

## Managing Specific Learning Disability in Schools in India

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Specific learning disability (dyslexia, dysgraphia, and dyscalculia) afflicts 5-15% of school-going children. Over the last decade; awareness about this invisible handicap has grown in India. However, much needs to be done to ensure that each afflicted child gets an opportunity to achieve his or her full academic potential in regular mainstream schools. In order to achieve this ideal scenario, all 'regular' classroom teachers should be sensitized to suspect, and trained to screen for this disability when the child is in primary school. School managements should become proactive to set up resource rooms and employ special educators to ensure that these children receive regular and affordable remedial education; and be diligent in ensuring that these children get the mandatory provisions both during school and board examinations. Once specific learning disability is recognized as a disability by the Government of India, these children with the backing of the Right to Education Act, would be able to benefit significantly.

**Key words:** *Dyslexia; Education; Learning disorders.*

The term 'learning disability' was first coined in 1963 by Dr Samuel Kirk, a psychologist, while delivering a speech at an education conference held in Chicago [1]. He had worked extensively with many students who were repeatedly failing in their examinations but were clearly "not retarded". He observed that these so-called 'scholastically backward' students could be helped by specific methods of teaching. Till then, such children were being labeled as having "minimal brain dysfunction" or "strephosymbolia", as they reversed their letters and made other errors in their spellings [2].

### WHAT IS SPECIFIC LEARNING DISABILITY?

Specific learning disability (SpLD) is a group of neurodevelopmental disorders manifesting as *persistent* difficulties in learning to efficiently read (dyslexia), write (dysgraphia) or perform mathematical calculations (dyscalculia) despite normal intelligence, conventional schooling, intact hearing

and vision, adequate motivation and socio-cultural opportunity [3,4]. Children with SpLD present with academic problems such as reading slowly and incorrectly, skipping lines while reading aloud, making repeated spelling mistakes, untidy/illegible hand-writing with poor sequencing, and inability to perform even simple mathematics. They invariably fail to achieve school grades at a level that is matching with their intellectual abilities [3-5]. SpLD afflicts almost 5-15% of school-going children [3-6]. This invisible neurological handicap is believed to be a result of functional disruption in neural systems rather than an anatomic problem and is genetically inherited [3-5,7]. Dyslexia afflicts 80% of all children identified as having SpLD [4]. Children with dyslexia have deficits in "phonologic awareness", which consistently distinguish them from those who are not reading-impaired [4,5].

The functional unit of the phonologic module is the "phoneme", defined as the smallest discernible segment of speech; for example, the word "bat"

consists of three phonemes: /b/ /ae/ /t/ (buh, aah, tuh). According to the “phonologic-deficit hypothesis”, children with dyslexia have difficulty developing an awareness that words, both written and spoken, can be broken down into smaller units of sound and that; in fact, the letters constituting the printed word represent the sounds heard in the spoken word [4,5].

### ADVOCACY FOR SPECIFIC LEARNING DISABILITY

#### *International efforts*

In 1964, USA government started financing the training of teachers to provide ‘remedial education’ to help children with SpLD continue their education in regular mainstream schools [1]. Subsequently, in 1969, the USA government passed “The Children with Specific Learning Disabilities Act” which for the first time officially acknowledged SpLD as a disability, and ensured their entitlement to “publicly funded” remedial education services and the benefit of provisions (“accommodations”) in their school curriculum [8]. In 1977, the USA government further strengthened this law by empowering these children with a “legal right to continue education in regular mainstream schools”. This was done to protect them from discrimination in education [8].

#### *Efforts in India*

In 1996, the Maharashtra government was the first in India to formally grant children with SpLD the benefit of availing the necessary provisions (“accommodations”) to enable them to complete education in regular mainstream schools [9]. These provisions comprised of: (i) extra time for all written tests with spelling mistakes being overlooked; (ii) employing a writer for children with dysgraphia; (iii) exemption of a second language (Hindi or Marathi in an English medium school) and substituting it with a work experience subject; and (iv) exemption of algebra and geometry and substituting it with lower grade of mathematics (standard VII) and another work experience subject. Initially these provisions were only given for the standard IX and X examinations, but subsequently, in the year 2000, they were given from standard I to XII [10]. In the year 2003, the government of Maharashtra extended the facility of provisions to college courses, and even seats were reserved for these adolescents in the

handicapped category [11]. A 2006 judgment of the Mumbai High Court has clearly stated that in the state of Maharashtra it is mandatory for the school and college authorities to provide these provisions and denial would be regarded as contempt of court and the school / college authorities would be liable for prosecution [12].

SpLD distorts scores of a student’s performance causing them to be very low. [13,14]. Provisions are intended to function as a corrective lens that will deflect the distorted array of observed scores back to where they ought to be [13,14]. It is aimed that these provisions will serve to “level the play field” for these students as their academic performance would now be matching with their intellectual abilities [13, 14]. In a recent study carried out at our clinic, children with SpLD who availed the benefit of provisions showed a significant improvement in their academic performance at the Secondary School Certificate board examination [15]. Their mean total marks increased by 22%; from 41% before diagnosis of SpLD to 63% after availing provisions [17].

Since 1999, the National Educational Boards which conduct the Indian Certificate of Secondary Education (ICSE) and the Central Board of Secondary Education (CBSE) examinations have also formally granted children with SpLD the benefit of availing the necessary provisions [5]. In the last decade, other state governments (Karnataka, Tamil Nadu, Kerala, Gujarat and Goa) too have recognized SpLD as a disability and granted these children the benefit of availing provisions.

Although there has been progress, there is still a general lack of awareness about SpLD in a large majority of Indian schools [16]. SpLD has still not been diagnosed as a disability by many state governments in India [16]. Also, there is no law in any state of India which mandates that a school should provide remedial education within its premises or that these children are entitled to “publicly funded” affordable remedial education services [16].

### EARLY DIAGNOSIS OF SpLD

The classroom teacher plays the pivotal role in suspecting this condition early as he/she is the first

to get an opportunity to closely observe a child's academic functioning in the school. A history of language delay, not attending to the sounds of words (trouble playing rhyming games with words, or confusing words that sound alike), along with a family history, are important red flags for dyslexia in preschool children [4]. An evaluation for SpLD should be considered for all children presenting with learning problems in preschool/school or those who get poor marks or grades in examinations in spite of having seemingly normal intelligence [3-5,18].

A conclusive diagnosis of SpLD cannot be made until the child is in the third grade, or about 7-8 years old, as some children are "normal late developers" and they outgrow their learning problems, unlike SpLD, which is a life-long disorder [3-5]. However, children in the age group of 5-7 years who have academic difficulties should also be assessed, and if they display signs of SpLD on educational assessment should be considered as "at risk for SpLD" and remedial education started [3-5]. These children need to be retested at 8 years of age to either confirm or rule out the diagnosis of SpLD [3-5]. A multidisciplinary team comprising of pediatrician, counselor, clinical psychologist and special educator is required for diagnosing SpLD.

If SpLD goes undetected, the child's academic problems have an adverse impact on his or her quality of life, *viz* self-image, peer and family relationships, and social interactions [17]. Unfortunately, in our country, many children with SpLD often remain undiagnosed because of a general lack of awareness leading to chronic poor school performance, class detention and even dropping out of school [5,16].

### REMEDIAL EDUCATION FOR SpLD

The cornerstone of treatment of SpLD is remedial ("special") education [3-5,14,19,20]. Because of the central nervous system's higher plasticity in early years, it should begin early when the child is in primary school [3-5]. Using specific teaching strategies and teaching materials, the Remedial Teacher formulates an Individual Educational Program to reduce or eliminate the child's deficiencies in specific learning areas of reading, writing and mathematics, identified during the

child's educational assessment [14,19-22]. The child has to undergo remedial education sessions twice or thrice weekly for a few years to achieve academic competence.

During these sessions the child with dyslexia undergoes systematic and highly structured training exercises to learn that words can be segmented into smaller units of sound ("phoneme awareness"). During these sessions, the Remedial Teacher explicitly and directly teaches the following tasks: (i) *Phoneme segmentation*: what sounds do you hear in the word *pot*? What's the last sound in the word *tap*? (ii) *Phoneme deletion*: What word would be left if the /m/ sound were taken away from *mat*? (iii) *Phoneme matching*: Do pen and pipe start with the same sound? (iv) *Phoneme counting*: How many sounds do you hear in the word *take*? (v) *Phoneme substitution*: What word would you have if you changed the /p/ in *pot* to /h/? (vi) *Blending*: What word would you have if you put these sounds together? /f/ /a/ /t/? (vii) *Rhyming*: Tell me as many words as you can that rhyme with the word *eat* [3,4,19,20].

Only after phonemic awareness gets developed "phonics instruction" begins. The child is taught that these sounds ("phonemes") are linked with specific letters and letter patterns ("phonics"). The goal of teaching phonics is to link the individual sounds to letters, and to make that process fluent and automatic, for both reading and spelling. In other words, phonics teaches students symbol-to-sound and sound-to-symbol. Spellings are taught through "phonics-based teaching" using color coded segmentation (e.g., bot/tle), word formation games, and sight word identification. However, the English language has words like 'any', 'because', 'island', 'enough', etc. which are impossible to spell from the sounds of their letters. These tricky words can be learned as a 'mnemonic' by dyslexic children. For example, the word 'any' can be remembered by using the first letters of the 'silly' sentence: 'Ants Never Yawn' [3,4,19,20].

The child also practices reading stories; both to apply newly acquired decoding skills to reading words in context and to experience reading for meaning. For dysgraphia, the child practices letter

formation within the context of copying exercises using “cursive writing worksheets” [3,4,19,20]. For dyscalculia, remediation involves rote learning of arithmetic facts, developing strategies for solving arithmetic exercises, and developing “number sense” or its access via symbolic information [14,19-22]. However, even after years of adequate remedial education, in many children subtle deficiencies in reading, writing, and mathematical abilities do persist [3-5].

## ROLE OF SCHOOL

### *Class Teachers*

In our country, many classroom teachers in regular mainstream schools have limited knowledge of SpLD [16, 23]. One of the main barriers encountered by students with SpLD is the teacher’s lack of knowledge about their disability and about the rationale of provisions [24]. Inadequate knowledge leads to negative attitudes toward persons with disabilities [25]. The Government of India, since 2001, has launched the *Sarva Shiksha Abhiyan* (“Education for All” movement), which is a comprehensive and integrated flagship program to attain universal elementary education in the country in a mission mode. Launched in partnership with the state governments, the program aims to provide use-ful and relevant education to all children, including children with disabilities (“inclusive education”) [26]. The challenge of serving academically diverse learners in regular classrooms is now an inevitable part of a classroom teacher’s role [27]. To ensure that classroom teachers develop appropriate teaching strategies to teach children with SpLD they need to attend teacher training workshops. The curriculum in every teacher education program in India should compulsorily include a specific course on the curriculum and instruction of children with special needs so that future classroom teachers have the necessary skills to teach children with SpLD [16,23].

Many children with SpLD typically have problems with inattention, impulsiveness, and hyperactivity [3-5]. Up to 20% of children with SpLD have co-morbid Attention-deficit hyperactivity disorder (ADHD) [3-5]. Simple psycho-educational interventions such as seating the child near the teacher to minimize classroom distractions,

or assigning a specific teacher to review daily assignments with the child have been shown to be effective in improving the behavior and academic performance of children with SpLD and SpLD with co-morbid ADHD [3-5].

Some of the strategies recommended for effective instruction include: review information about previous lesson on the topic before beginning the current lesson; clearly state what the student is expected to learn during the current lesson; describe how the student is expected to behave during the lesson e.g., tell the child not to talk with peers if the task given is found to be difficult, but to raise his/her hands to get the teacher’s attention; state all materials that the child will need during the lesson e.g., specify that the child needs crayons, scissors, and colored paper for an art project rather than leaving the child to figure out on the materials required for the art lesson [28].

### *School Counselor*

Due to lack of knowledge about SpLD, parents, especially mothers, undergo lot of stress in coping up with their child’s academic difficulties, and even in accepting the diagnosis [24,29-31]. Many parents at first are reluctant to allow their child to begin remedial education and avail the benefit of provisions [29]. They prefer tuitions taken from a private regular teacher which is not the therapy for their child’s disability [24,29]. Students with SpLD often feel lonely and different among peers and get teased or bullied by them [24]. The school counselor plays a crucial role in ensuring that parental and student stress is effectively minimized by explaining them the nature of the disability, the importance of remedial education, and the rationale of provisions. The school counselor should also, in due course, make parents aware that SpLD is a lifelong disorder. This is important to empower them to guide their child in selecting an appropriate career for adult life.

**Web Table I** provides a checklist, which can be used by the teacher for assessment/screening of SpLD in students.

## SCHOOL AUTHORITIES

The school principal and management play a crucial

role. At present, there is an acute shortage of remedial teachers and most schools do not have a remediation center [5,16]. Many parents cannot afford the services of remedial teachers working in the private sector. “SpLD-friendly” schools in Mumbai have started “resource rooms” to ensure that these children get affordable and regular remedial education. In the “resource room”, students with SpLD receive direct, specialized instruction individually or in small groups (3 to 5 students per remedial teacher). Remedial teachers in a resource room focus on particular goals as mandated by an Individualized Education Program and remediate general education curriculum. They also emphasize the development of executive skills, including homework completion and behavior. Depending on individual needs, students usually attend resource rooms three to five times per week for about 45 minutes per day. Resource rooms have proven to be successful in significantly improving academic skills of children with SpLD [32-34].

These SpLD-friendly schools also ensure that a proper register of these children is maintained to monitor their academic progress and that they get the benefit of provisions in the examinations. They ensure that the regular classroom teachers undergo training in SpLD and even encourage some of them take up the additional responsibility of becoming remedial teachers.

#### THE RIGHT TO EDUCATION ACT AND SPLD

Since 1st April 2010, the Government of India has implemented the Right of Children to Free and Compulsory Education 2009 (RTE Act) which makes education free and compulsory to all children, including those with disabilities, in the 6-14 years age group [35]. A recent Parliamentary Committee has suggested that SpLD be included in the definition of “child with disability” in the Right of Children to Free and Compulsory Education (Amendment) Bill 2010 [36]. Once SpLD is recognized as a disability, ample funds from the *Sarva Shiksha Abhiyan*, which is the flagship program for implementation of the RTE Act, would become available for the benefit of children with SpLD [37]. These funds can be utilized to train classroom teachers, set up resource rooms in schools, and employ remedial teachers. At present

many children with SpLD studying in non-English (vernacular) medium schools, and especially in rural areas, are going undetected for non-availability of standardized psychological and educational tests. Funds from this program could be utilized by educational institutes to develop standardized psychological and educational tests in all Indian languages. Funds could also be utilized to start the undergraduate and postgraduate degree courses for people wanting to become remedial teachers and special educators.

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