

Learning Disabilities: Causes and Educational Strategies

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ABSTRACT

A specific learning disability is intrinsic to the child and linked to neurological dysfunctions, whereas a specific learning difficulty in United Kingdom is seen as a school issue, a mismatch between the child's performance and what the curriculum offered. This study explores the concept of learning disability with the aim of identifying the traits or symptoms as well as causes and educational strategies to overcome the disability. The study reveals a number of characteristics or symptoms that are associated with learning disabled children. However, not all children identified as learning disabled exhibit all the symptoms associated with learning disabilities. Hence, it is recommended among others that the method of communication between the teacher and the learning disabled children is very crucial hence it should be direct, simple and meaningful.

Keywords: *Learning Disabilities, Trait/symptoms, Educational Strategies.*

INTRODUCTION

The field within special education that has experienced fast growth and expansion has been that of learning disabilities. And it has captured the interest and attention of professional and layman alike from every sector of special education, general educators, physical educators., neurologists, ophthalmologists, optometrists, pediatricians, physical therapists, psychologists, and a host of others have all taken an active interest in the learning disabilities. The professional attentions to learning disabilities have resulted in rapid formation of professionals and parent groups and services to help such children with learning disabilities but these have not been without problems or confusion (Uji, 1996) one of such problems is the numerous terms used to described the same child; for example, minimal brain injury, minimal brain dysfunction, specific learning disabilities, learning disabilities, perceptual disabilities, minimal brain cerebral palsy, cerebral dys-synchronization syndrome, asphasoid syndrome, conceptual handicapped, interjacent child, psycholinguistic disorder, agraphia, factual agnosia and numerous other terms were used. However, these terms are useful to conceptualize the term learning disability which is an umbrella term, which encompasses a broad range of learning problems, such as dyslexia, aphasia and agraphia.

In another development, some specialists believe that brain damage is a necessary condition for a child to be classified as having learning disability person whereas other professionals choose not to include social or personal deviation within the category while others still believe that special education embraces all learning disabilities. The most widely cited and accepted definition was formulated in 1968 by the national Advisory Committee on Handicapped children (NACHC). Uji (1996) stresses that "Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written languages. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic. They

include conditions which have been referred to as perceptual handicapped, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantages". On the other hand, Williams (1991) observes that in the United States of America's background, a specific learning disability is intrinsic to the child and linked to neurological dysfunctions, whereas a specific learning difficulty in United Kingdom is seen as a school issue, a mismatch between the child's performance and what the curriculum offered. In the United Kingdom, the perception of learning disability is emphasized in the curative measure than their causes. Thus, learning difficulty as conceived in the United Kingdom apart from implying, that the problem could be surmounted; places the responsibility of improving learning on the school and teacher, this is more encouraging development than the situation in the United States of America as described from the preceding. Adima (1989) summarizes the concept of learning disabilities into three:

- a. Learning disabilities may be described as a condition in which the results of a child's precise achievement in school work is less than his actual potential.
- b. Learning disabilities refer to a retardation (not mental retardation), disorder, or delayed development in one or more of the processes in speech, language, reading, spelling, writing and arithmetic.
- c. A person with learning disabilities is one with adequate mental ability, sensory processes but who has a limited number of specific deficits in perceptual ability/integrative ability and expressive processes.

Early in the 1960s, the term learning disability was first applied to describe a number of disorders found to be related to academic failure that could not be attributed to other categories of exceptionality or to poor environmental factors. Kirk (1963) and Bateman cited in Okobia (1992), described learning disability as a retardation, disabler, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic or other schools subjects resulting from a psychological handicap caused by a possible cerebral dysfunction and emotional or behavioural disturbances. It is not the result of mental retardation, sensory deprivation or cultural or instructional factor. This definition attributes learning disabilities to deficiencies in the basic psychological processes, which underlie school learning. That is, some forms of neurological dysfunction cause these deficiencies, which results in learning disabilities.

However, the exact relationship between neurological dysfunction and learning disabilities has been controversial. Some believe that when no other recognizable cause of school failure exists, it should be assumed that a malfunctioning in the central nervous system causes learning disability. Some others argue that among those identified today as learning disabled, some of them may be exceptionally well-endowed individuals who just do not fit into regular classrooms. They may be so ordinary classroom work that they may refuse to attend to it. Such individuals could just be the likes of Thomas Edison and Albert Einstein –two extra-ordinarily gifted/talented persons who performed very poorly in their early schooling days. This argument does not rule out mild neurological dysfunction as a

possible cause (Gallagher as cited in Eze and Okoye, 2005). Learning disabilities result from developmental imbalances, which are characterized by uneven pattern of abilities. Gallagher attempted to distinguish between educable mentally retarded and learning disability. According to him, the mentally retarded individual exhibits low ability profile across various indicators of intellectual functioning, while the learning-disabled show strengths in some areas and weakness in others. Although, this definition attempted to provide clear index for learning disability identification, it has the limitation of what psychological processes define the condition and appropriate method of measuring the processes. In an attempt to overcome some of the definitional problems, Okeke (2001) defined learning disability as:

Those children who have one or more deficits that are not caused by hearing, visual or emotional disturbances but which hinder proper development and as a consequence, prevent them from achieving maximally like other children of approximately the same age, grade and intelligence quotient, and therefore need special attention for remedial purposes.

This definition appears to be comprehensive as it delineated certain criteria for identifying those to be classified as learning disabled. However, the definition appears to group all those with deficits not caused by hearing, visual and emotional disturbances as learning disabled.

Symptoms of Learning Disabilities

Observation has shown that a few or many of the symptoms of learning disabilities may manifest in a given learning-disabled child. Some of the major characteristics of learning disabilities are described below:

- i Learning-disabled children are characterized by normal or above average intelligence. It has been observed that although, learning disabled children's performance varies depending on the nature of tasks presented, their intellectual functioning are usually within normal limits. They are not generally retarded or deficient in all areas of development.
- ii Learning-disabled children manifest specific learning deficits. They experience difficulty in reading and may not be able to read at class or age level. When they encounter a mild stressful situation, they are liable to commit a number of dyslexic errors. They experience unusual difficulty in spelling and oral expression of thought. Also, they experience difficulty mastering basic arithmetic skills; dealing with abstractions, whole-part relationships, and tasks that require intact visual-motor perceptual integration.
- iii Learning disabled children may experience perceptual-motor deficits. Children with these deficits encounter difficulties in printing letters, writing and drawing. They have unusual difficulty reproducing geometric designs with blocks. Their ability to discriminate between figure-ground and/or whole part is also poor.
- iv Learning disabled children may exhibit general coordination deficits. Some children with learning disabilities are often awkward or clumsy. This may manifest in fine muscle performance and/or overall coordination of the muscles of the body.

- v Another system associated with learning disability is hyper kinesis and less frequently hypo kinesis. The child with this deficit constantly moves from one place to another, engage in one activity or the other, or may simply exhibit restless or fidgety behaviour. This child may also engage in uninhibited speech.
- vi Some learning disabled children manifest short attention span and/or distractibility. The child with this deficit finds it difficult to pay attention or concentrate on a presented material for long. He/she experiences difficulty in selecting attention and sustaining it.
- vii Some learning disabled children are also known to be impulsive. They often cannot restrain themselves from certain acts, especially, in a strange or over-stimulating environment. They may speak without control, and often get into trouble with authorities.
- viii Children with learning disabilities have been observed to manifest deficits in the area of social skills, have poor peer acceptance and motivation. They exhibit low self-concept and sense of self-efficiency and usually show uncooperative and aggressive behaviour.

Other educational characteristics of the learning disabled include:

- i Perceptual difficulties: This always results in problems of discerning meaning from or discriminating between sounds (what is heard), vision (what is seen), and other sensory stimuli including touch, movement and direction, learning disabled children find it unusually difficult to understand the movements involve in such things as writing or general sensory stimuli that combine either sound or vision with movements. They also find it hard to distinguish essential stimuli from non essential background). So far, this ability is important in reading, copying from the chalkboard or a talking instructions, as they are always background (figure –ground) stimuli in any natural environment.
- ii Attention disorder: This is as a consequence of their behavioural disorders of hyperactivity, distractibility and disinhibition, which in turn make it difficult for them to stay long enough on a task to finish it, or to understand it because their attention is short lived.
- iii Disorders of thinking and memory: These disorder manifests as a difficulty at recalling things that have been learned. This limits the child's ability to think in the abstract or in hypothetical manner (that is, considering probabilities).
- iv Sometimes, learning disabled children have generalized cognitive (learning) problems. This is why it is sometimes difficult to distinguish them from those with mild mental retardation.

Causes of Learning Disabilities

Medical factors: Miller (2003) strongly believes that the causes of learning disabilities may be an impairment of the brain functioning or minimal damage to the brain which could be due to either prenatal pressure or postnatal trauma to the head. Hence, the use of the term minimal brain dysfunction, other medical factors may include prenatal problems like maternal malnutrition, bleeding in pregnancy, poor placental attachment to the uterus,

infectious diseases of pregnant mother like German measles, virus disease like gonorrhoea, syphilis, influenza. Others include excess use of alcohol during pregnancy and drugs like aspirin are all likely causes.

Heredity: Kolo (1994) and Kaplan (2002) believe that learning disabilities may be hereditary. So far, several members of a generation of a reading problems in spite of the fact that they were found to be of average intelligence.

Health Problem: A serious illness, a head injury, underfeeding, poor nourishment could be contributory factors to learning disabilities.

Family/Environmental Factors: Family discord or disunity and quarrels between parents or among siblings. Not getting enough care and attention at home and worries because of other problems in home can also contribute to making a child learning disabled.

School Problems: Inadequate instructional materials and wrong pedagogical (teaching) methods in the school system could also play a major role in contributing to children becoming learning disabled. Lere (2002) states that problems such as excessive use of the cane by the class teacher, lack of interest and motivation, lack of suitable or qualified teachers, child's refusal to attend school regularly, over crowded classroom, the child entering school at an early age and the child's frequent change of schools are likely to cause learning disability among children.

Educational Intervention Strategies for Children with Learning Disabilities

There are two broad types of intervention approaches: direct and indirect interventions. However, this discussion will discuss disabilities. In this regard, the following approaches shall be the focal point.

Modality Matching Approach: The usefulness of this approach in education of children with learning disabilities can be seen not only in the influence it has on adaptation of instruction to the learning styles of children. But also in multisensory training, one assumption guiding intervention in the field of learning disabilities is that instruction should be planned based on individual learners' characteristics. This requires that individual differences among the learning disabled should be reflected in instructional planning. Advocate of modality matching opines that children with auditory learning styles will achieve better if instruction is presented in a way that emphasizes the use of auditory skills. The same thing applies to children with visual learning style, they learn better if instruction emphasizes visual skills.

Behavioural Approach: This approach was derived from the behavioristic theory of learning, and is based on extensive and careful task analysis and emphasizes the use of reinforcement to enhance the learning opportunities of the learning disabled. In using this approach reinforcement is seen as an integral part of instruction, while the focus of treatments is on observable behaviours. Also, academic tasks are viewed as the sum product of the units of behaviours. It is true that the behaviourists do not emphasize the role of cognition in learning, however, some researchers who adopt the behavioural approach in teaching the learning disabled teach thinking operations in a way similar to cognitive strategy instruction (Lloyd, 1984, 1988).

Instructional Approach: This is an intervention approach that depended primarily on the idea of effective instruction. There are three main intervention techniques within this approach. They are multisensory intervention, direct teaching intervention and environmental modification technique.

Multi Sensory Intervention: This intervention technique aims at a modification of instruction in such specific way as to improve the learning opportunities of low achieving pupils. The modification of instruction is done to emphasis the use of several sensory modalities in learning. Multisensory technique has not been effectively applied in most areas of academic achievement, but has been very much used in the language areas. For example, they have been extensively used in reading, handwriting, and spelling, and found to be effective.

Direct Teaching Intervention: Advocates of this technique emphasize the modification of instruction as a 'format' for specifically teaching children with learning disabilities. For instance, Gettinger, Bryant and Fayne (1982) formulate a procedure for modifying existing instructional programmes to enhance its efficacy on children with learning disabilities. The results of their study indicate that incorporating certain variables like reducing the number of words taught in any one lesson, distribution of practice opportunities, and organization of spelling words enhance the performance of primary school pupils in spelling tasks.

Environmental Modification Technique: This intervention technique focuses on a comprehensive modification of the total school learning environment rather than emphasis on only teacher student interaction and instructional plans. The purpose is to adapt the learning environment to the needs of the learners so that children with learning disabilities will benefit more than educational opportunities provided. This emanates from the view that the schools do not respond adequately to the individual differences among school children.

Cognitive Approach: This approach emphasizes the importance of cognition in learning. Adherents in learning differ as to what cognitive techniques are considered important in learning. While some emphasize cognitive behaviour modification, others emphasize the information processing approach. Though, the techniques may appear to be different from each other, yet a great deal of overlap exists between them.

Information Processing Techniques

The information processing approach emphasizes what happens to the presented information within the organism between the time of presentation and response. Central to this approach is the idea of meta-cognition which involves the awareness of one's own thinking, and the conscious application of relevant skills in order to reach the specified goals. A number of studies that applied these techniques show that a comprehensive instructional programme that aims at teaching self-regulation in learning have differentially greater effects on low achieving learners than average or above average learners (Pflaum and Pascarella, 1980).

CONCLUSION AND RECOMMENDATIONS

This study was preoccupied with learning disabilities. The major aim was to identify its causes and educational strategies that could be adopted to contend it. An extensive review of literature has revealed a number of characteristics or symptoms that are associated with learning disabled children. It is worthy to note that not all children identified as learning disabled exhibit all the symptoms associated with learning disabilities. It must be understood that no single learning disabled child will manifest all the characteristics mentioned in this study. However, a combination of a few of these behavioural and educational characteristics is what a teacher should look for to identify a child who is learning disabled. Therefore, according to Lere (2002) suggest that to ensure efficient educational provision for the learning disabled children in the school system, the following approach should be considered:

- a. There should be individualization of needs, interest and ability of each child.
- b. The physical setting or work area with the learning disabled child must be non distraction, that is, avoid very bright colours in the classroom like wall pictures and dresses.
- c. The length of time devoted to each learning period for the learning disabled child should be kept short because of the short attention span of some of them.
- d. Each lesson should be brief and aimed at achieving a specific objective. Thus the child should be assigned a single task at a time, and be reinforced appropriately when he has performed the task satisfactorily
- e. The method of communication between the teacher and the learning disabled children is very crucial hence it should be direct, simple and meaningful.
- f. The teacher should be a good model, talking slowly, but naturally and should associate speech with fun and interest.
- g. Moto activity should be involved in academic learning.
- h. Concrete objects should be used to teach concept.

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