

# NEWSLETTER

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YEARS OF  
SERVICE &  
COMMITMENT



*A video that traces transformation of children with dyslexia. The song has been written by Madan Karky and set to tune and sung by Karthik.*



YouTube

*A video on our full-time remedial center-Ananya Learning and Research Center*



YouTube

# Madras Dyslexia Association – A Journey of Innovation and Success

Madras Dyslexia Association (MDA) began on a fortunate stroke of serendipity rather than a planned and precise execution. When the word dyslexia was still a 'term in the dictionary' a group of parents decided to begin an organisation, which would, of course, help their children, but also children studying in other schools. Since the motley group of parents came from diverse backgrounds whose children required multiple levels of help they set up MDA. That was thirty years ago.

Initially the core group of founder members had to understand what dyslexia meant and how they could provide the correct help their children required. Like any fledgling organisation MDA, in the initial years, went through growth pangs, floundered a bit, but with continued persistence, found its feet.

When teachers had to be trained as remedial educators to cater to the needs of a dyslexic child, the expert trainer, Hazel McKay of UK, was available in New Delhi. We sent a group of teachers to train under. I can say, there was no looking back for MDA, from then on.

From the initial years of our beginning, MDA has come a long way in paving the way for teaching and helping school children who have dyslexia.

In the beginning, when MDA did a lot of assessments for children with dyslexia, we also had part-time remedial programmes. We realised that many children were being sent out of their schools because they couldn't cope with academics. We felt we had to help these children. We started Ananya, a full-time learning centre where children bridge their learning for a year or two and could once again go back into mainstream schooling or opt for the National Institute of Open Schooling (NIOS) as per their ability, inclination and interest.

MDA was indeed doing a lot for dyslexia, but we realised it wasn't enough. Just one full-time learning centre like Ananya wasn't about to make a lot of difference, let alone create a ripple. We then hit upon the idea of setting up Resource Rooms in schools with trained special educators who will cater to the needs of the children inside their school premises itself. It

started to make a difference. Many school children with dyslexia began to receive its benefits because they got timely help in school and more children were brought into its ambit because the additional cost of sending children to outside remedial centres were not there. It helped parents too.

We now went a step further to reach children in both government and private schools. MDA began training school teachers because children spent most of their day in school. We have conducted over 400 such training programmes which will directly benefit over 15,000 primary school teachers to identify and remediate dyslexia in their classrooms.

In order to further boost this endeavour, we have placed the training programme content of MDA on the NPTEL platform of IIT Madras. A further 7,000 teachers have been trained using the same. And this number is growing.

We have been working hard for 30 years in the area of dyslexia. It has been a very satisfying experience to empower 1,75,000 government school teachers under various schemes initiated by Department of Education, Government of Tamil Nadu; MDA is also providing 2,200 remedial kits. These would enable them to identify and remediate children with dyslexia in primary school.

A notable feather in our cap is the MDA-Avaz App developed in collaboration with Innovation Lab. The app is presently being used in a number of schools to help children with learning differences and also children with English as a second language.

MDA was selected as 'Champions of Chennai' by KSA Trust.

Madras Dyslexia Association still has many paths to tread. We are sure to travel further on this journey with the help of special educators, donors, volunteers and other stake holders interested in helping children and adults with dyslexia.

**D Chandrasekhar**

President, Madras Dyslexia Association

## Alumni Corner ...Dec 2010

Meet Swathi, a 1st-year college student from the U.S. doing an undergraduate course majoring in Political History of South Asia and making media for democracy at New Hampshire, USA. Swathi is a cheerful, vocal and articulate young girl brimming with confidence and full of dreams. She dreams of making films, and many other things which we are sure she will achieve.

We first met Swathi as an eight-year-old when her mother brought her in for testing and subsequent admission to Ananya as she wasn't able to cope with the Montessori school where she was studying. It took several years for Swathi to accept her learning difficulties. Now, as a college student, she tells us about her emotional journey as a dyslexic.

Most children (and more so the struggling dyslexic child) are caught up in the daily rut of coping with tests, exams, parental pressures, etc, and few have the time, energy or maturity to introspect. The natural recourse for a child may be to bottle up these emotions and cry in private, not even letting their parents know their innermost feelings.

Swathi explained to us the importance of personal space for her. In her life she felt that her personal space was of utmost importance to be able to cope with what was going on within her. A private haven where she could shed those silent tears when she was down.

Her parents have been very supportive and appreciative of her through all this, giving her the space she needed just as they themselves were coming to terms with her condition. As a young child in class 1 and 2 she could not understand what was happening to her. She only knew that she was lagging behind in class. Her perception of what she considered rejection by her teachers, was hard on her. What is interesting is that Swathi says that she could not accept even friendly teachers who would take extra care to spend time with her to help her. She'd think, "It is only because I am lagging behind that they are helping me." Accepting help was also a cause for depression. Accepting her problem seemed to be bigger than the problem itself. When pulled

out of mainstream school and put in Ananya as a full-time student, she loved her teachers there and understood she was getting a lot of help and found life at school easier, she still wanted to get back to mainstream school as quickly as possible as this was a "special" school, not a regular one.

In college, Swathi says, she still has issues with reading and spelling but has developed some strategies which she uses for dealing with the vast amounts of reading she has to do. She feels the Internet is a very useful tool for getting a lot of information. She also likes to read the summaries and reviews of the matter that she needs at college in order to get a background of what she needs to work on.

Swathi is a girl of many interests and can easily enthrall others also into participating. An avid organic gardener and a samba dancer she has got her parents interested in both of these. Her parents are very happy that Swathi has introduced these wonderful things to them.

After chatting with us, Swathi came in to talk to our NIOS students one day. The clear message from her was "follow your passion and do what you are interested in. Don't get forced into doing something you don't want to pursue." She also told them about the two sides of examinations. On the one hand, exams used to irritate her but later realized the need for them and the positives got from them. What she learnt earlier in Physics is coming in useful for her photography now and she really appreciates her early learning.

On learning she said that one can go deeper and deeper on any topic/subject they would love to know about and also that learning becomes easier once you start liking what you want to learn.

Working at the Media Centre at college after her classes, Swathi has earned about 150 dollars which she has very generously donated to MDA. What a philanthropic attitude at this young age! Thank You, Swathi. We appreciate it and wish you all the best.



## LD and Emotional health

*Arundhati Swamy*

*Vol. : 13 No : 3 December 2003*

The past decade has witnessed prolific research, development and application of new psychological theories that emphasize the importance of emotional health. Chief among them has been Daniel Goleman's ground-breaking works on Emotional Intelligence, placing in perspective the invaluable role of emotional well-being that leads to successful living.

To a society that has grown up on a staple diet of high achievement, the emotional and social development has been incidental. However this does not discredit a whole generation and its record of achievement. Surely there are millions of people who achieved success, without having had to compromise on their emotional health. They did not have to succumb to the pressures of achievement because they grew up in environs that nurtured emotional stability.

If education was once considered to be the acquisition of a strong knowledge base, today it encompasses the development of the whole individual. This assumes a greater relevance in efforts to support LD children through their inevitable struggle to cope with parental and societal expectations.

Every parent has the right to realistic expectations of their children. Every child has the right to expectations that their parents will provide a safe and secure environment in which their potential may be realized. LD puts on temporary hold parental expectations of academic achievement, sending uninformed parents and their children into a tailspin.

The disappointments of the present telescope into the hopes of the future, threatening their dreams of a good college education and a promising career.

Remediation, though vital in helping children deal with the challenges of learning disabilities, is just one piece in the rehabilitation puzzle. The other equally vital pieces that need to be put into place are the parent-child relationship, the student teacher relationship and the child's self-esteem.

The discovery of LD in a child can unleash an extraordinary pressure on the parents, ranging from denial to fear and helplessness. Unable to understand his inability to cope with academics, the child's anxiety is compounded by the fear of loss of parental acceptance. At this juncture, the emotional health of the family is crucial. If the family is already carrying emotional baggage from other stress-related issues, much of their collective emotional energies are diverted towards dealing with them, making available only depleted reserves of emotional energy to deal with the new stressful situation. Therefore, the most effective step at this stage would be for parents to deal simultaneously with all the stressful situations in their life, thus releasing hitherto trapped resources. Indeed, not an easy task! A proactive step would be to seek help through counselling.

Apart from the fact that the family can benefit from the restoration of emotional balance, counselling interventions can contribute significantly to a proper diagnosis of LD. For often LD and emotional stress are manifested through similar symptoms! It is thus very important to identify at the earliest, which of them is responsible for the difficulties being faced by the child. Needless to state, that some children could be dealing with both LD and emotional stress, each one greatly impacting the other.

Now let's take a closer look at the child. While remediation empowers him with specific learning strategies to overcome the learning disabilities, a self-realization process is the answer to building his self-esteem. Through the developmental needs at the social, emotional, physical and spiritual levels, the child learns to value himself as a person, not just as a student who must perform well in order to gain

acceptance. Recognition and realization of talents and abilities in non-academic areas will provide opportunities for achievement and a sense of self-worth. For the single child, upon whom all parental expectations converge, there is an additional pressure to perform.

Remedial help and professional counselling can provide the much needed support to families to deal with LD and emotional stress, but they are options oft ignored. Perhaps the fear of social stigma is a very real threat. What then, is more important – peoples' opinion or the joy of having successfully faced a challenge?

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## The counselling angle: Implications for the special educator

**Panelists: Mrs Nirmala Pandit, Mrs. Harini Mohan, Mrs. Sujatha.R & Mrs. Janaki Ramanathan**

*Vol. : 21 No : 3 December 2010*

Many children with learning difficulties also have a lot of behavioural issues that need to be dealt with. They have to be referred to professional counsellors to address their problem behaviour. While this is imperative, the remedial teacher also needs to deal with it as she sees the child a few times a week and many LD children share a very good rapport with this teacher. They see this person as a supportive, 'significant other' in their life and are quite open to listening to him/her. So the remedial teacher needs to be a teacher and counsellor rolled into one though their primary focus is remediating the needs of the child.

We thought we should probe this angle and decided to get the views of teachers with experience to share their views with us. Our editorial team members, Mrs. Kamala Ramaraj and Mrs. ShanthiGopalan interviewed the following: Mrs Nirmala Pandit (N.P) who has been teaching children with learning disabilities for more than 30 years and is one of the founding members of Madras Dyslexia Association. We also have MrsHarini Mohan (HM) Head of Senior School, Ananya, MrsSujatha.R (SR) Head of Junior School and Mrs. Janaki Ramanathan (JR) Vice Principal and a teacher with several years of mainstream experience as well.

### **What are some behavioral problems that you have found among children with dyslexia?**

N.P: Emotional outbursts, lack of attention, saturation, answering out of turn, non-stop talking.

H.M: According to me, the main problem of a purely dyslexic child is low self-esteem which manifests itself as aloofness, diffidence, and noncompliance to instructions in the classroom for sheer fear of failure.

J.R: Some of the behavioural problems are: restlessness, excessive talking, tendency to disturb others which is often due to the fact that they are in need of help.

S.R: Some of the behavioral problems I have observed in children with dyslexia are lack of proper attention and focus in classroom activities. Many of them come on empty stomachs and I have found that Hunger, with a capital 'H' especially affects those who are already inattentive and distracted. It compounds the issue of lack of concentration. Many don't know how to express it. They skip their morning meals for various reasons like not having time or not liking what they are given or due to some mood upset because of what they were told or how they were told it. This leads to fidgeting, uneasiness, which thereby leads to lack of concentration. Other behaviour problems are due to lack of language, which is because of their family background like the first generation English learners who have to learn in a language they don't really understand or speak.



***Do you feel remedial teachers should do something about these children or should refer them to counsellors?***

N.P: It is not possible to send a child to the counsellor often. Day-to-day counselling is important. In fact, start the day with counselling I think counselling should be a part of a teacher's training so that a teacher understands each child holistically. It is important to know his/her diagnosis and the ramifications well. It is very important to tell the children what their difficulties are and how it affects their learning - but assure them that it can be overcome. Be sure to discuss how they can use their strengths to do so.

H.M: As behaviour in the learning setup affects learning, a remedial teacher has a role to play. She has to do her best to motivate (through various rewards) to make the child modify his behaviour and learn. In a group situation, she should be careful to assess whether she can handle the whole issue and give the student the desired skills without eating up the quality time for other students. She can make note of it and deal with it after class. Also she should carefully assess on a case-to-case basis whether they need the help of counsellors. When the child has the problem of underlying violence he needs to be immediately referred to a counsellor. If it is a question of low self-esteem leading to not working to their full potential then she can give some classroom accommodations such as extra time etc to enable the child to do better and to instill in the child the confidence needed.

J.R: The teacher should become his friend and confidante, understand his problems, help him in the best suited manner. Try to motivate him to the best of her ability to boost his self confidence. If all of this fails, he should be referred to the counsellor.

S.R: These children need a lot of guidance from the teachers initially before they are referred to the counsellors. The remedial teacher unlike the mainstream teacher can check what is happening in the family when there's a sudden disruption of behaviour because a lot of their problems arise from their families. In many households, lack of discipline,

ground rules, family support etc, are seen and need the direct intervention of the remedial teachers. A good and honest talk with the parents, mostly with the mothers throws a lot of light on the home situation and can solve a lot of problems. There's an example of a child, who had a working mother who was too busy to give quality time to her children. A routine, a time schedule was given which she followed and this resulted in a tremendous improvement in the behaviour of the children and now they follow the routine and enjoy school.

***Do you think that there is a thin line between behaviour modification and punishment?***

N.P: A lot of talking is necessary - keep the communication channels open. The students will understand that it is alright to talk to the teacher. Behaviour modification will not be mistaken for punishment if the modification exercises have some connection with the behaviour. For example, if homework is not done make sure the child finishes it during lunch hour or stays back after class.

H.M: I do agree that most of the time, there is a very thin line between both behaviour modification and punishment. If behaviour modification is misconstrued as punishment it will only aggravate the problem. A balanced approach is needed to deal with the needs of a child. Each child's need should be analysed and assessed independent of the other children and the course of action explained to them so they don't wonder why something is happening only to them.

J.R: There is a very thin line between punishment and behaviour modification and the warning signs are when the child feels he is victimized. Behaviour modification causes only momentary hurt depending on how it is handled by the special educator. Once the child understands that the teacher is his friend and guide, he will accept the behaviour modification whole-heartedly and put in his best efforts to change to please the teacher. But the teacher must be honestly convinced that it is necessary and will work and only then it can be made to work.



## Parental support with reference to LD child

*Mrs. Brinda Jayaraman*

*Vol. : 16 No : 2 Oct 2006*

(Mrs.Brinda Jayaraman runs an organisation, 'Anchor For Self Help Access' (ASHA), wherein she organizes regular workshops on parenting skills and communication).

This is her speech in Samyukth 2006, conducted by Madras Dyslexia Association at Dakshinamurthy Auditorium, P.S High School, Chennai.

Each family needs to concentrate on communication with their children, which is the key to adept parenting and my speech is about this communication with their children, particularly with a child with special needs. Living with a child with special needs means constantly moving towards approximating the norms of the society, norms in terms of developing predictable responses and implementing conflict resolution. Dr.Kilhar of George Town University calls this the 'Strategies that encourage the esteem of the individual and family', which I think is the most appropriate quote here. My speech is going to deal with this role of the family and its significance to children with Learning Disability.

Above all, in families with an LD child, we find that 'acceptance' is the main issue and the parents need more counselling than the child, to recognise the fact that 'early intervention' is the key to their child's normal development. We find that it is very hard for parents to accept the fact that has been communicated to them by the teachers of their children right from the kinder garden classes; that their child needs special care. They would have been alerted by these teachers that their child was not reading or writing, but they will be misguided by their elders at home that this is 'a natural phenomena', which will just 'fade away with time' and by the instances of this or that relative 'being' the same way! This wrong guidance of 'fading away with time' dissuades them from looking for a counsellor or medical help until it is too late. Mostly they come to affirm whether what they have been told is true and

by that time the damage has been done to the self-esteem of the child. The mother of the child will be doing most of the talking, while the father will look as if he has been dragged into the session/situation about which he has nothing to do. He has been very 'busy' lately and only 'she' deals with it. 'She' needs counselling as she even 'cries' about it and not 'me'! The major problem lies in these attitudes of the parents. Though I do think that parents are not to be blamed entirely as they constantly compare them to the 'normal' children from the mainstream, their handwriting, spellings and language expression etc., are the only norms available. This pulls the parents down, makes them feel inadequate and they pass all this to the child. They bombard them with a mass of questions about the school, class and homework, allowing the child no respite to think or answer. The cornered mother wants to somehow set things right by reacting hastily from her blind corner, when nothing else works, unaware of the lifelong harm done to the child. Finally she 'gives up' and they end up running from pillar to post in search of a cure. Approval by key adults, self-achievement and self-expression are the cornerstone, the nourishment for any child's growth. The parent must understand that the emotional needs of any child with or without LD can be provided only by the key adults (parents and family) and it is on their approval that a child's healthy development lies. I would like to give one example of this situation here. A child would have done its best, finished some tasks committed in the counseling session. While we review it, I would look at the work done by the child, while the parent will keep complaining about the part not done. They will comment, " He/she is committed to do it, but did not", not understanding that the child tries his best, but was being let down for not being appreciated for his

efforts. Parents should understand that the child's time and efforts alone need appreciation and should not always worry about the results. They should be sensitive about the child's longing for approval, as approval is the delightful thrill that boosts his self-achievement and thereby his self-esteem. If he is good in other field appreciate him and please do not pass terrible comments like, "who wants this prize?" "Remember what marks you got in maths". The child gets frustrated when his achievement is minimised by his parents. Self-expression gets stunted when there are siblings who may not have this problem. The child compares himself to his siblings even when the parents do not. He decides that he is not capable, simply because he cannot do what his siblings can do. So, the following conclusions are clear from the above situation: Parents start getting angry when they cross the threshold of their patience and the impact of their verbal/physical abuse on their child is serious. The child is humiliated and stops behaving because of fear as he interprets their anger as withdrawal of love. So, he learns an aggressive model of behaviour.

I want to call attention here to what happens to the child during the whole process. The impact of punishment is very detrimental to the child and the child forms negative impressions about his parents' love, not understanding that this anger arises out of concern. He thinks his parents love his normal sibling more than him, even though the parents do not discriminate between the two. He starts believing so because he perceives their anger is out of their lack of love. So, parents who shout are surely giving a wrong message to their children. He interprets their shouting as 'I am withdrawing my affection for you'. By shouting or physically punishing, firstly we are humiliating the child. Secondly, we are hurting his ego and inexorable damage to his self-esteem. He starts doing something like for example his homework only because of this punishment. There is not going to be a permanent change or realization on his part that it is his responsibility to do this work. In future this is going to become a pattern. You shout and the child obeys. Or he is going to lie that he has done it. His parents' disapproval is going to make him do dishonest things. This unpleasant and aggressive model that a parent presents is going to be the example he is going to base his activities on in future. Parents should not forget that a child learns by imitating, not only their actions, but also their words.

They should also know that punishment in any form does not produce even one positive change in a child. In adolescence, fear becomes rebellious behaviour. Even a docile child can become aggressive enough to hit his parents and the parents are flabbergasted by this behaviour, not knowing it is they who have contributed to this situation all along.

Family, partaking in the development of an LD child will be enhanced by the following:

- 3 Participation by every family member.
- One window.
- Family responsibilities to an LD child, making academic activities interesting. Praise and encouragement. No verbal 'put downs'.
- Support groups.

As parents of LD children, they must follow the above consistently as a supportive measure. All members should participate. Positive participation means the whole family should meet and discuss the issues with regard to the child and decide how as a team they are going to address them. Associations like MDA, counsellors, special needs instructors are available for the parents in dealing with the situation. They must take their guidance and do accordingly and that will surely produce positive results. There should be only a single window operation where matters go through that window. Multiple parenting will confuse the child and leads to manipulations by the child, as the issues are discussed and quarreled over between the couple; eg, watching T.V. While mother permits the child to watch it, the father disagrees and they start quarrelling in front of the child.

The LD child should understand that he has responsibilities to fulfill and the parents should not take up all the responsibilities as it is often done with any special needs child for e.g. the homework. They go out of their way to find out about the homework, which in turn helps the child shirk his tasks. The challenge here is for the parents to make it interesting. Visual aids and other guidance are available to learn how to do it. Parents must have priorities and must perform them properly. Turn every stone to educate the child. I am thrilled that so many parents are interested in the activities of the MDA, which shows that they are taking up the challenge and are in the right path.



Encouragement is very essential for an LD child. Resilient children do not need it so much. A child whose self-esteem is very low, who is hopeless in dealing with academic difficulties, has to make up for what he has lost, encouragement is crucial. Avoid verbal 'put downs' under any, even trying circumstances.

#### Styles of parenting

- Effective communication
- Listen actively (use magic words)
- Validate feelings
- Effect of words you use: 15%, your tone: 30%, your body language: 55% Maintain eye contact.
- Be observant about non-verbal clues

Never ignore his excitement. Be interested in whatever he wants to say. Validate his feelings, for example, when a child complains that his bus driver yelled at him, and everybody laughed at him, perceive the hurt feelings behind the statement. Label it and give it back as a paraphrase to the child. Ask questions like - 'Were you embarrassed?', 'Did you feel awkward?'. This will let him know that you have understood and are empathizing with him, which will help him to open up more with you. E.g. 'Ayesha is moving away and she is my best friend'. Questions by the parent: 'Are you feeling sad?' 'Are you missing her?' Hug her and that will soothe her feelings more than just words. Body language can express and convey your feelings much more than words ever can.

Always be aware of how you are projecting yourself to the child. They are very smart and will assess and validate you by your actions. They can understand you by the very way you communicate. Remember that a democratic parent, a balanced parent should be very effective in communicating. Scars that happen when you put them down because of your words or actions will take a very long time to heal. Whatever your anger, frustration, please twist over negative thoughts into positive words/actions and then say it. E.g. "I like the way you do things. But if you could do it better it would be fine!" Make DON'T messages into DO messages.

I would like to end my talk with an anecdote- There was a girl called Wilma, from a poor, black family from Tennessee that had 22 other children. She was affected with polio when she was four years old, but her dream was to partake in Olympics as an athlete. Everyone who heard this laughed at her, but her mother did not. She encouraged Wilma to such an extent that she went on to win in Olympics at the age of 16. Her mother often told her, "Ability is what God has given you. The letter 'Dis' is added by man. You forget it. You have the ability to run and you will do it." Wilma went and did it because she had a parent who believed she could do it. I need not go to USA in search of another Wilma, here are people like her mother/parents, counsellors, volunteers and institutions like MDA. Proof enough, determined enough, tough enough to win.



## Understanding Difficulties in Mathematics

*Subha Vaidyanathan*  
Vol. 14, Issue 2, October, 2004

Mathematics occupies a prime place in learning and clearly demarcates those who understand and those who don't. While those high on math skills are considered to be very brilliant, the other group is often looked down with disdain as those with lesser cognitive skills. The great amount of importance

given to mathematics has led many people to have anxiety and stress about performing well with numbers and non-performance therefore leads to lower self-image. When understanding breaks down in mathematics, students do feel as though they are swimming in a sea of incomprehension. Not understanding, anxiety, low performance thus becomes a cyclical process.

The term 'dyscalculia' suggests learning difficulties purely related to mathematics. Most dyscalculic students will have cognitive and language abilities in the normal range and may indeed do well in non-mathematical subjects. Problems vary from person to person and affect people differently in school and throughout life. On the other hand, when we talk of dyslexia it is not always accompanied by math learning problems. Normally we analyse a dyslexic child's strengths and needs vis a vis their language area; reading, spelling, comprehension and writing and secondarily their organisation, memory, visual spatial, sequencing skills. We need to look at the number work too, if it affected by the problems as well. Parents and educators are intrigued by some of the underlying issues:

- Why is this child so slow in doing his Math?
- Why is he still counting with his fingers even though he is older?
- Why is it he can arrive at the answer but not write it in steps and in an organised way?
- Why is this child able to do pure calculations but is stumped the minute language is introduced into it?

Experts feel that a 'differential diagnosis' is needed to find out which area of math is troubling the child. Since mathematics is cumulative in nature, it will be beneficial if breakdowns are identified as early as possible, before children lose confidence or develop a fear of math.

### **Where is the breakdown?**

- a. Is it the language part of maths?
- b. Is it the memory part of math?
- c. Is it weak visualisation?
- d. Could it be that they have trouble forming the concepts?
- e. Could it be that they don't really have the systematic stepwise problem-solving skills?
- f. Could the problem be attention related?

If you take up the numbers we can see that every number has a name, a shape and therefore a meaning. For instance the shape 1 has a name and meaning, that is it has correspondence with 1 object, a pen, a cow, a boy, etc. to math learning.

Thus, the numbers have to be learnt systematically and each class has certain expectations of the knowledge. By class 5 a child is to be aware of the numbers, up to crores in the Indian System and a million in the International System. Instruction is sequential and once numbers up to 20 are mastered it becomes easy to teach other numbers which are built upon these numbers. At this stage the memory for shapes, associations and sequences are necessary to understand the placement and importance of numbers. For instance, 3 is three, and comes after 2 but before 4.

To understand what role memory plays in mathematics, we need to remember that mathematics being more cumulative than other subjects depends a lot upon what has been learned in the past and this in turn causes a memory overload and drain. Almost every kind of memory that one can think of finds its way into math.

Visual memory is retaining the connection between the awareness of the numbers and the functions of calculation.

Factual memory is the part that learns and stores math facts. Math facts can be tables, the starting point for organisation for eg., addition from right to left and division from left to right etc. These facts if not recalled accurately and quickly leads to errors and result in slowness in working.

Procedural memory is used to recall how to do things, for eg., the steps to reduce a fraction or perform long division. When we learn how to ride a bike or to swim procedural memory comes into play and we do just do it without really knowing how we did it. Although many such procedures are unconscious, many of them that we use in arithmetic are learnt quite consciously. We've learnt explicitly how to borrow or carry and use it in multiplication or division and can often recall and explain these procedures clearly.

Short term memory is the medium through which information is first registered in the brain. When a child sees a sum he quickly processes the math facts by looking at the symbols or reading the problem. Further the details of the math facts are registered and processed quickly and the sequence of the numbers and visual attributes of the facts should be preserved correctly.

Auditory memory comes to play when a teacher can read out a sum and ask the class to do it.

Both visual memory and auditory memory are part of the short term memory which with long practice and understanding goes into the long term memory.

Long term memory is when learning leads to store of connections between the neurons in the brain and is constantly reinforced by practice. This is why practice is important in maths.

Memory for rules is very important for success in maths. When children come across new problems they must recall from long term memory the appropriate rules for solving the problem. For instance, when adding or subtracting two unlike fractions the child must remember that the L.C.M. has to be found; or in algebra that multiplying two negatives gives a positive, and so on.

Active working memory allows children to hold together the parts of the maths problems in their heads. It is very important, since students hold in their minds the operations and steps of the larger problem and then must instantaneously recall facts, which are needed to solve it.

Going over the same thing over and over again gets information from short term memory into long term memory, but unless one rehearses reflectively and internalises the principles it doesn't work. Emphasis on rote memorisation, learning math only by drill and practice rather than understanding and reasoning is not good for the child in the long run.

### *What can be done?*

1. Multi sensory teaching: Children learn when math is taught in a variety of ways – be it visually via demonstration; verbally via oral explanation; experientially with aid of physical objects to demonstrate a particular function and of course working out in their notebooks.
2. Using Multiple Intelligences: For a child who is high on music using their favourite songs to learn math facts, remembering and repeating them, making an interpersonal high child work and learn in a group or a verbally high child verbalise what they have learnt, frame different kind of statements for sums are effective methods to reinforce learning.
3. Use of calculators so that they develop problem solving skills as opposed to continuing to insist on calculation skills.
4. Teach basic math facts, vocabulary on and via cards to add, subtract, multiply and divide.
5. Not to assume that the child something. Instead build practice in the lessons. Cumulative reviews of skills and learning in order to develop a certain level of automaticity with math facts.
6. Provide models of math problems and sums if needed for reference and learning.

Mathematics encompasses a wide variety of skills and concepts which are related to each other and build on one another and that is possible to master some and struggle with some others. To enable learn the concepts is the key.

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## Understanding Some Aspects of Memory for Teaching and Learning

*Vol: 23 No: 2 September 2012*

*Editorial Team 2012*

As teachers of children with learning difficulties as well as parents we are often confronted with children who struggle to recall. "My child's memory seems like a sieve!" A common statement from frustrated parents is that the child can remember film songs lyrics completely but is unable to remember his answer. He can parrot the script of his favorite movie or a popular jingle but look blank when a question is asked in History. The mother makes him learn thoroughly and the child goes to the test and says "I forgot". Teachers too are often baffled by the child who

seems to have a very poor memory for spellings, for tables and for answers. The child gets charged with having a “selective memory” and that he chooses to remember what he wants like his father’s promise of going to the mall on Sunday but not the test he has the next day.

The educational system in the West does not make much demands of a child’s memory whether it is spellings, tables, or formulae. These are often provided to them and the ability to apply these is checked rather than trying to overload the memory system with myriads of facts. The demands of the Indian educational system on the other hand makes the child rely heavily on memory. Children who have been scoring very well are often children with a good memory who can reproduce their answers verbatim. Most of the exams are mainly testing the memory of the child and it is only recently that the Higher Order Thinking Skills (HOTS) questions are being introduced. Very often children tend to do Math through rote as numbers are given just as in the text book. The lack of language skills are being compensated by their strength in memory. With CBSE’s plans of introducing Open book exams the understanding and application skills would surely improve.

Teachers, educators and parents would do well with an understanding of the nature of memory and to know some techniques to help enhance memory. According to the All Kinds of Minds website, “... briefly records new information, mentally juggles information while using it to complete a task and stores and recalls it at a later time in some way needed. It is the storage system of material that varies in size and format. Understanding something and remembering are different.

Much more memory is needed to do well in school than at any other time”

Researchers have shown there are many kinds of memory; upto 200 kinds and each of these would have implications for various kinds of academic performance. We have to be aware that children may have deficits in some kinds of memory and strengths in others and that there is nothing like poor memory as such. As we all know the short term memory holds things for a short time only and is the first halt in remembering something. There is a lot of competition

for this space as new information wants to enter here. Kids with a “leaky” short term memory could forget something that they have just heard or seen. It also acts as our relay station and sometimes sends them to the long term memory and sometimes just forgets it. (Levine 2002) Children with dyslexia sometimes have a good long-term memory for incidents, places, movies and faces they are familiar with and forget what has not been experienced. Internal dialogue is important in remembering something and children need to be shown how to whisper or subvocalise what they have to remember.

Some children have a good ‘recognition memory’ and these children would do well on multiple choice questions, those good in long term storage or access will do essay questions well. When word recall is a problem giving one word answers for questions becomes a problem. There was a student who had a hard time recalling the word Hitler and had to hit his cheek every time to he had to recall the word Hitler.

Considering that memory plays such a major role in our education system and since children with memory deficits need to be helped we need to have a thorough understanding of it.

- If the child remembers better when he sees things written on the board, through colours, charts, pictures, graphs etc. he has a good visual memory. This child would need to see the text and print. He/ she needs homework and reminders of things to be brought, on a side of the board allocated for reminders.
- Some children prefer to listen to instructions or the teacher teaching and take in every word. They are happy learning in group study as they can learn using their ears. These children have a good auditory memory.
- Some others like action while learning, whether pacing up and down or rocking or even working on an exercise bike. They are using their muscle memory. They are more kinesthetic.
- The child learns all the answers at home but does not write in a test or exam. The parents think he has a poor memory and teachers think he hasn’t learnt well. On probing why he did not write the

answer though it was revised the day before in class, he replied that he didn't know that he had to write that particular answer for that question. So here the understanding of the question, the language aspect of it, was interfering with his output. He knew the answer but didn't realise that that was the answer for that question.

- When a child comes unprepared for the test that was announced it could be that he/she hadn't paid attention in class when instructions were given. In this case his /her attention has come in the way of remembering.
- Other children know the answer but their hand just doesn't cooperate as it does not keep pace with their thought process due to poor motor skills. With a reluctance to write, what comes out on paper is just a small percentage of what they know.
- While some children know to learn an answer they tend to forget in a test situation. Here they have to read the paper, understand the question which may be differently worded, bring in other information like spellings, the test presentation etc. What is needed here is "active working memory" which maybe poor for the child.
- For some other children acting out a scene helps. These are children who can remember scenes in a movie or an incident that happened quite a while ago. Their episodic memory is good and needs to be used effectively. Wherever possible if role play can be done then even World War II can be taught by using this method.
- For some others the association memory maybe good. They learn to associate one with the other to be remembered. They maybe good visual spatial learners and associate with parts of the house, the entrance verandah with some point and then the living room, kitchen, bathroom, bedroom study etc. Others could associate with a rhyme.
- Those high on musical memory can put tables into songs and some other facts too into songs. We taught some of our strategies to children in the form of songs and they found it easy to learn and remember.

Sung to the tune of "Here we go round the mulberry bush"

This is the way we edit our work

Edit our work, edit our work

This is the way we edit our work when we finish writing

We look for C, capitals

in the beginning and for names

We look for O, overall if all the words are there

We look for P, punctuation, commas, full stops question marks

We look for S, spelling mistakes, spelling mistakes, spelling mistakes

This is the way we edit our work, by checking for COPS

Checking for COPS

This is the way we edit our work, by checking for C..O..P..S

Considering students learn in their own preferred way, if information is presented using different formats, the teacher is able to reach out to a larger number of students in the classroom. Students find that the use of strategies helps them to organize and retrieve the information better. According to Howard Gardner, Father of Multiple Intelligences, "The more different ways in which we present ideas, the more intelligence that we can activate, the more likely that the person will really understand the idea, the topic, the theory that we are talking about."

There are various ways that would facilitate the learning process in a child. The most fundamental ones are key-word underlining, taking down points, chunking, highlighting key phrases etc. Given below are some specific strategies that would help a child become a better learner.

### Highlighting the Verb Method:

In this method the verbs in the sentences are underlined and/ or written in colour. They are also written down as a list in a box on the left side of the page and questions are generated around them. For example, the functions of the Election Commission are:

a) preparing the electoral rolls

b) fixing the date of the elections



- c) supervising the elections
- d) arranging for the counting of votes
- e) declaring the results

So, the questions would be - Preparing for what? Fixing what? Supervising what? Arranging for what? And declaring what? An acronym could also be formed with the first letters of the verbs so that they can be remembered. The acronym of p f s a d will help them recall better or even a sentence using these letters: "Pat felt sad" can be used.

### **Episodic Patterns:**

An episodic pattern organizes information about specific events. It includes the time and place, specific people, the duration and the sequence of events. It can be used for teaching or learning the II World War or the Jallianwallah Bagh massacre.

<http://classroom.jc-schools.net/daleyl/nonlinguistic%20rep.ppt>

### **Tapping a Child's Special Interest**

Teachers can help students learn by using their areas of interest like music, arts, sports etc. A student in class who plays football used the game to memorize an answer in Economics. He visualized himself passing the football on the field and associated the action with "total value of goods and services produced". Next was tackle and this was associated with "income and payments received". Finally, as he visualized shooting the ball into the goal - he memorized "expenditure on consumer goods, investment and saving".

### **Play- acting:**

Kinesthetic learners like to express themselves through movements. This helps them remember and process information. Enacting an important event in history is a good strategy. For example, the Balkan wars. Five students in class played the part of the five Balkan countries who wanted to be independent of Turkey. The defeats of Turkey, the signing of the treaty and so on were acted out by the students. This helped the students memorize the answer and write it down.

### **Visualization:**

Visualization helps students get a mental picture of an event, a concept, an idea. For example, the sentence "Monarchies were abolished in Germany,

Russia, Austria and Turkey". The acronym GRAT was used as a clue. The students were asked to close their eyes and visualize a RAT (with an initial G before his name) sitting on a throne with a crown on his head. This helped them remember the name of the countries and the context in which they were used in the sentence. In the geography lesson on climate, the lengthy answer about the south-west monsoon was memorized in a similar manner. The students visualized the winds blowing from the Indian Ocean, turning towards the West Coast, striking against the Western Ghats etc.

**Venn Diagrams:** Venn diagrams are drawn as two circles overlapping each other. The inner zone represents the common aspects while the outer zones represent the differences. Hence these diagrams are used for comparing and contrasting two ideas or concepts in a lesson. The Venn diagram below shows the similarities and differences between the south-west and the north-east monsoon.

**Herring-bone Mapping:** The object of this graphic organizer is to identify the main idea and supporting details. An advantage of the herring-bone techniques is it enhances the ability of students to answer essay questions. A herring-bone map is set up like a fish skeleton. The backbone of the map represents the main idea, while the spine of the map represents the supporting details. In class, we used this strategy to learn the causes of the revolt of 1857. Each spine and the supporting information were written in a specific colour.

Learning using the students preferred modalities and using their memory strengths along with adequate repetition, rehearsal and practice is going to be the answer for effective recall and retrieval.

Apart from these, some basic factors that would work as well are exercise (It keeps the brain ticking and are important before class), adequate sleep, good breakfast, stress free learning and not watching TV as the last thing at night.

### **References:**

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<http://www.allkindsofminds.org/memory-module>



## Dyslexia in Adults

**Dr. Angela Fawcett**

*Professor Emeritus and Vice President of British Dyslexia Association  
Vol 28 Issue 3 October, 2017*

Why do we need to consider dyslexia in adults? Surely dyslexia is just a problem for children when they're starting to learn to read - it doesn't affect adults at all does it? I am a leading researcher in dyslexia across the age range and the author of Pearson's Screening Test for Dyslexia, DST- J India, the first in India for ages 6 ½ to 11.

My interest in dyslexia started 35 years ago when my son Matthew was diagnosed as dyslexic at the age of 5 ½. As time went on we began to realise that my husband David was also dyslexic. He had struggled through school at each stage, graded only fair but a very pleasant member of the class. David is a highly creative man who is verbally skilled, but even as an adult he does not enjoy reading, he is troubled by his spelling and his memory is terrible. This is typical of an adult with dyslexia, even when they have learned to read and completed school.

Dyslexia is genetic in origin so if a parent is dyslexic there is 50% chance that their child will also be dyslexic. And, of course, this is something that persists throughout your life - dyslexia existed before children were routinely asked to learn to read, because it is a difference in brain organisation. This means the problems will show up when asked to do something that demands you coordinate your resources, such as learning to read or spell, but the problem is there in every aspect of learning and it seems that if you are dyslexic it is just difficult to become automatic in any of your skills. This means you always have to work harder and put in more effort than other people. The problem is most severe

for adults who have not received support throughout their schooling as with many adults with dyslexia in India. This means they are likely to continue to struggle with literacy and this will impact on their working lives.

A key issue in dyslexia is organisation and time management and this is something needed throughout life, in work, social and home life. It is easy to mistake the problems associated with dyslexia for lack of care. So, just as the younger child would be accused of carelessness in school, so many dyslexic adults may appear disorganised forgetful and uncaring, because they may not remember important issues. It is important to recognise that this is an integral part of dyslexia in order to ensure success in life.

Of course, it is not just in your relationships that dyslexia can be a problem - your Manager may assume that you are lazy and incompetent because it takes you longer to complete your tasks. I have worked with many adults who have needed to explain these difficulties in terms of dyslexia in order to ensure that they remain in employment. This is, of course, dependent on whether your skills are sufficiently developed to apply for a job in the first place, and to be accepted at interview. This applies at all levels including those dyslexic students who worked hard enough to obtain a place at university, who continue to struggle with spelling new vocabulary, meeting their deadlines, dealing with their admin and building a new life as a student with all the organisation involved.

## செய்தித் துளிகள்

மதராஸ் டிஸ்லெக்சியா அசோசியேஷன் தொடங்கி முப்பது வருடங்கள் நிறைவடைந்ததை கொண்டாடும் விதத்தில் வருடம் முழுவதும் பல நிகழ்ச்சிகள் நடைபெற உள்ளன. இதன் தொடக்கமாக பகுதி மற்றும் முழு நேர சிறப்பு பயிற்சி மையத்தில் பணிபுரியும் சிறப்பு பயிற்சியாளர்கள் கௌரவிக்கப்பட்டார்கள். இந்த சேவைகள் மதராஸ் டிஸ்லெக்சியா அசோசியேஷன் தொடங்கியது முதலே வழங்கப்பட்டுவருகிறது .

### விழிப்புணர்வு

டிஸ்லெக்சியா பற்றிய விழிப்புணர்வு ஏழு பள்ளிகளை சார்ந்த ஆசிரியர்களுக்கு மற்றும் ஒரு தனியார் நிறுவனத்தின் ஊழியர்களுக்கும் வழங்கப்பட்டது .இது டிஸ்லெக்சியா பற்றிய குணாதிசயங்கள் மற்றும் இதனால் ஏற்படும் சிரமங்களை விரிவாக விளக்கியது .

### பயிற்சிகள்

நமது அலோஸியேஷனின் மிக முக்கியமான தீவிர சிறப்பு ஆசிரியர் பயிற்சி ஆங்கிலம் மற்றும் தமிழ் மீடியத்தில் உள்ள ஆரம்பப் பள்ளிகளில் பணிபுரியும் ஆசிரியர்களுக்காக அளிக்கப்பட்டது .

மேற்கு வங்கத்தின் சமிக்கிற சிக்கூா அப்யானுக்கு மனோசேத்தனா அகாடெமிக் அண்ட் ரிசெர்ச் சென்டர் உடன் இணைந்து ஆறு நாள் பயிற்சி அளிக்கப்பட்டது .

இதே போல் ஒரு பயிற்சி ஏழு ஆரம்பப்பள்ளிகளில் பணிபுரியும் ஆசிரியர்களுக்கும் அளிக்கப்பட்டது .

அமர் சேவா சங்கத்தின் ஆசிரியர்களுக்கு ஆறு நாள் பயிற்சி அளிக்கப்பட்டது

இவற்றை தவிர ஸ்ரீ நிகேதன் பள்ளியில் பயிலும் மாணவர்களின் பெற்றோர்களுடன் கலந்துரையாடலும் நடைபெற்றது .

### வளஅறை

கீழ்க்கண்ட பள்ளிகளுடன் வளஅறை அமைப்பதற்கான உடன்படிக்கை கையெழுத்திடப்பட்டுள்ளது.

1. அர்ஷ வித்யா மந்திர்

2. யுவ பாரதி பள்ளி

### கூட்டமைப்பு

நமது நிறுவனத்தின் பயிற்சி புத்தகங்களை கூட்டாக பிரசுரிப்பதற்கான உடன்படிக்கை 'நிப்மேட்' டூடன் கையெழுத்திடப்பட்டுள்ளது

# Happenings in MDA

MDA set the ball rolling for the celebrating the completion of 30 meaningful years. The year-long celebration was kick started with an event to felicitate our special educators providing remedial teaching in our fulltime and part-time remedial centre. This is the one of the first services that MDA offered to the children with dyslexia. The commemorative logo was also launched.

## Awareness

Awareness program for teachers was conducted in 7 schools. The program brings to focus the characteristics of dyslexia and the difficulties faced by the children due to this condition. A similar program was conducted for a leading corporate organisation too.

## Training programmes

Our flagship program - Intensive Teacher Training Program was conducted successfully. We also conducted a similar intensive program for Tamil medium teachers.

Through collaboration with Manochetna Academic

and Research Centre, we conducted a 6 day training for West Bengal SSA.

A similar program was conducted for the primary school teachers of 7 leading schools.

Tamil Vazhi Payirchi -a 6 day program for the teachers of Amar Seva Sangam was conducted.

In addition to these, parents of Shriniketan group of schools were addressed.

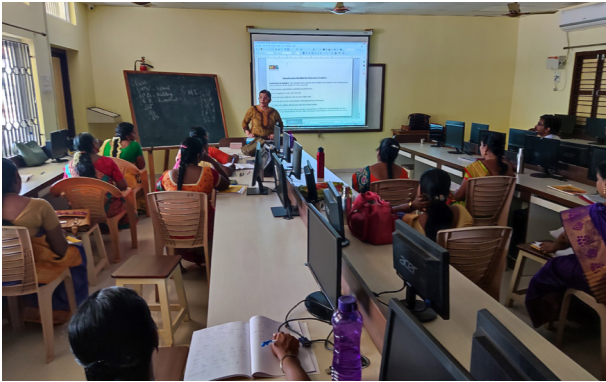
## Resource Room

New Resource Room affiliations were signed with the following schools:

- Arsha Vidya Mandir
- Yuvabharathi School, Coimbatore
- VES Panchetti
- VES Gummidipoondi







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