Educational needs of specific learning disabilities—An overview

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Abstract
Learning disabilities encompass variety of learning problems. It is not a problem with intelligence. According to the National Centre for Learning Disabilities (NCLD), Learning Disability is a neurological disorder that affects the brain's ability to receive process, store and respond to information. Specific Learning Disability (SLD) is a hidden disability. Children with learning problems are unique and they differ from one another in their learning styles. They may have difficulties in listening, reading, spelling, calculation, writing or communicating. These are very important and basic skills for academic achievement. Children with SLD have unique educational needs for coping up with their peer groups. In India, approximately 13 to 14 per cent of all school students suffer from one or other learning problems. Higher cognitive skills such as concept formation, problem solving and decision making are substantial for all children for academic development. Students with SLD need extra efforts to develop these skills. The National Curriculum Framework recommends an inclusive curriculum that ensures full participation of all children including first generation learners, learning disabled, slow learners and children from SC and ST (NCERT, 2005) [14]. Unfortunately, most of the schools fail to provide the appropriate educational opportunities to SLD due to lack of awareness about learning problem, over-crowded classroom, un-trained teachers, lack of teaching learning materials, as a result, these children are marked as failures. This present paper focuses on the educational needs of SLD like specific teaching strategies, materials, individual educational plan and assessment procedures that help in reducing the learning problems in the areas of reading, writing and mathematics.

Keywords: Specific learning disabilities, elementary education, disability bill, educational needs.

Introduction
Learning disabilities include variety of learning problems. It is not a problem with intelligence. Students with intellectual problem are mostly having poor cognitive capacity and it affects learning academics. But, students with learning problems have problem in one academic area. Learning disability refers to the 20 to 25% of students who exhibit problems acquiring academic skills as a consequence of a range of causes. These included intellectual disability, physical or sensory deficits, emotional or behavioural difficulties and inadequate environmental experiences. According the Individuals with Disabilities Education Act (IDEA) specific learning disability as “a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. Kamala (2014) [3] mentioned in her study “Specific Learning disabilities in India – Rights, Issues and Challenges” that 5-15% of the 416 million children in India have Specific Learning Disability (Krishnan, 2007; Krishna Kumar, 1999; Mehta, 2003) making it the most wide spread disability (Suresh and Sebastain, 2008; Tanton, 2007). It is reported that India has at least five students with SLD in every average-size classroom (Thomas, Bhanutej, and John, 2003). The incidents of dyslexia in primary school children in India have been reported to be 2-18%of dyslexia, 14%of dysgraphia, 5.5% of dyscalculia (Shah, 1981; Khanna, 1981).

Types of specific learning disabilities
Specific learning disabilities are of different types, namely dyslexia, dysgraphia, dyscalculia, developmental aphasia and nonverbal learning disabilities.
Students with SLD face a number of educational problems such as difficulty in reading the content, poor reading comprehension, problem in writing, understanding the content etc.

**The main learning disabilities are as follows**

**Dyslexia:** It is known as reading disability. They have problem in phonemic awareness, identifying the sounds, word decoding, reading fluency, spelling identification, vocabulary and comprehension problem. They may also have difficulties in visual discrimination and visual sequences.

**Dysgraphia:** It is a type of specific learning disability associated with writing. It includes both physical and quality of writing. Students with dysgraphia have difficulties in holding pen/pencil, discriminating the directions, spatial organization, judging the length of sentence and matching of shapes. They also have the characteristics of overwriting, mirror writing, missing letters, lines or sentence.

**Dyscalculia:** Students with dyscalculia have problems in mathematical calculations. They face difficulties in understanding the concept, analyzing and solving math problem, formula, shape, sequence of steps, distance, direction and quantity.

**Review of Literature**

According to Western Australian Government estimates, at least 20% of students currently enrolled in school in Western Australia are at risk of failing to meet an appropriate level of educational attainment as a result of learning difficulties. For some of these students, the barrier which hampers their learning may be only temporary. Some students may have missed a great deal of school and others may not have received appropriate instruction in reading. SLD are considered a high-incidence disability. The U.S. Department of Education reports (2010) that there are over 2.8 million students being served for SLD. This number of students is approximately 47.4% of all children receiving special education services.

Paul (2000) [5] stated that one of the barriers encountered by students with disabilities is the teacher’s lack of knowledge about the disability and the types of services and accommodations available to them. The researchers have reported that there is an inadequate knowledge about disabilities leading to negative attitude towards persons with disabilities.

Doda (2009) [1] quoted the opinion of Samir Parikh, a child psychiatrist that dyslexia is not a disease but it is a lifelong problem and presents challenges that need to be overcome every day. He mentioned that the reports of Nalanda Institute have highlighted that in India during the last two decades or so, there has been an increasing awareness and identification of children with learning disabilities. Despite this growing interest, India still does not have a clear idea about the incidence and prevalence of LD. Kamala (2014) [3] mentioned that many students with specific learning disability in the mainstream education have been remaining unidentified; they are often termed as ‘lazy, dull and inattentive. The problems of these students remain unnoticed by the teachers due to lack of awareness about learning disability. First of all, awareness of this hidden disability has to be increased and the topics of SLD should be compulsorily taught to doctors, school teachers, counselors and general public. The problems of the students with specific learning disability should be brought to the lime light and their rights and issues regarding specific learning disability must be addressed at the national level, and they should be trained to demand for their Legal Rights in Education.

Sandhu (2015) [6] reported that research and advocacy in learning disability is still at its nascent stage in India. The census 2011 also does not enlist learning disability as a separate category of disability. So, the authentic data on the population with a learning disability is not available. The author also mentioned that as per the newspaper Tribune report about 15% of the school-going population are having dyslexia in India. However, there are no uniform provisions for the whole country to address this issue. Furthermore he pointed that only dyslexia so far appears to be gaining recognition as a specific learning disability in mainstreaming schools in India. Finally, he concluded that there is also a dire need to spread awareness and disseminate information about SLD by trainers, teachers, parents and the medical fraternity especially relating to assessment, diagnosis, and provisions so as to avoid wastage of this precious human resource.

**Impact on Learning**

SLD have strong impact on psychological processes which affect the academic achievement of students. Psychological process involves perception, attention, memory and organization. Students with SLD have problems in the below mentioned psychological processes.

**Perception**

Perception is the ability to receive and interpret the information through the sensory organs, such as visual or auditory input. Perception is important for learning as it includes the skills of recognizing, comparing, and discriminating the information. Students with SLD having problems in perception may show the characteristics of reading and writing letters, words, or whole passages in reverse.

**Attention:** It is a broad term that refers to the ability to receive and process the information. Many of the students with SLD have attention problems. Students those who have problems in attention may not concentrate in the classroom activities and show poor academic achievement.

**Memory:** It is another vital component of psychological process. Memory involves many different skills and processes. It is the ability to organize information for learning from the previous knowledge. Students with SLD may have difficulties in remembering or restoring the past information and apply in the new situations.

**Organization:** Organization is the ability to organize information in orderly and sequential manner. Students with SLD may have difficulties in organizing their thought processes, their class work, and their environment.

**Policies and Legislations for SLD**

The Right to Free and Compulsory Education Act (2010) provides free and compulsory education to all children aged 6-14 years. It also provides for ‘special training’ for the
child who is not admitted and if admitted not able to complete elementary education. Such a child is entitled for the admission in a class which is appropriate to his age. SLD is not one of the seven disabilities mentioned therein. As a result, children with SLD fall into the “general” category and are not given the facilities required for their education. The Rights of Persons with Disabilities Bill (2012) revised by the Ministry of Social Welfare. The new bill has included SLD / Learning disability in its ambit (Bill, 2012). It has also defined it as “Specific Learning Disabilities” refers to a heterogeneous group of conditions wherein there is a deficit in processing language, spoken or written, that may manifest itself as a difficulty to comprehend, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disabilities, dyslexia, dysgraphia, dyscalculia, dyspraxia and developmental aphasia”. The Rights of Persons with Disabilities Bill (2016) revised the types of disabilities that have been increased from existing 7 to 21 and the Central Government will have the power to add more types of disabilities. Specific learning disability has been included as one of the disabilities in this bill.

Provisions for students with SLD
Sandhu (2015) [6] reported that Central Board of Secondary Education (CBSE) is providing concession for the Learning Disability students. The rights of the learning disability students mentioned by CBSE are as follows:

• Extra time is given to the students with SLD during examination (15 minutes extra time per hour).
• For the students with SLD are exempted from studying second language and substituted with the work experience subject.
• Permitted to use calculators for mathematics calculation during examination.
• For the students with dyslexia, the question paper will be read out during examination.
• Students with SLD are exempted from spelling errors.
• For Students with SLD are exempted from drawing maps, graphs, figures, charts etc. in the written examination. They will be given supplementary questions to complement the marks.
• Students with dysgraphia are allowed to use writers during examination.
• Students with SLD studying in X standard are exempted from studying algebra and geometry and allowed to substitute with standard VII mathematics and work experience subject.
• Grace mark of 20% should be given in one or two subjects for those students with SLD who have failed in the examination.
• Students with SLD are exempted from writing answers in detail during examination.
• For students with Learning Disabilities of standard 1st to standard 9th and standard 11th, along with the written test, the students shall also have an oral test for unit and semester examinations.
• Students with Learning Disabilities, for standard 10th and 12th examinations, can choose the centre close to their residence.

The above listed provisions are available to the students with SLD in India. These provisions and concessions can be accessible to the students with SLD only when they produce disability certificate in the prescribed form issued by the recognized people and institution.

Educational needs
In India, approximately 13 to 14 per cent of all school students suffer from one or other learning problems. Higher cognitive skills such as concept formation, problem solving and decision making are substantial for all children for academic development. Students with SLD need extra efforts to develop these skills. The National Curriculum Framework recommends an inclusive curriculum that ensures full participation of all children including first generation learners, learning disabled, slow learners and children from SC and ST (NCERT, 2005) [14]. In order to overcome the educational problems, special educator and general educators should know the strengths and weakness of the students with SLD. Parents and teachers must understand the performance level and attitude of such students. School authorities should maintain a continuous and comprehensive educational evaluation report including assessment test for successful implementation of Individualised Education Programme (IEP).

The Individuals with Disabilities Education Act (IDEA) says that students have the right to a "free and appropriate public education." IDEA is a law that requires all states and territories to provide a public school education to children with disabilities between ages three and 21, no matter how severe their disabilities are. As soon as children with learning disabilities are identified, they are entitled to services under this law. Unfortunately, most of the schools fail to provide the appropriate educational opportunities to SLD due to lack of awareness about learning problem, overcrowded classroom, un-trained teachers, lack of teaching learning materials, as a result, these children are marked as failures. The following are the strategies to overcome the educational problems of SLD.

Provide appropriate special education services
Students having specific learning disability have the eligibility for special education services. Teachers should give more time to finish schoolwork or task. Students who have problem in reading can use pictorial material, those who have listening problem they can record the classroom instruction process and students who have problem in writing can use computer for spell checks and grammar checks.

Plan individual educational process (IEP)
IEP is the heart of special education. IEP team consists of members includes professionals, child and teacher. Proper planning of IEP will promote educational development of students with SLD.

Provide accommodation and adaptation
With appropriate accommodation and adaptations students with specific learning disability could be accommodated in all areas of teaching learning process. Adaptation is the key for making meaningful accommodation. Adaptation can be done in teaching learning methods, materials, and infrastructure and evaluation process.

Provide Adequate Teaching Learning Materials:
Materials can be used to develop memory like charts, tables,
number lines, calculator, maps, tactile diagrams, kinaesthetic materials etc.

**Use appropriate teaching methods:** Present the content into small steps. Speak clearly and slowly which helpful for students to understand the concept. Use appropriate materials which suit the content like diagrams, graphics and picture. It should invoke their interest visually and verbally.

**Use of assistive technology (AT):** Students with SLD can use the AT devices from low tech to high tech based on their needs and problems. Example: Text to Speech software, OCR software applications, Screen Reading software, Audio Books, Portable Word Processors, Auditory Word Processing Software, Word Prediction Programs, Graphical Word Processors, On-Screen Keyboards, Voice Recognition Software, Organizational/Outlining/Drafting Software and Online Writing Support.

**Guidance to parents**
Parents should understand the educational problems of their children and try to solve them by using certain coping strategies. Parents should be encouraged to provide plenty of opportunities to their wards to enhance their interests and talents.

**Conclusion**
Students with SLD face many problems in academic pursuits. They have difficulties in reading, writing and calculations. Appropriate teaching learning materials, methods, adaptations process help them to overcome their educational problems. Planning of IEP and using suitable assistive technology can improve the academic standards of students with specific dyslexia, dysgraphia and dyscalculia. Proper orientation and training programmes on SLD should be given to the special and general educators to understand the educational needs of students with SLD as well as the teaching methods related to SLD.

**References**
2. Individuals with Disability Education Act Amendments of 1997, [IDEA].