and tell the muscle to contract. Abnormality can result in a condition in which there is too much muscle tone so that arms or legs, for example, are stiff and difficult to move. There is resistance to passive movement.
- Irritability and seizures.
- Spontaneous Babinski reflex. When the Babinski reflex is present in a child older than 2 years or in an adult, it is often a sign of a central nervous system disorder. The central nervous system includes the brain and spinal cord.
- Abnormal finger posture
- Atypical arm, leg and trunk movements.

There are other markers at birth on examination for motor delay such as:

- Neonatal motor assessment: by analysis of intra oral sucking pressures where irregular or absent sucking indicates the risk of developmental delay.
- Infants that were fusing in prone position had higher rate of motor delay.
- The infant's poor ability to lift the head in prone and to align the head with body.

History taking and good examination needs to be followed up with investigations like:

a. Neuro imaging studies that are valuable in predicting the outcomes.
b. Cranial ultrasound which detects various abnormalities that could indicate developmental delays (mainly useful for the preterm).
c. MRI (Diffuse tensor MRI) has higher sensitivity and hence important to detect early damage.
d. EEG especially for brain wave abnormalities.
e. Genetic tests for clinically suspicious babies
f. Metabolic studies – inborn errors of metabolism
g. Biochemical Investigation of the blood, urine, organic acids, amino acids etc.
h. Thyroid screening

Conclusion

Active surveillance is required before discharge from NICU and in follow up.
Early markers for developmental delay should be ongoing starting from bed side – to pick up signs and symptoms, do investigations appropriately to confirm diagnoses, discharge check, follow up at regular intervals by a multidisciplinary team.
Once diagnosis of developmental delay is made by the above methodology, early intervention is the key – there could be a reduction of up to 40% of disability and improved cognitive outcomes in short and long-term outcomes and it can be started in NICU itself.

Algorithm for follow up of an at-risk infant
↓
Start early intervention (stimulation)
↓
Pre discharge
Assign level of follow up:
Neurological examination, nutrition and growth assessment, neurological assessment,
neuro-behaviour, neuro-sonogram and other appropriate investigations.
Hearing screening, ROP screening
Thyroid screening and metabolic profile assessment of parent coping and support services at home.
↓
Follow up:
Medical examination /Nutrition/growth
Neurological assessment
Development tests
Function assessment
Behaviour, cognition, psycho-educational
↓
Timely specific intervention.

Every child is gifted. They just need to unwrap their packages at different times.

Happenings in MDA

After School Remedial Centre

Multiple Intelligences or MI is the cornerstone of all programmes at MDA. Keeping this in mind there was a play, an art competition and a story writing competition.

On Children's Day, a pre-recorded video of our children enacting 'Alice in Wonderland' was played to the audience. Some children dressed up as the characters they were enacting for the online-recording adding colour and creativity.

Children were also asked to submit their art and stories for an online competition. These art were both colourful and detailed. Their stories too were very imaginative. Prizes were given later. The works of the children were compiled and released Children's Korner, the children's newsletterof MDA.

Children enrolled in our After-School remedial programme celebrated many events online showcasing their talents and learning new skills in a fun way as a group.

'CELEBRATING MADRAS' was conducted online on 10th September giving the students an opportunity to research and gather information on facts and history of Chennai. They spoke with great confidence. Later, all children participated in a quiz centred on Chennai. The children also did a fun activity of making the word 'MADRAS' using the matchsticks.

The festive times were celebrated with much gusto by the special educators and the children.

Vinayaka Chaturthi was celebrated online on 30th August. Step by step instructions were given to the children for making an idol of Lord Ganesha using playdough. The children made colourful and beautiful Ganeshas enthusiastically and proudly displayed their work.

Ananya Learning and Research Centre

The children of our fulltime learning centre, displayed their talents and skills they had developed. For the project 'MAD AD' not only did the children make posters and other collaterals to market a 'product', they also enacted an adaptation of the popular TV show 'Shark Tank' for their products. Multiple Intelligences was closely integrated with the various aspects of the project. This was a proud moment for the visiting parents who watched their children creatively display their products, talk about the product and act in the show.

Webinars and others

We were invited to put up a stall to showcase MDA Avaz Reader in the State Level Exhibition of Innovative Assistive Devices for the Differently Abled. This was organised by the Commissionerate for the Welfare of the Differently Abled, Govt of Tamil Nadu.

Training programs

Having created awareness amongst the schoolteachers, specific training programs were conducted for different segments of the teachers - i.e. Early Intervention Training Programme for pre-primary teachers, 6-day Basic Programme for the primary school teachers and Effective Learning Programme for Middle school teachers.
In addition to these, the students of MWA school were addressed on study skills, motivating them to enhance their learning skills.
Many schools belonging to the VES group of schools renewed their Resource Room affiliation with Madras Dyslexia Association

Celebrating Thirty Years of MDA with School Partners

In continuation with our celebrations of our 30 years of service for the cause of dyslexia, our monitors and trainers were felicitated in the presence of the heads and special educators of the schools who have Resource Rooms affiliated with MDA and whose teachers have been empowered by our training programmes. Representatives of a few of these schools also spoke on the occasion.

Anita Methodist School has been associated with MDA for the past 5 years. Joan Illango, Principal, shared with us the incident that brought to fore the significance of the difficulty posed by dyslexia. She said she was grateful for the commitment with which the monitors of MDA guide the teachers and special educators enabling many success stories.

AVM, Virugambakkam, a school associated with us since 2016 was represented by Mrs. Nidhya Guhan, Correspondent. She elaborated on how this association has helped numerous students through awareness drive for the parents and training for the teachers. She affirmed that this was made possible by the efficient, detailed and thorough methodology followed by MDA along with the meticulous follow-up. This team effort has been unfailingly rewarding She was thankful for the customised solutions that made this journey feasible.

Akira a full-time learning centre run by St, Andrews, Hyderabad was set up in 2017 in collaboration with MDA. In the message sent by Ms. Allana Mathew she recalled how a personal need that brought them to MDA inspired the establishment of this centre to help the children with dyslexia in the city. Patience, cooperation and their willing nature makes the MDA staff very approachable, equipping their special educators with not just remedial strategies but also with know-how in integrating MI and supporting children with appropriate OT.

Breaking through Dyslexia, Kolkata was the first location where MDA conducted the Intensive Teacher Training Course outside Chennai in 2018. Ms Divya Jalan recalled how she met Mr. D. Chandrasekhar in 2013 in her personal journey. Thereafter, DC has been the continuous source of inspiration for them to go forward in this journey of providing services.

DAV Gurushikshanam has been including a module on dyslexia and associated remedial strategies developed by MDA for the past 5 years in their teacher training program. Mrs. Lakshmi, the Director congratulated the founders on their pioneering entry into this area when not much was known about it. They are glad that their scholars were making a difference to the students by including strategies enabling enhanced attention and by teaching them using their dominant intelligence.

The resource room at MCC has been set up under the sponsorship of Cognizant Foundation. Dr. Manohar, Principal recalled in his congratulatory message, how MDA initiated and persisted in providing this support. He reported how some students have been remediated through this initiative and have mainstreamed. He suggested that this training be introduced in the curriculum of the B.Ed program.

Mrs. Parameshwari of Mahatma Gandhi Senior Secondary school said that the training programme helped identify and address children with SLD. The teachers gained a lot of information from the interactive programme especially on how to guide parents.

Mrs Sheela Rajendra of the PSBB group of institutions congratulated MDA on completing 30 years in the service of dyslexia and building self confidence in scores of children. She said MDA was a force to reckon with in the cause of dyslexia.

Mrs. Aruna of Manochetna, Kolkata thanked MDA for its support and highly appreciated the training programme conducted by MDA.

Ms Shameem Fathima of MWA Gopalapuram lauded MDA's 30 year journey in the field of dyslexia and said MDA shows the way ahead for children with dyslexia.

Mrs. Lalitha Chandrashekar traced Ramana Vidyalaya's long term association with MDA. She lauded MDA's yeoman service to children with difficulties who were earlier outside the radar of class teachers. The teachers trained by MDA were able to identify children with dyslexia early, remediate them and bring them back to the mainstream at the earliest.

Ms. Mita Venkatesh of Sankara Senior Secondary School mentioned that the school had seen improvement in children as a result of remedial intervention and thanked MDA for its guidance.

Mrs Sumitra Raghavan of Vidya Niketan Bangalore said that the teachers were able to find out the skills a child lacked and were able to come up with remedial plans to suit individual children.

Mr. Venkatesh of VES group of schools said that MDA's training programme was a tremendous learning for all the teachers. They would definitely like to scale up activities in the field of dyslexia. The resource rooms have benefitted more than 10,000 families and the parents are extremely grateful for the help received inside the school.

Mr. Shivakumar of VET mentioned that the outcome of the training was reflected in the smiles he saw in the faces of children and parents. Teaching became an interesting experience. The children who lagged behind no longer felt that they could not understand what was being taught in class. It brought all of them on an equal plane.

நிகழ்வுகள்

பயிற்சிகள்

டிஸ்லெக்சியா பற்றிய விழிப்புணர்வுப்பயிற்சி பல பள்ளிகளில் நடத்தியதன் அடுத்தகட்டமாக மழலையர் பள்ளி ஆசிரியர்களுக்கு ஆரம்ப கால தலையீட்டின் முக்கியத்துவம் மற்றும் வழிமுறைகள், தொடக்கப்பள்ளி ஆசிரியர்களுக்கு மாற்று போதனை பற்றிய ஆறுநாள் பயிற்சி மற்றும் நடுநிலை பள்ளி ஆசிரியர்களுக்கு எளிதாக கற்பதற்கான வழிமுறைகள் பற்றிய பயிற்சியும் நடைபெற்றது. இதைத்தவிர பள்ளியின் மாணவர்களுக்கு சுலபமாக கற்கும் முறைகள் மற்றும் கற்கும் பொழுது நினைவில் கொள்ள வேண்டியவை பற்றி, ஊக்கம் அளிக்கும் விதத்தில் பயிற்சி அளிக்கப்பட்டது.

VES குழுமத்தில் உள்ள பல பள்ளிகள், நமது நிறுவனத்தின் உதவியுடன் வள அறை அமைப்பதற்கான உடன்படிக்கையை புதுப்பித்துக் கொண்டது .

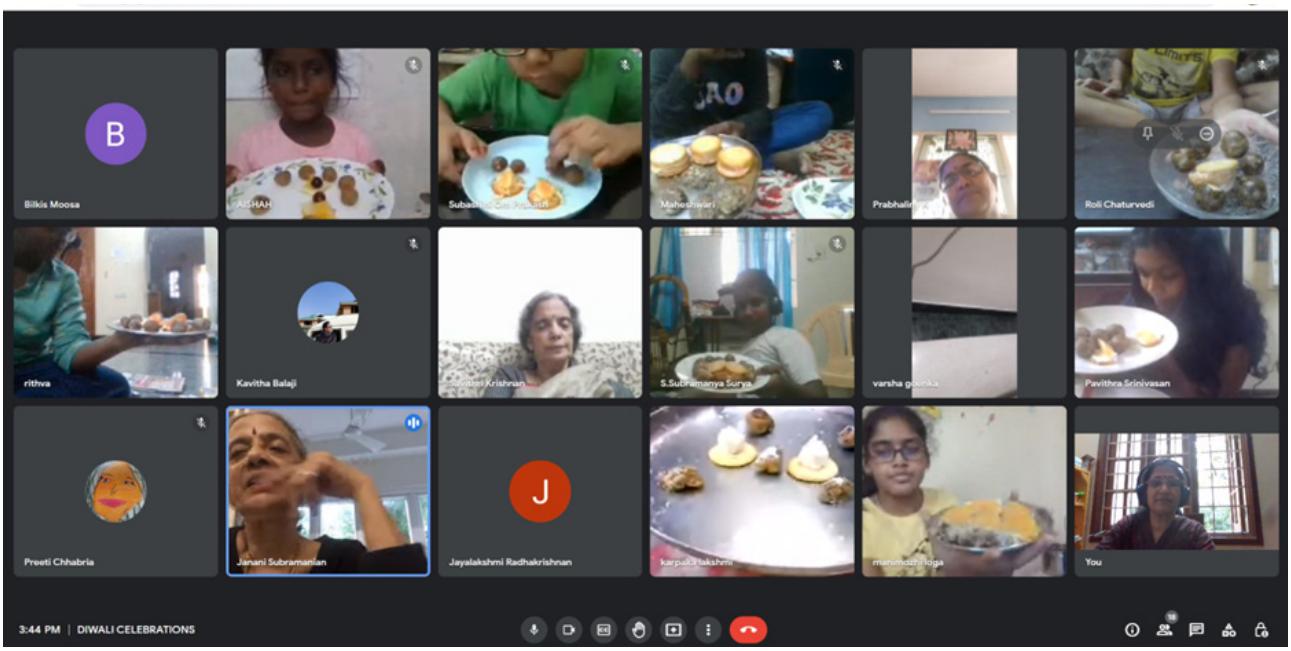
பகுதி நேர மாற்று போதனை மையம்

பகுதி நேர மையத்தை சேர்ந்த மாணவர்கள், தங்களது திறமைகளை வெளிப்படுத்தும் விதமாகவும் , புதியனவற்றை கற்கும் விதமாகவும் இணையதளத்தின் மூலம் பல நிகழ்ச்சிகளில் உற்சாகத்துடன் பங்கேற்றனர்.

சென்னையை பற்றிய சரித்திரத்தையும் மற்றும் சுவை மிகுந்த தகவல்களையும் சேகரிக்கும் விதமாக ' செலிப்பரேடிங் மெட்ராஸ் ' இணையதளத்தின் மூலம் செப்டம்பர் 10 ஆம் தேதி கொண்டாடப்பட்டது. மாணவர்கள் மிக்க தன்னம்பிக்கையுடன் சென்னையை பற்றிய பல புதிய தகவல்களை பரிமாறிக் கொண்டனர். சென்னையை பற்றிய வினா விடை போட்டியிலும் பங்கேற்றனர். மாணவர்கள் தீக்குச்சிகளை கொண்டு 'மெட்ராஸ்' என்ற வார்த்தையை அமைத்தனர்.

இன்னும் பல பண்டிகைகள் மாணவர்களாலும், சிறப்புஆசிரியர்களாலும் உற்சாகத்துடன் கொண்டாடப்பட்டது.ஆகஸ்ட் 30 ஆம் தேதி விநாயகர் சதுர்த்தி பண்டிகை இணையதளத்தின் மூலம் மிக விமரிசையாக கொண்டாடப்பட்டது. களிமண்ணை கொண்டு விநாயகர் செய்முறையை படிப்படியாக ஆசிரியர்கள் விளக்கினர். மாணவர்கள் செய்முறையை பின்பற்றி விநாயகரை பல வண்ணத்தில் செய்து மகிழ்ந்தனர்.

அக்டோபர் மாதம் 22 ஆம் தேதி ,இணையதளத்தின் மூலம் தீவாளி பண்டிகை கொண்டாடப்பட்டது .மாணவர்களும்,ஆசிரியர்களும் உலர் பழங்களை கொண்டு லட்டுகளும் மற்றும் கார வகை பிஸ்கேட்களும் தீயில்லாமல் செய்து மகிழ்ந்தனர். லட்டுகளை முந்திரி ,பாதாம் ,வாதுமை கொட்டைகள் மற்றும் பேரீச்சம்பழங்களை கொண்டு செய்தனர். கார வகை பிஸ்கெட்கள் செய்வதற்கு உப்பு பிஸ்கெட்டுகள் ,கிரீம் சீஸ் மற்றும் ஆரஞ்சு துண்டுகள் கொண்டு செய்தனர் தீபாவளிக்கு தாங்களே பலகாரங்கள் செய்தது அவர்களுக்கு சந்தோஷத்தை அளித்தது.



பங்கேற்புகள்

மெட்ராஸ் டிஸ்லெக்சியா நிறுவனம் 'பேட்டில் ஆப் பூபே ' என்னும் நிதி திரட்டும் நிகழ்ச்சியில் ஐந்தாவது முறையாக இந்த வருடமும் பங்கேற்றது .

நமது நிறுவனம் தொடங்கப்பட்டு முப்பது ஆண்டுகளாக கற்றலில் குறைபாடுடைய மாணவர்களுக்காக ஆற்றிவரும் தொண்டினை குறிக்கும் விதத்தில் நம் நிறுவனத்தின் பயிற்சியாளர்கள் ,பல பள்ளிகளை சேர்ந்த தலைமை ஆசிரியர்கள் மற்றும் சிறப்பு பயிற்சியாளர்கள் முன் கௌரவிக்கப்பட்டார்கள்.

ஐஐடி சென்னை ஆய்வு பூங்காவில் நடைபெற்ற வருடாந்திர தொழில்நுட்ப நிகழ்ச்சியான ஐந்தாவது 'எம்பவர் 2022' மாநாட்டின் கண்காட்சியில் ,நமது நிறுவனத்தின் சரியாக

வாசிப்பதர்க்கு துணை புரியும் 'ஆவாஸ் செயலி' வைக்கப்பட்டது

கைன்ட்னெஸ் பௌன்டேஷன் என்னும் தொண்டு நிறுவனம் நடத்திய 'கைன்ட்னெஸ் கார்னிவல் 2022' பங்கேற்ற நம் நிறுவனம்கற்றலில் குறைபாடு பற்றிய விழிப்புணர்வை ஏற்படுத்தியது.

நமது நிறுவனத்தின் அணைத்து நடவடிக்கைகளும் பன்முகத்திறனை அடிப்ப டையாகக் கொண்டது ஆகும்.

இதை நினைவில் கொண்டு மாணவர்களுக்கு நாடகப் போட்டி, கைவினை பொருட்கள் செய்யும் போட்டி மற்றும் கதை எழுதுதல் போட்டி நடத்தப்பட்டது.

குழந்தைகள் தினத்தன்று, மாணவர்கள் பங்குகொண்ட 'ஆலிஸ் இன் ஒண்டர்லாண்ட் ' நாடகத்தின் வீடியோ பதிவு பார்வையாளர்களுக்கு காண்பிக்கப்பட்டது .

அத்தினத்தில் மாணவர்கள் நாடகத்தில் தாங்கள் ஏற்ற கதாபாத்திரத்திற்கு ஏற்ற உடையினை அணிந்து வந்தனர். இவை ஆக்கபூர்வமாகவும், வண்ணமயமாகவும் இருந்தன.

இதைத்தவிர, மாணவர்கள் தாங்கள் வரைந்த ஓவியங்களையும் மற்றும் எழுதிய கதைகளையும் ஆசிரியர்களிடம் கொடுத்தனர். ஓவியங்கள் வண்ணமயமாக இருந்தன. கதைகள் மாணவர்களின் கற்பனை வளத்திற்கு எடுத்துக்காட்டாக அமைந்தன. பரிசுகளும் வழங்கப்பட்டன.

இவ்வோவியங்களும் கதைகளும் நமது நிறுவனத்தின் ' சில்ரன்ஸ் கார்னெர் ' 'எனும் மாணவர்களுக்கான செய்தி மடலில் அச்சிடப்பட்டது .

அனன்யா லேர்னிங் அண்ட் ரிசெர்ச் சென்டர்

இங்கு பயிலும் மாணவர்களும் தங்களது திறமைகளை வெளிப்படுத்தும் விதத்தில் பலவற்றை செய்தனர் . 'Mad Ad' என்னும் பொருட்களை விற்பதற்கான திறமைகள் பற்றிய ப்ரொஜெக்ட்டும் நடைபெற்றது. இதற்கு தேவையான சுவரொட்டி -களையும் மற்றும் பொருட்களையும் மாணவர்கள் தாங்களே செய்தனர். பொருட்களை விற்பது பற்றிய மிகப்பிரபலமான தொலைக்காட்சி நிகழ்ச்சியான 'ஷார்க் டேங்க் ' நிகழ்சியை தழுவிய ஒன்றையும் நடத்தி காண்பித்தனர். இவை அனைத்தும் பன்முத்திறனின் பல்வேறு அம்சங்களின் அடிப்படையில் அமைந்திருந்தது . மாணவர்கள் பேசியவிதம், மற்றும்

பொருட்களை விற்பதற்காக அவர்கள் கையாண்ட யுத்திகள் பெற்றோர்களுக்கு ஒரு பெருமைதருவதாக அமைந்தது.

பிற நிகழ்வுகள்

'இன்னோவேடிவ் அசிஸ்டிவ் டிவைசெஸ் போர் டிபரென்டலி ஏபில்ட்' என்ற மாநில அளவிலான பொருட்காட்சியில் நம் நிறுவனத்தின் ' அவாஸ் ரீடர் ' செயலியை வைப்பதற்கான அழைப்பும் பெறப்பட்டது. இப்பொருட்காட்சி நமது தமிழக அரசின் மாற்றுத்திறனாளிகள் நலத்துறையால் நடத்தப்பட்டது.

Madras Dyslexia Association
94, Park View, G.N. Chetty Road,
T. Nagar, Chennai 600 017
Tel: 2815 6697, 2815 7908
Email: ananyamdachennai@gmail.com
Website: www.mdachennai.com