

RESEARCHES ON LEARNING DISABILITIES - WHERE ARE WE?

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ABSTRACT

This article focusses on the review of research studies done on the area of learning disabilities and the need to conduct more research studies in this area. School children are seen to have different types of learning difficulties with regard to academics. Children with learning disability, who occupy the largest number receiving special education, are not recognized much in schools. It is mistaken for stupidity in pupils by teachers or parents who are not exposed to awareness of special needs of such children.

The purpose of this paper is to review studies on self-esteem, emotional maturity, innovative methods of instruction for children with learning disabilities; parents' awareness regarding learning disabilities and teachers' behaviour towards children with learning disabilities and find the gap so as to derive the implications.

These studies explored problems of such children and the instructional strategies adopted for them. More researches have to be done in this area to meet the needs of these students who need special attention.

Keywords: Learning Disabilities, Special Education, Self-Esteem, Emotional Maturity, Instructional Strategies, Innovative Methods.

INTRODUCTION

In most schools, one can find individuals with learning disorders. They are seen to have different types of learning difficulties with regard to reading, writing, speaking, reasoning or doing arithmetic calculations. Learners with multifarious language-related or arithmetic-related disabilities are found in most schools. Parents, teachers and educational planners at all levels have a great role to play in the minimization of difficulties in learning. The need of creating awareness about learning disabilities through more researches in this area is very essential.

What is Learning Disability?

All children are unique with respect to their diversified abilities or disabilities. In most schools, one can find some children with special educational needs. These children lack the ability to acquire the basic skills needed for learning such as reading, writing, listening, speaking, reasoning or doing mathematical calculation.

Learning disability is a disorder that interferes with the development of the basic academic skills. It is a condition where a child's achievement is substantially below what one might expect for the child (Kumar & Raja, 2008). A

child is with a learning disability is one who has average or above average intelligence and yet struggles to perform academically. There seems to be cognitive roadblocks set up by the brain which may prevent the child from inputting, interpreting, organizing, reproducing and processing information. These may include memory problems, attention problems, hyperactivity problems and auditory or visual problems (Saravanabhavan, 2009).

The difficulties that children face in the learning process have begun to attract serious attention. A learning disability is found across all ages and in all socio-economic classes. Learning disabilities may affect individuals differently at different stages of life - early childhood, elementary school years, adolescence and adulthood. Students with learning disabilities may be identified at any age, but most of them are first noticed in early elementary school grades (Ysseldyke & Algozzine, 2006).

Children with learning disabilities are found to have various problems with regard to learning. Among the symptoms commonly related to learning disabilities are slowness in completing work, reversals in reading and

writing, difficulty in discriminating size, shape and colour, poor organizational skills, difficulty with sequencing, poor short-term/long-term memory, difficulty with abstract reasoning or problem solving, poor visual-motor coordination etc (Lakshmi, 2008). ¹The various risk factors that a child with learning disabilities experiences are not recalling the names and sounds of letters or words, difficulty in copying and recalling the formation of letters and numbers, difficulty in associating sounds with written symbols, reversing or inverting the letters or numbers etc.

No area of special education has experienced so much rapid growth, extreme interest and frantic activity as learning disability. The number of children with learning disabilities has increased rapidly in the recent years making this category the largest in special education (Baral, 2005). About five percent or more of the total population of all school-age children receive special education or related services because of a learning disability. The percentage of children classified as having a learning disability has increased substantially from less than 30 percent of all children receiving special education and related services in 1977-1978 to a little more than 50 percent today (Sanrock, 2006).

The causes of learning disabilities are complex and not well understood. There is a great deal of confusion regarding the exact causes of learning disabilities. They are neither caused by cultural and linguistic differences nor by poor instruction. Learning disabilities may be caused by educational, physiological, psychological or environmental factors (Rao, 2005).

Learning Disability - Types

There are different kinds of learning disabilities such as dyslexia, dysgraphia, dyscalculia, dysphasia, dyspraxia and so on.

Dyslexia

Dyslexia is a learning disability that causes difficulty in reading and spelling, but does not affect intelligence. It refers to difficulty with words spelt, words pronounced, words written and association of meanings with words

¹<http://www.childrensmn.org/web/mentalhealth/010840.asp> (Accessed on 16 Jan 2009)

(Pollock & Waller, 1997). ²The symptoms of dyslexia include slow or inaccurate reading, poor spelling, poor writing or mixing up similar words. Dyslexic children may also have difficulty in recognizing words or letters, in associating sounds with letters or in making a word out of a combination of letters. ³The other symptoms of dyslexia include slow rate of oral and silent reading, excessive lip movement in silent reading, reading word by word, omission of letters / words while reading, substitution of letters / words while reading, inability to read for a longer time, difficulty in spelling words correctly, difficulty in pronunciation of words, difficulty in memorizing etc.

Dysgraphia

Dysgraphia is a learning disability that causes difficulty in writing. It is a learning disorder marked by special difficulties in learning to write, chiefly in forming sequences of letters into words and sentences (Vashistha & Bharadwaj, 2006). ⁴The symptoms of dysgraphia include mixture of upper and lower case letters, irregular letter sizes and shapes, pain while writing, talking while writing etc. Moreover spelling mistakes, punctuation errors, irregular letter sizes and shapes, slowness in writing and copying, poor handwriting etc are the various symptoms found in dysgraphic students.

Dyscalculia

Dyscalculia is a broad term that refers to severe difficulties in mathematics. In other words it is a wide range of life-long learning disabilities involving mathematics (Kumar & Raja, 2008). ⁵It is a mathematics disability in which pupils have a difficult time in solving arithmetic problems and grasping mathematical concepts. ⁶Arithmetic involves recognizing numbers and symbols, memorizing facts, aligning numbers and understanding abstract concepts like place value and fractions. Any of these may be difficult for children with dyscalculia. ³Children with

²<http://www.childrensmn.org/web/mentalhealth/010840.asp> (Accessed on 16 Jan 2009)
³http://www.lonline.org/article/Dyslexia_Basics (Accessed on 10 Oct 2008)

⁴http://www.slowlearner.co.in/learning_disability.htm (Accessed on 10 Oct 2008)

⁵<http://www.lonline.org/article/12770> (Accessed on 10 Oct 2008)

⁶<http://www.articledoctor.com/disability/> (Accessed on 16 Jan 2009)

³http://www.lonline.org/article/Learning_Disabilities%3A (Accessed on 28 April 2011)

dyscalculia suffer from various learning problems such as inability in differentiating between sizes, shapes and quantities, inability to do counting, difficulty with fundamental operations of addition, subtraction, multiplication and division, difficulty in telling time, difficulty with problem solving skills etc.

Dysphasia

Dysphasia is a learning disability that causes difficulty in speaking and understanding. It can be described as a disturbed function in the process of interpreting and expressing language. It is a language disorder which indicates loss of language due to brain damage or dysfunction (Reddy et al, 2006). ⁷The symptoms of dysphasia include difficulty gaining meaning from spoken language, demonstrating poor written output, exhibiting poor reading comprehension, showing difficulty expressing thoughts in verbal form, difficulty in labeling objects or recognizing labels and so on.

Dyspraxia

Dyspraxia is a learning disability that causes difficulty with patterns of movement. It can affect hand or eye coordination, especially handwriting and organization (Pollock & Waller, 1997). ⁸The symptoms of dyspraxia include inability to sit still for long periods, slowness in work compared to other children, standing and speaking slowly, poor vocabulary, difficulty in coordinating their movements and in answering questions.

Researches on Learning Disability – Status Quo

A learning disability is usually diagnosed when a child enters primary school and is aggravated in higher classes when the focus of instruction is less on basic skills and more on content information. Academic lag continues to increase with time and if no assistance is provided, there is the risk of the child not completing the school. Drop-out rate for the child with learning disabilities is fairly high (Nakra, 1996). Learning disability may go undetected out of sheer ignorance and early diagnosis is very important. The growing awareness about this disability may encourage researches in this area.

⁷ <http://karthi-seo-ld.blogspot.com/2007/11/dysphasia-learning-disabilities.html> (Accessed on 29 April 2011)

⁸ <http://www.dyspraxiasymptoms.com> (Accessed on 29 April 2011)

• Findings on Self-Esteem of Children with Learning Disabilities

Self-esteem refers to the extent to which a person values, approves of, appreciates, prizes, or likes himself or herself. It is a favorable or unfavorable attitude towards the self. People with high self-esteem generally enjoy a great deal of self-confidence and have a realistic assessment of their strengths and weaknesses. In contrast, people with low self-esteem are generally less willing to put their ideas about themselves to the test and are never convinced of their self-assessment (Prema & Raja, 2005).

Self-esteem is affected by a wide range of influences that range from formative childhood experiences in relation to one's standards or ideals. Lack of self-esteem and a negative self-image are reflected in failure-oriented people who downgrade themselves. Repeated failures in the school years exert one's most damaging effects on self-esteem (Martin, 1977). A study conducted by Blake and Timothy (1990) reveals that children with learning disabilities have less self-esteem compared to children without learning disabilities. Use of a self-esteem scale to study the verbal skills among students in general education, students with learning disabilities and those with mild or moderate handicaps respectively revealed significantly lower self-report for the subjects with learning disabilities (Debra, 1990). While studying student behaviour, self-esteem and academic achievement among regular and special education students, it has been found that the child with learning disabilities displayed significant behaviour problems compared to the regular education group (Peterson & Edward, 1991).

Inclusive education entails the formulation of plans and policies designed to cater to the special needs of children with learning disabilities as well. Educational administrators need to execute appropriate strategies to enhance the self-esteem of pupils whose morale tends to be lowered by their peculiar difficulties in learning. Snowden and Caulhon (2002) while studying the effects of inclusion on the anxiety and self-esteem of special education students in the regular classroom found that self-esteem could support academic success and could help to improve instruction for special education students,

particularly those enrolled in inclusive classrooms. While studying the effects of inclusion of students with learning disabilities in academic and non-academic activities on self-esteem, it is found that school-based activities and community-based activities make the students feel good about themselves and increase their self-esteem (Chang & Rose, 2002).

High self-esteem helps to build strong convictions and optimistic attitudes. It makes a person self-motivated and ambitious and open to new opportunities and challenges. Self-esteem can be considered as a coping mechanism for child with learning disabilities students to accept their disability and to strive for positive self development. Robert & Todd (2003) while studying the academic success among at-risk students during the transition from elementary to middle school found that self-esteem is found to be a significant factor for school success.

• *Findings on Emotional Maturity of Children With Learning Disabilities*

Emotional stability is the ability of the character to remain stable in times of stress. Children with learning disabilities are found to have various emotional problems, which may give rise to emotional disturbance. Low self-esteem may be a consequence of enduring learning difficulties and failing to achieve academically at any age level (Hannell, 2006).

Children with learning disabilities often show signs of frustration and appear to be emotionally disturbed. They also exhibit various other characteristics such as frequent shifts in emotional moods, distractibility, inattention etc (Neilson, 2002). They often have frequent temper outbursts, but for no reason. They are also found to be emotionally liable and unstable. Emotional instability arises mainly due to lack of contact with the outside world which generates frustration.

Ganesan (1999) on studying the personality traits of students with and without learning disability made a conclusion that students with learning disability are less emotionally mature, less calm, less placid, less prone to getting in difficulties, less able to face reality, less

conscious, less staid, less rule bound, less ordered, less responsible, less adventuresome, less sociable, less spontaneous, less responsive, less impulsive, less sufficient, less disciplined, possessing less ego strength and having poorer self-concept and self control than students without learning disabilities. A study (Sharma & Kumar, 2007) aimed at finding personality traits of creatively gifted child with learning disabilities and academically gifted children has shown that creatively gifted children with learning disabilities are careless, frustrated, get emotional when frustrated, anxious about self and feels insecure and due to these unique problems, they use their creative talent to avoid tasks and is rated by the teachers as most disrupted at school.

Apart from teaching the children to read, write and do arithmetic, teachers must also provide conducive learning environments to children, which are supportive to their emotional development and stability. For many children with emotional problems, supportive services or intervention outside the classroom is essential. Brown (2003) on assessing the impact of a holistic residential intervention of students with learning disabilities found that the students had improved on the course of the school year as perceived by parents, dorm parents and themselves.

Murik (1995) on examining a set of curricular strategies aimed at reducing the emotional disturbances and remedying the reading disabilities on ten teenagers found that designing curricular strategies which serve to satisfy a child's need for emotional security can facilitate learning. The results of the study (Passolunghi, 2011) on examining the cognitive and emotional factors on a sample of 18 children with Mathematical Learning Disabilities corroborated the hypothesis that these children are impaired in working memory capacity, inhibitory ability, and speed of processing and that the children with MLD showed higher levels of anxiety in mathematics.

• *Findings on Children Without Learning Disabilities Vs Children With Learning Disabilities*

The special disabilities may arise since the individual has

failed to master a particular skill or concept at a particular time and thus find themselves handicapped in some advanced work (Skinner, 2006). These problems can make it difficult for a person to learn as quickly as someone who isn't affected by learning disabilities. Pandey (2000) on investigating the frustration tolerance level of children with learning disabilities with a sample of 100 learning abled and 100 children with learning disabilities within the age group 6-9 years, it was found that the children with learning disabilities were found to be more aggressive in terms of extrogression than learning abled children and that the children with learning disabilities were seen to be not so sensitive and skilled in presenting the frustration experience as the learning abled children.

Verma (2002) on studying the cognitive and motivational aspects of children with learning disabilities found that learning disabled were significantly different in respect of selective attention, auditory discrimination, visual discrimination, visual memory and perception than their non-disabled counterparts. In an experimental study (Behera & Pradhan, 2007) which explored the creative potentialities of children with learning disabilities for a sample of seven children identified as learning disabled and seven normal children, it was found that these children had better performance than the normal children in the creative activity conducted for both the groups and that the learning disabled were in no way inferior to the normal children in performing the creative activities. The longitudinal study (Mazzocco & Devlin, 2009) which examined whether children with Mathematics Learning Disabilities have weaker rational number knowledge than children whose difficulty with rational numbers occurs in the absence of MLD showed that the children with Mathematics Learning Disabilities failed to accurately name decimals, to correctly rank order decimals and/or fractions, and to identify equivalent ratios where as children with low math achievement but having no Mathematics Learning Disabilities accurately named decimals and identified equivalent pairs, but failed to correctly rank order decimals and fractions.

• *Findings on Innovative Methods of Instruction For Children With Learning Disabilities*

Learning disabilities can be overcome to a certain extent by providing remedial instruction and right type of educational experiences. A study (Ahuja, 2004) conducted on the effect of comprehensive intervention strategies on achievement, self-concept and social skill development of children with learning disabilities showed that comprehensive intervention strategy programme significantly improved reading skills and practices, ability to comprehend information from figural presentation, ability to distinguish between part and whole and ability to match figures and also resulted in significant improvement in self-concept and social adjustment scores.

Opitz (2002) conducted a study on the effects of implementing web accessibility standards on the success of secondary adolescents with learning disabilities through web-based learning modules for secondary school adolescents with learning disabilities which comprised of an informative website for adolescents with and without learning disabilities and the results of the study indicate that web sites created using universal design guidelines that adhere to federal recommendations for web accessibility may assist all types of students in improving the accuracy of response when using information from a website.

Heo (2008) investigated an experimental study on the impact of multimedia anchored instruction on the motivation to learn of students with and without learning disabilities in a general classroom setting which included 80 randomly selected seventh-grade students with 28 students having a learning disability and findings of the research indicate that students with learning disabilities who received the anchored instruction improved in their motivation to learn and also in their academic achievement to a level similar to students without learning disabilities.

On examining the generalization of simulated and in situ vocational social skills training for youths with learning disabilities through the investigation of the effects of 12

measured behaviours with the participation of four students with learning disabilities and confederates, it was found that simulated social skills package delivered at school led to the generalization in eight of twelve behaviours and that the in situ training at the work site produced generalization in four of six behaviours (Rai, 2007).

In a study (Rath, 1992) conducted to demonstrate an individualized instruction training approach for teaching children with learning difficulties, especially in reading and comprehension skills, it was found that there was improvement in scores in the post-testing session as compared to the pre-testing session. Tandoh (2003) on investigating the strategies and limitations 18 college students with learning disabilities namely dyslexia, dysgraphia and dyscalculia face in a web-based instruction environment and the contributions of web-based instruction course designers and their impact on web course design employed in-depth interviews found that learning through the web helps to increase students' motivation, self-esteem and a sense of autonomy. The findings of a qualitative study (Durham, 2010) which examined the role of arts instruction and arts integrated teaching in the development of cognitive process and personal dispositions of children with moderate to severe learning disabilities indicated that when children with learning disabilities engaged in intensive arts and arts integrated instruction, they appeared to develop specific knowledge, skills, and dispositions, as evidenced by interviews, observations, and analysis of student performances.

• ***Findings on Parents' Awareness Regarding Learning Disabilities***

Parents are very much ignorant about learning disability like dyscalculia which hampers their children's performance in arithmetic. There is so much pressure on a child these days to catch up with the rest of the class that children with learning disabilities become the victims of their parents' anxiety to avoid their children being considered as stupid by their teachers or peers. A study (Sreedevi & Devi, 2008) which was taken up to know the stress and coping among parents of children with learning

disabilities showed that the majority of parents experienced greater financial burdens, reduced social and recreational participation and mental worries about child's future and they also experienced moderate level of physical care burdens, strained relationship with family members and teachers, reduced family support and self-esteem due to the presence of a children with learning disabilities.

Parents' knowledge of the learning difficulties that their children face will go a long way in the creation of a congenial environment for these children. Sreedevi (2008) on examining the special needs of parents of children with learning disabilities through adopting ex-post facto research design, revealed that majority of parents had given first priority to the advocacy needs such as information about their child's condition and management techniques to handle difficult behaviour of their children, information on government legislations related to children with learning disabilities and their families and suitable vocational programmes for children with learning disabilities.

• ***Findings on Teachers' Behaviour Towards Children with Learning Disabilities***

Awareness of difficulties that students face while trying to learn can enable teachers to open their eyes more to the experience. They have to identify the innate potentialities of their children and they must understand that each child is unique in his or her abilities or talents. Only when a teacher knows about the learning difficulties faced by the students, he/she can adopt instruction to cater to their specific needs.

MacDonald (2008) surveyed on special education instruction for secondary students with learning disabilities and the findings of the study reveal that secondary special education teachers provide a wide range of practices and activities to their students with learning disabilities with an emphasis on supporting students' content learning and that the perception of the secondary special education teachers was that they should be providing the services they actually provide and they report devoting almost half of their time to

provide direct instruction to students, approximately one third of their time to provide instructional support activities and approximately one fifth of their time to provide non-instructional activities and also it was surveyed that half of the secondary special education teachers taken for study do not feel fully prepared by their preservice preparation programs to teach secondary school students with learning disabilities.

Implications

Learning disability is a life-long condition but the effects of this disorder can be controlled with appropriate support, guidance and interventions at home and school. Once parents and teachers notice that children have severe problems with academic skills, they should seek help from qualified professionals. Rehabilitation programmes have to be planned for these children according to their level and also according to their nature of dysfunction.

Parents also are not optimally aware of learning disabilities like dyscalculia which hinders their child's performance in arithmetic. Awareness of learning disabilities alone helps parents to give the right type of guidance and emotional support to their children. Parents should not discourage their children when they lag behind in their studies and they must find out with the help of experts what hampers their progress. They have to accept the fact that their children can learn only at their own pace of learning and it is no good pushing them beyond their ability to learn. They can encourage their children to develop their learning skills to the maximum extent possible. Through proper parental care, children with learning disabilities may be able to develop their academic skills.

Awareness of the difficulties that dyscalculics face can enable teachers to open their eyes more to the ways of helping them. Teachers have a great role to play in moulding the mindset of children with learning disabilities in such a way as to enable them to convert their challenges into chances for their intellectual and emotional development. They need to provide their students with positive role models by bringing to their attention the anecdotes from the lives of great personalities like Thomas Alva Edison, Albert Einstein and

Winston Churchill who in spite of their learning disabilities like dyslexia, dysgraphia and dyscalculia rose to the peak of excellence in their careers as scientists, mathematicians or statesmen. Also the teachers have to be aware of the compensatory strategies that they can use to make these students to cope up with the academic tasks and also determine how they may be most appropriately used to facilitate learning.

It is essential for researchers to investigate new technologies that can facilitate learning. A learning disabled individual requires special support apart from classroom teaching. There are different kinds of learning disorders which affect the performance of school children. Studies in the areas of learning disabilities like dyspraxia and dysphasia are lacking and more studies have to be conducted in these areas. Studies may also be carried out on the comparison of the learning-disabled with learners affected by other disorders like autism, ADHD etc. The disabled learners require help to learn normally through early recognition and specialized approaches to teaching. Hence researchers should come forward to study more about this disorder and adopt suitable measures to treat these disabled learners.

Recommendations to Researchers

Academic skills are indispensable for learning and more researches in this area are becoming increasingly needed. Dyslexia, dysgraphia, dyscalculia etc are seen to be specific learning disabilities and children with these problems require diagnosis as well as support apart from classroom teaching. It is to be noted that very few research studies have been done in the field of these learning disabilities. It is imperative that researchers come forward to study these learning disorders and adopt certain ways and means to treat these academic sufferers.

Awareness of learning disabilities is very much essential to investigate about new technologies that can be most appropriately used to facilitate the learning of disabled children. Technologies have the potential to create a conducive atmosphere to active learning by the students. Experimental studies, both culture fair and

culture specific, on innovative methods of instruction which may benefit these arithmetic-disabled children other than the computer technologies are also to be done widely for the sake of developing countries.

Psychological factors other than self-esteem, emotional maturity etc concerned with children with learning disabilities are to be taken into account and studies on areas like intelligence, emotional intelligence etc should be conducted. Also studies on management factors like leadership, communication, decision-making etc concerned with children with learning disabilities too need to be done for the benefit of these educationally handicapped children. Hence researchers need to come forward to carry out more intensive studies on this area and suggest suitable measures to treat these disabled learners.

Conclusion

Children with these learning disabilities require special assistance on the part of teachers, educational specialists and even parents. By choosing materials and activities suited to their level of learning and by stimulating their urge to bring out their best, teachers can help the pupils with learning disabilities to turn their difficulties into special opportunities to be model achievers. The task of teaching the child with learning disabilities is indeed challenging and by becoming aware of the strategies that can mitigate the difficulties, instructors can grow in confidence in accomplishing this complex task. It is thus essential that researchers to carry out more intensive studies on this area to meet the special needs this category of students who need special attention.

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