ABSTRACT

The dearth of relevant information about issues regarding learning difficulties in relation to the School-age children in Nigeria, formed the basis of this paper. The fact that the concept of learning difficulty is relatively new, is not an indication that it has not been in existence. Learning difficulties could be seen to be as old as learning itself. The much emphasis on physical impairments such as mental retardation, blindness, deafness, impulsivity and hyperactivity overshadowed the attention that should have been given to learning difficulties. But with the overwhelming global increase in educational problems in the 20th and 21st centuries, it has become obvious that the main issues affecting learning be given due consideration. This paper therefore established a position that learning difficulties which have affected over 2.9 million school-age children in the United States of America, exist also in Nigeria in apparently greater dimension. It is a heterogeneous disorder, which poses difficulty in reading, writing and mathematical calculations. This paper observes that the disorder is capable of devastating the social, psychological and educational well-being of an individual. Though a life long problem which ranges from mild to severe, its actual causation is yet to be determined. This paper has however identified the types of learning difficulties – Dyslexia, Dyscalculia, Dysgraphia,
Dyslexia, Visual and Auditory perceptual deficits and presented
the internal and external factors that could predispose learning
difficulties. In view of the anticipated negative impacts it may have
on School-age children, this paper recommended some
intervention or coping strategies that can assist the affected
children achieve their educational goals and live successful lives.

Background

Quite unlike other impairments such as deafness, blindness and other behaviour
disorders, which have distinct physical properties, learning difficulties are not
easily noticeable because of their inherent posture in children. Research shows
about 10% of children experience, mild to moderate learning difficulties, while
5% experience severe difficulties, and approximately 80% of these children have
difficulties with reading and spelling (Dalwood, 2009). They are often referred to
as hidden handicap (Kenyon, 2003). Though learning difficulties apparently have
devastating effects on children of school age, the hidden nature of the disorders
make it somewhat a herculean task for scholars to give it the desired attention.
The impact of learning difficulties is grossly underestimated because it is not
easily detected and can therefore not easily be studied for the purpose of
remediation.

However, with seemingly increasing problems associated with learning, it has
become imperative that much attention be given to issues regarding learning
difficulties with the objective of identifying and resolving them so that children
can learn with relative ease. It is important to stress that learning difficulties may
occur in children who are not yet of school age but they cannot be detected or
diagnosed for possible remediation until the children are attending school.

Far from being a gloomy and helpless condition, children with learning difficulties
can be successful both at school and in their careers later in life if given the
adequate support and attention. Kenyon (2003, P.12) optimistically states that

People with learning difficulties can be high achievers
and can be taught ways to reduce obstacles and barriers
caused by their disability. With support and
intervention, people with learning difficulty can be
successful in learning and life ….. they can learn to
compensate for specific deficits and even overcome
through alternate ways of learning, accommodations
and modifications.
It is against this backdrop of hope that effort is made in this paper to identify the various types of learning difficulties and their predisposing factors on the Nigerian child. Plausible remediation strategies that will ameliorate students learning difficulties are equally recommended.

Conceptual Framework

The first and most difficult issue in the area of learning disorders is to attempt to distinguish between learning difficulty and learning disability. Some scholars argue that both terms have the same meaning and can therefore be used interchangeably (Wikipedia, 2009). Some posit that learning difficulty is a general framework, which envelops learning problems including learning disability (Crowl, Kaminski & Podell, 1997). This implies that learning difficulty could become a disability when it is diagnosed to be a severe disorder. To them therefore, the degree of the learning condition makes the difference. Other scholars have attempted to make a clear distinction between the two concepts. These scholars argue that learning difficulty is a non-categorical definition, including all those who have difficulties learning one or more of the basic academic skills. On the other hand, learning disability is a categorical definition based on diagnosis (National Medical Research Council, 2009). They posit that while learning difficulties readily respond to intensive educational intervention, learning disability is a lifelong and pervasive disorder which does not respond to intensive educational intervention.

While the United States of America and Canada prefer to use the term learning disability, the United Kingdom posits that learning disability refers to a range of conditions that are almost invariably associated with more severe cognitive impairments: so, the United Kingdom prefers the term learning difficulties or specific learning difficulties (Wikipedia 2009). This paper adopts the position of Strydom (2009) who maintains that learning difficulty is an all embracing term for children with any type of learning problem or disorder. The United States of America simply prefers the use of learning disability for the convenience of classification. According to Strydom (2009) when a child is classified as learning disabled, he becomes the financial responsibility of the state. The basis for classification is on two grounds: first, that the learning problem is presumed to be due strictly to some neurological dysfunction and not by external factors. Secondly, that a child is classified as a learning disabled when he has been properly diagnosed and the result shows a discrepancy between a child's potential and his achievement. Such children are legally recognised as disabled and covered by the Federal Disability Discrimination Act. The exclusion of external factors in learning disability is one of controversial issues among scholars because many have argued that the existence of a neurological dysfunction has not yet been
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proved as the cause of learning disability and it is equally very difficult to ascertain that external factors do not have any role to play in establishing learning disabilities. This paper therefore agrees with Strydom (2009) that the terminology notwithstanding, attention should be given to children with all types of learning difficulties in Nigeria especially while they still remain less severe so as to avoid the negative effect on the children's academic, social and personal life. The position of this paper is that both terminologies should be viewed from the same perspectives because both appear to identify the same learning problems among school-age children.

In view of the controversy over terminologies, learning difficulties have been very difficult to define. Bootzin, Acocella & Alloy (1993, P.458) posits that “even today, clinicians do not agree on the definition of learning difficulties, and they continue to struggle to define the term”.

Umolu in Nwoye (1988) opines that the concept is relatively new because it came into focus in 1963 when Kirk (1963) first used it to describe a group of children who have disorders in the development of language, speech, reading and associated communication skills for social interaction.

The Education for All Handicapped Children Act of Public Law Section 5 (b) (4) of the United States of America defines learning difficulties as

a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia and developmental Aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing or motor handicaps, of mental retardation, or of environmental, cultural or economic disadvantages (Bootzin et al 1994, p.458)

The learning disabilities Association of America in Kenyon (2003, p.3) sees learning difficulties as

a chronic condition of presumed neurological origin, which selectively interferes with the development, integration and/or demonstration of verbal and/or non-
verbal abilities... Throughout life, the condition can affect self-esteem, education, vocation, socialisation and/or daily living activities.

Bridges and Practice in Kenyon (2003, p.3), which is an American learning disabilities and literacy initiative equally defines learning difficulty as “a neurological problem often genetic that affects the way that persons process visual, auditory or other sensory information”. The most widely acceptable definition of learning difficulties was given by the American National Joint Committee on Learning Disabilities (NJCLD) in Nwoye (1988, p.18) and re-echoed by Hami (1990). The committee define learning difficulties as a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to the dysfunction of the central nervous system. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g. sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g. cultural differences, insufficient/inappropriate instruction, psychogenic factors), it is not the direct result of those conditions or influences.

All these definitions are based on presumption because the actual causation of learning difficulties is yet to be ascertained. While these definitions may be considered plausible pending further intensive research in the field of learning disorders, this paper however posits that the idea of limiting the causes of learning difficulties strictly to internal factors may be misleading because external factors could be more pervasive. Moreover, the assumption that learning difficulties have a neurological connection or that they result from a dysfunction of the central nervous system is yet to be proved empirically. Therefore, it is safer to assume that learning difficulties could result from a combination of internal and external factors.

Types of learning difficulties

From the definitions stated above, it is clear that learning difficulties are heterogeneous in nature. Despite the controversies over terminologies, some learning difficulties have been identified. They include the following:
Learning Difficulties: Etiology, Predisposing Factors and Intervention Strategies

Reading difficulty or dyslexia (DSM-IV TR Code: F81.0/315.00):

Reading difficulty is the most common learning problem anywhere in the world. In America alone, it is rated to have 70 – 80% of all students with learning difficulties (Wikipedia, 2009). It is often referred to as dyslexia which is “a language based disorder of institutional origin characterised by difficulties in single word decoding, reflecting insufficient phonological processing .... including problems in acquiring reading, writing and spelling (Kenyon 2003, p.6) Kenyon maintains that dyslexia can rise from mild to severe difficulty. It is assumed that this disorder has a hereditary connotation because it is often seen as a run in families.

Wikipedia (2009) argues that reading difficulties of which dyslexia is one, was initially known as 'word blindness' which “affects any part of the reading process including difficulty with accurate and/or fluent word recognition, word decoding, reading rate, prosody (oral reading with expression), and reading comprehension". The most common features or indicators of reading difficulty include the inability to distinguish, identify or separate sounds in a spoken word. Some scholars refer to this as difficulty with phonemic awareness (Kenyon, 2003). Such children often have weak sound-symbol knowledge, which clearly shows their inability to match letter combination to specific sounds. They equally share the inability to blend sounds together to recognize a word. Common examples of dyslexia are

(a) revising or mis-sequencing letters within words when reading or writing. For instance, words like b/d; brid/bird; on/no; did/dog or M/N

(b) inability to identify words like ‘bat’ by sounding out the individual letters b – a – t.

(c) trouble with rhyming games such as ‘cat’ with ‘bat’

(d) inability to use the sound of r, sh, th, f, z, c or ch when reading. Such speeches are regarded as babyish and imperfect (Bootzin et al, 1993; Kenyon, 2003)

The several signs and symptoms of reading difficulty are identified by Strydom (2009) to include

(a) reading slowly and painfully
(b) experiencing decoding errors especially with the order of letters
(c) showing wide disparity between listening and reading comprehension of some text.
(d) having trouble with spelling
(e) exhibiting difficulty recalling known words
(f) having difficulty with written language
Writing Difficulty (DSM – IV TR Code: F81.1/315.2)

This disorder is also known as Dysphasia or Aphasia in DSM – IV or Dysgraphia (Kenyon, 2003; Strydom, 2009). It is assumed to be a neurological disability which is characterised by impairment in written language ability such as handwriting and the mechanics of writing, spelling, organisation of ideas and composition. Kenyon posits that the actual cause of this difficulty is yet to be known though assumed to be neurological difficulty. The signs and symptoms of Dysgraphia as listed by (Kenyon, 2003; Strydom, 2009) include

- poor and distorted handwriting that is difficult to read
- inappropriately sized and spaced letters, irregular shape or slant letters
- illegible printing and cursive writing
- poor spatial planning on paper
- copying or writing slowly with strain
- difficulty thinking and writing at the same time
- inconsistent spacing between words or letters
- poor drawing capabilities
- persistent wrong or odd spelling despite instruction
- being a messy eater
- has unfinished words or letters, omitted words
- has cramped or unusual grip and may complain of sore hand.

Mathematical difficulty or Dyscalculia (DSM – IV TR Code: F 81. 2 – 3/315.1).

Dyscalculia is considered as a disorder or difficulty in doing mathematics which includes simple arithmetic and grasping of mathematical concepts (Employer’s guide, 2003). It is common knowledge that most people generally have problems with mathematical calculations while in school but a person with Dyscalculia often has much more difficulty in solving basic mathematical problems such as quantity, placing value and time. They often have difficulty memorising mathematical formula or facts, organising numbers or understanding how problems are organised on a page. Emerson (2009) refers to it as having poor number sense. According to Kenyon (2003) this difficulty may not be quite noticeable during the early period of a child’s life but may be manifested when the child is faced with mathematical calculations. Without prompt attention, this difficulty may affect the child’s ability in the management of money as well as spatial reasoning later in his life. Kenyon maintains that people with Dyscalculia are usually characterised by
(a) inability to remember or retrieve maths facts
(b) inability to use visual imagery effectively
(c) visual – spatial deficit
(d) a confusion with mathematical operation especially those that involve multi step processes.
(e) difficulty in language processing that may affect the ability to complete mathematical problem solving (Kenyon 2003, p.7).

Additional signs and symptoms as given by Strydom (2009) include the difficulty in understanding concepts of place value, quantity, number lines, positive and negative value; carrying and borrowing as well as difficulty understanding concepts related to time such as days, weeks, months and years.

Dyspraxia

This learning problem is not reflected in the DSM – IV TR but appeared conspicuously as a learning difficulty in section 300. 7 (c) of the United States of America Federal Code (Employer’s guide, 2003). It is a learning difficulty with the body’s system of motion that interferes with a person’s ability to make a controlled or co-ordinated physical response in a given situation. It is sometimes referred to as motor planning disorder because it has to do with a number of difficulties with motor skills such as combing of hair, brushing of teeth, wearing cloths properly, the inability to accurately put things in their respective positions, problems with hand writing, clumsiness and even the difficulty of waving goodbye (Wikipedia, 2009). This disorder properly fits into the dysfunction of the central nervous system or what others refer to as minimal brain dysfunction. The inability of the brain to properly co-ordinate the activities that are received from the senses would make it a difficult task for the individual to learn particular concepts because learning is predominantly a function of the brain.

Visual Perceptual Deficit

This difficulty is not reflected in the DSM – IV TR but from the aforementioned definitions, it is clear that Visual Perceptual Deficit is a major learning difficulty. It has to do with children whose eyesight or vision have no physical impairment (normal) but have difficulty in receiving and/or processing information through the sense of sight (Employer’s Guide, 2003). This implies that although such children see clearly but have problem viewing things in their correct order. For instance they may see p as d or q as b or + as ÷ or s as z. This is different from dyslexia because it has to do with what is seen and not how it is written on paper. People with this disorder often enjoy rote learning and eloquent speeches.
Auditory Perceptual Deficit

This learning difficulty refers to children whose sense of hearing are quite functional with no physical impairment but have difficulty receiving information accurately through auditory means (Employer’s Guide, 2003). The difficulty associated with this disorder is the inability of the brain to correctly interpret what has been heard and therefore, understanding and remembering oral instructions becomes very difficult. For instance they hear da as ga. They may be unable to tell a story sequentially but have stronger ability to learn visually (Wikipedia, 2009). Their problem is understanding and remembering oral instruction and hearing one sound over a background noise (Employer’s Guide, 2003).

It is important to note that a child may have more than one of these learning difficulties at the same time. When this occurs, the child is considered to have a difficulty known as comorbidity. It is often very difficult but possible to intervene in such condition.

Predisposing factors of learning difficulties

Presently, there is no empirical proof regarding the exact cause(s) of learning difficulties. Many scholars argue that there is no apparent causation of learning difficulties (Wikipedia, 2009). This may be due to the seemingly low attention given to the field of learning difficulties. However, some scholars maintain that it is a disorder of the central nervous system which results from the inability of the brain to receive and process information correctly (Duffy & McAnulty in Crowl et al, 1997 & Hamil, 1990) but this position cannot be fully accepted because it has not been proved scientifically. Recent evidence as revealed by Kenyon (2003, p.10) posits that “most learning disabilities do not stem from a single, specific area of the brain but from difficulties in bringing together from various brain regions causing subtle disturbances in brain structure and functions”. In the same vein, Engelmann in Crowl et al (1997), Wikipedia (2009) and other environmentalists have argued that much as learning difficulties are presumed to have been due to internal factors, external factors could equally be presumed to have predisposed learning difficulties in children.

In view of the fact that scholars are yet to prove the real causes of learning difficulties, this paper identifies some of the factors that may predispose learning difficulties in children. Both the intrinsic and extrinsic variables have been considered in the discussion.
Hereditary or Genetic influences:

Experts in the field of learning difficulties have argued that some learning difficulties may have been transmitted to children through heredity or from the genes of their parents who had similar difficulties. According to Dalwood (2009), learning difficulties are known to run in families. Some scholars observed that most cases of learning difficulties run in the families of the affected children. They argue that it is not uncommon to find that children with learning difficulties do have parents or relatives with similar difficulties. However, this assumption is yet to receive universal acceptability because there is the possibility of some children acting out their lives in ways that their parents do, which implies that they have their parents as role models. Even where this assumption of genetic influence is true, it can only be regarded as a predisposing factor and not the actual causation of the disorder.

Problems during pregnancy and birth (Brain development):

It is presumed that learning difficulties could also be traced to the pattern of/or anomalies in the developing brain of the child during pregnancy and during birth. Such anomalies that could hamper normal brain development and cause brain dysfunction include low birth weight; illness or injury during birth; insufficient oxygen to the foetus probably due to twisted umbilical cord; premature birth or prolonged labour; alcohol use during pregnancy which is dangerous to the development of the brain of the foetus affecting the developing neurons. Such could lead to intellectual impairments, low birth weight, hyperactivity and other physical defects. Other anomalies include the use of tobacco during pregnancy as well as the use of hard drugs (e.g. cocaine) during pregnancy which could have adverse effect on the brain receptors that help to transmit incoming signals from the skin, eyes and ears. Kenyon (2003) further suggests that the mother’s faulty immune system may react to the foetus and attack it as it were an infection.

Accident after birth

Accident such as head injury and the treatment of cancer with chemotherapy or radiation at very early age may cause learning difficulties because the brain is likely to be affected.

Environmental factor

Some environmental factors have been assumed to predispose learning difficulties. They include the susceptibility of children to environmental toxins or poisons like Cadmium and lead (lead paints or lead water pipes). Another
environment factor of learning difficulties is poor nutrition of children during their early period of life.

Although, the causes of learning difficulties are yet to be ascertained, there is a general agreement that intelligence cannot be the cause of learning difficulties because students with learning difficulties have either average or above average IQS though they struggle to meet up with their mates comparatively in their learning abilities (Kenyon, 2003). Scholars agree that students with learning difficulties are so classified because there is a discrepancy between their actual performance and the expected performance in academics (Crowl et al, 1997). This paper has adopted the cognitive theory of learning difficulty which identified three major approaches to the causes of learning difficulties (Crowl et al, 1997).

i. **Perceptual Deficit Approach:** This approach attributed learning difficulties to either errors in visual or auditory perception or lack of perceptual-motor ability such as eye co-ordination. What this implies is that a student with perceptual learning difficulty may not have difficulty in seeing (sight impairment) but has difficulty interpreting what he sees.

ii. **Attention Deficit Approach:** This approach states that learning difficulties may be characterised by students’ inability to pay the desired attention to their studies. Such students are easily distracted by other stimuli which may not be relevant but have difficulty paying attention to relevant stimuli (Krupski, 1986). In other words, students with attention deficits are unable to learn what is expected because they do not pay due attention. This could account for why Attention Deficit/Hyperactivity Disorder (ADHD) is often linked with learning difficulties. Some scholars have however argued with proves that ADHD is not included in the standard category of learning difficulties because people with ADHD may learn adequately when successfully treated for the disorder (Wikipedia, 2009). Though, it is generally believed that learning difficulty and ADHD could co-occur in an individual. This is known as comorbidity. It should be noted that a student with learning difficulty is usually affected in specific areas of learning whereas, people with ADHD are usually affected in all spheres of life. There is however a strong case in recent times for the inclusion of ADHD in the definition of learning difficulties. The controversy is yet to be resolved.

iii. **Rehearsal and Mental – Cognitive Deficit Approach:** This approach opines that students with learning difficulties often fail to apply meta-cognitive strategies but behave like young children who do not understand that they needed to take active measures to increase their learning. They do not
understand that actively attempting to learn increases learning or that they already have the capacity or ability to take active measures in their studies.

Having seen the types and the predisposing factors of learning difficulties, the need to assist affected students cope with their studies and live successful lives becomes imperative.

**Intervention Strategies**

There is a unanimous agreement by scholars that learning difficulty is a life-long and heterogeneous disorder whose actual cause and cure have not yet been determined (Bootzin et al. 1990). However, scholars have equally argued that the academic and learning skills of affected students can be greatly enhanced with specific intervention strategies, which are designed specifically for the improvement of students’ areas of weakness in academics. An early intervention will drastically reduce the number of students who meet with the diagnostic criteria for learning difficulties (Sternberg & Grigorenko, 1999). This paper equally agrees with the position of Fulton (2009) that the earlier a learning difficulty is identified, the easier it becomes for treatment. For any intervention strategy to have a meaningful impact therefore, early diagnosis through accurate assessment of affected students in our schools must be considered as a paramount step. Some of the coping or intervention strategies include the following.

**Direct Instruction**

Students with learning difficulties would require a highly structured intensive and direct instruction from teachers and psychologists who would place more emphasis on carefully planned lessons for small learning increments (Wikipedia, 2009). Under this strategy, the specialised teacher is not expected to be scarce or infrequent in attending to the students. There must be a rapid—placed interactions between the teacher and the students such that mistakes could be corrected as soon as they are noticed. By this interaction, the teacher will avail himself the opportunity of making progress report on the students.

**Individual Education Plan (IEP)**

In some developed countries like the United States of America, the individual Education plan for students with learning difficulties was tested and found worthwhile. It is the belief of this paper that the programme will equally be found useful in Nigeria for the same purpose. Under the plan, the affected children, their parents and specialised teachers are fully involved. It is a programme that helps in the monitoring of the students’ comprehensive verbal, written, motor and social...
skills both at home and in school. Through series of assignments, affected students' strengths and weaknesses are clearly defined, which will in turn give room for adequate planning of learning activities that will enable the child do his best at school (Lyness, 2007).

Development of Basic Perceptual Skills.

The problem of real perception as noted by Bootzin et al (1993) include visual and auditory perceptions which show difficulty in either seeing things in correct order or distinguishing between sounds. Four skills that may be relevant in this direction have been identified by Cusimano (2001). They are visual perception, visual memory, auditory perception and auditory memory skills. He suggested that close attention should be given to visual memory skills like the visual memory of words because research has indicated that about 80% of all learning in schools are done by means of visual modes. In addition, he suggested that since many students have weak auditory memory skill development especially in the areas of listening, attention and recall, specific instruction should be presented to facilitate improvement in those aspects so that students with learning difficulties can learn with relative ease.

Development of special training skill for students with Dyscalculia:

This paper observes that some students have real difficulty in comprehending mathematical concepts. This is different from the general apathy students have towards mathematics and calculations. Such students require some special coping skills to remedy their situations. Affected students should be allowed to use their fingers and scratch paper in counting and solving calculations because their memories may likely fail them. In the course of teaching, teachers should be encouraged as much as possible to make good use of diagrams in the explanation of some concepts. Affected students should be encouraged to equally seek assistance from classmates through the formation of peer reading/study groups. Other skills include the use of coloured pencils to differentiate problems; drawing of pictures of word problems on the chalkboard and the use of memories to learn steps in mathematics (Strydom, 2003).

Conclusion

The goal of identifying students with learning difficulties is not for the purpose of labelling which may have adverse effects on the students but to seek for possible coping strategies of helping them achieve optimal results in their academic pursuits. If Nelson Rockefeller who was diagnosed to have so much reading problem (Papalia & Feldman (1999) could rise to the position of the president of
the United States of America, there is therefore no reason to lose hope on children with learning difficulties. With a positive attitude and attention from peers, teachers and parents, affected students will learn to cope with their conditions without shame or stress.

References


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