

Teachers' Perception of Causes, Consequences and Strategies in Managing Learning Disabilities among Secondary School Students in Anambra State

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Abstract

Learning disabilities is one of the challenges facing educational system. The study investigated the causes, consequences and strategies in managing learning disabilities in Anambra state using descriptive survey research design. A sample of 200 teachers was randomly selected from ten schools in the study area. Three research questions and two hypotheses guided the study. The instrument for data gathering was tagged "Causes, Consequences and Strategies in Managing Learning Disabilities Questionnaire" (CCSMLDQ). The reliability of the instrument was determined using test retest method which yielded 0.88 while the administration of the instrument was done on face to face administration. Weighted mean scores were used to answer the research questions while the hypotheses were tested using t-test. The major findings of the study are that educational factors and genetic factors are responsible for major causes of learning disabilities; poor working memory and poor academic achievement are the main consequences of learning disability. It was recommended that teachers should be equipped and trained in strategies such as improved teaching methods, and that teachers should serve as role models to help students with learning disabilities, among others.

Keywords: learning, disabilities, causes, consequences, strategies

Introduction

Education sharpens individual to be functional to oneself and the society. When an individual deviates from this normalcy as a result of disorder or developmental delay, problem is likely to occur (Garguilo, 2017). Such individual may not operate at the frequency expected of his age. This may showcase in one's inability to learn age appropriate behaviours, skills, values, attitudes and abilities that are suggested to sharpen the individual into functional human being. This problem of inability to learn at appropriate age or level is called learning disability. Learning disability is synonymous with learning disorder. The difference lies in the degree of severity or intensity. Learning disorder is more profound than learning disability. Learning disabilities describe a group of disorders underlined with specific academic, language and speech skills. These include

difficulty in reading and spelling (dyslexia), mathematics disability (dyscalculia), and writing disability (dysgraphia).

Learning disabilities, cited in Adam et al. (n.d), is defined by United States of America Public law 94-142 of the Individuals Disabilities Education as

a disorder in one or more of basic psychological processes involved in understanding or using language, spoken or written, which may manifest itself in imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations. The term includes conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not include a learning problem which is primarily the result of visual learning or motor handicaps, of mental retardation of emotional, cultural or economic disadvantage (p225).

The Ministry of Education, British Columbia (2011) defined learning disability as “a number of conditions that might affect the acquisition, organization, retention, understanding or use of verbal or non-verbal information. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking or reasoning.”

Therefore learning disability is a type of neurological disorder that affects the brain's ability to receive, store and respond to information. This means individuals with learning disorders have neurological impairment that mixes up signals between the brain and the senses. Students with learning disorders have average or above average intelligence. They can see, hear but they do it differently. They have a neurological impairment in perception, conceptualization, language, memory attention and motor control that is abnormal in functions. The learning disorders affect people's ability to either interpret what they see and hear or link information from different senses to the brain. These handicaps can manifest in different ways as specific difficulties with spoken and written language, coordination, self-control or attention. Such difficulties have a link to academics and can impede learning to read, write or do mathematics. According to UNESCO (2018), the world incidence of learning disability is as follows: Children aged 6-11, 1.8%; Adolescents aged 12-17, 2.67%; Adults aged 18-65 years, male 2% and female 1.4%; 65 years of age and above for male 0.8% and female 0.7%. In Nigerian situation, there is no statistical evidence to show the existence of learning disabled children as cited in Taura and Abdulkadir (2021), though learning disorder exists. The learning disorder is identified when there is gap between intellectual ability and achievement in one or more of the following areas of oral expression, listening comprehension, and basic comprehension.

In a normal physiological development, the child is expected to acquire a set of basic cognition and motor skills. Any significant delay or gap in development could be a sign of learning disability. A series of researches, proven tests and assessments have to be conducted before diagnosing this condition. Learning disabilities can be identified using psycho-educational assessment, which includes academic achievement in line with a

measure of intellectual capacity. This test helps determine if there is discrepancy between a child's potential and performance capability as well as his academic ability. Teachers and counsellors are to be competent to identify pupils and/or students with learning disabilities for remediation (Eyo & Nkanga, 2020). Learning disabilities are not as a result of physical or mental illness, economic condition or background, neither are they indication of weakness or laziness.

Having conceptualized what learning disability is, there is need to explore the risk factors of learning disabilities. Causes of learning disabilities are not well known. However, some risk factors such as neurological impairment has been suggested to be responsible for learning disabilities. These include inherited genetic characteristics from either or both parents which can influence the general intellectual development of an individual. When a child inherited abnormal chromosomes from either or both parents, this may lead to abnormal or delayed intellectual development and cause some learning disabilities (Cottrell, 2014; Javid et al., 2020).

Adverse circumstances and situations surrounding pregnancy may have a lot of negative effects on the developing fetus when the baby is born. This could result from dangerous substances taken in by pregnant women during critical development of their fetus especially in the first and second trimesters. Also illness or alcohol can cause birth of a brain damaged children. Malnutrition of pregnant women may cause birth of low weight baby. Such children may become hyperkinetic, disorganized in behaviour and may experience some learning difficulties (National Institute of Neurological Disorder and Stroke, n.d)

Poor nutrition during early childhood may possibly lead to unhealthy condition and sickness, and such causes brain damage and backwardness in children. Hence they experience learning disabilities. Accidents after birth or exposure to toxic conditions can lead to destruction of nerve tissues and cause some infections to the brain (Osegbo, 2013). Children who lack exposure to proper manipulative skills needed for later intellectual development and achievement may be subjected to learning disabilities. A good example is home devoid of home gadgets like television, radio or laptop; such can reduce children's knowledge unlike those who have these gadgets. These gadgets may in their capacity increase their knowledge.

School based factors such as methods of teaching, teacher-pupil relationship, and poor psychological climate in the classroom such as denigration of students by tactless teacher, could be responsible for slowness in learning. Hence Asia et al. (2018) maintained that inappropriate instruction at lower level may cause learning disabilities among children early stage of education. Poor attendance or absence from school and frequent change of school may lead to learning challenges via learning disabilities.

Learning disabilities can be categorized and described according to information processing that is affected by specific difficulties. When classified on the basis of the

stages of information processing, learning disabilities fall into four categories of four stages of information processing used in learning. These include input, integration, storage and output. Individuals experience difficulty in learning when there is problem or abnormality in input, processing and output mechanism of information processing. This could be explained in this way. Human receives information through the five sense organs, process and communicate with outside world. All learning comes in through one or more senses. These senses relate information to the brain for processing. If well processed, it is stored, organized, synthesized, associated and integrated with previously learnt materials ready for use. This information is used when the individuals have the ability to process the information and output it through sending it out from the storage areas from the brain in form of verbal, non-verbal and written forms of expression.

The table illustrates input, process and output in learning process (Denga, 1987:28).

Table 1: Input, process and output in learning process

Input	Process	Output
Information from 5 senses	Retain Recall Organize Sequence Synthesize Integrate Associate	Verbal Written Physical (motor). Non-verbal.

In the input stage, information is obtained through the senses of sight, taste, hearing, smell and touch. Any difficulty in any of these senses of information will affect reception of information received. For instance, hard of hearing may lead to difficulty in receiving information. Such information received is faulty and could possibly affect cognitive processing of the information leading to learning disability. At the processing and storage stage, perceived information obtained through the input is interpreted, categorized, and put in sequence. If there is difficulty in organizing and sequencing, such information may not be properly synthesized, stored and retrieved from the working memory hence learning disability ensued. On output, children with learning difficulty may have problem in expressing themselves verbally, written or motor skills as a result of cognitive impairment. The information from the brain may come out as language output through words (spoken or written) or through muscle activity such as gesturing, written or drawing.

When learning disabilities are categorized on the basis of specific difficulties caused by processing deficit in different areas, different learning disabilities will ensue such as mathematics disability, reading disability, among others. Hence learning disability is

heterogeneous. If an individual has more than one learning challenge, the condition is known as co-morbidity or co-occurrence of learning disability.

Research evidence has indicated the effect of psychological process deficit, that is the offshoot of learning disabilities, in the different areas as mentioned earlier in this work. These includes deficit in memory, meta-cognition and organization (Kormos, 2017). These deficits cause academic difficulties and result in achievement significantly below expectations given average intellectual capacity.

Students with learning disabilities are very heterogeneous; no two students possess the same profile of strengths and weaknesses. Hence they need special education and related services (Texas Council for Developmental Disabilities, 2013). Students with specific learning disability similar to those with mild mental retardation have low self-esteem and poor academic achievement, though their adaptive function may be intact. Hence there is need for counselling and motivational treatment that could raise their self-esteem and enhance their academic performance by their caregiver and teachers.

In the area of cognitive processes, children and adolescents with specific learning disability may experience any of the multitude of difficulties in perception that involve ability to recognize, compare, discriminate information and attention may likely cause inability to focus on information and this inhibits the ability to perform tasks at appropriate achievement level. Such students may also have problems with working memory which inhibits their ability to store and retrieve previously processed information from long term memory. They may also have deficit in meta-cognition which is the ability to monitor and evaluate performance as well as organization difficulty which is the underlying thread of all these cognitive processes. Students with specific learning disabilities may have difficulty in organizing their thought process such as their work and their environment. Because of these effects on cognitive process, students with learning disabilities may have difficulty in a variety of academic areas as well as social and emotional development since they cannot process information adequately at appropriate level. Research evidence by Kormos (2017) indicated that learning disabled children find it difficult to acquire and store information as well as use this information appropriately.

It is necessary to mention that characteristics that interfere with such student's acquisition of reading or writing skills can also interfere with their social behaviours. For example, individuals may have difficulties in interpreting social situation and social cues and they can act impulsively without identifying the consequences of their feelings and concern of others (UNESCO, 2018). Such behaviours can cause strained relationship with peers and significant people. This could cause some of these students to withdraw from school and engage in different undesirable behaviours like shame, anxiety, frustration, social isolation and lack of self-confidence. Such situation have serious psychological effect on the child and lead to negative self-image and self-esteem (Papanastasiou, 2017).

The school may neglect the special needs of the learning disabled and constrain them to operate at the level of other students who are not experiencing the difficulties; such students may begin to exhibit deviant disorders. These children may despise the teachers because the teachers are not showing love and care. Parents are not left out; those parents who are not vigilant to notice what these children are experiencing may judge them. Hence, such students face frustration at home and school which may tend to be suicidal. These may subject the students to truancy, poor academic achievement and maladaptive behaviours, among others. Hence, there is need to take proper care of these students to enhance students' proper adjustment both in school and home. Children and adolescents with specific learning difficulties need special services that are tailored towards specific areas of dysfunction. When special attention is geared towards the psychological needs of these pupils and students, they are likely to stand the chance of realizing their potentials in completing school successfully and making considerable adjustment.

Teachers and counsellors need to develop long term therapeutic relationship in which they can help students to go through the system, acknowledge their limitations and praise their triumphs to enhance their adjustment. Since most of the difficulties these children experience are in academic areas, teachers should be involved in team group in planning these services for the group.

Inclusive education has been advocated, whereby learners are trained together not minding disability. Counsellors need to contact general education teachers as well as resources specialists who will provide specialized services to students with learning disabilities both inside and outside classroom (UNESCO, 2018).

Learning disabilities cannot be cured. However, early intervention, support and management of these children can grant success in school. Parents and teachers are the first to notice that a child is finding it difficult to read, write, or learn. If noticed, efforts should be made to solicit for help of specialist for effective intervention as early as possible. Counsellors need to inform teachers about specific techniques such as teaching step by step approach to mathematics problems, using repetition, teaching outlining techniques and teaching students the use of memory aids. According to Asia et al. (2018), appropriate teaching strategies can go a long way in enhancing learning disabled learners. Also, classroom modification could be done through use of oral tests, use of computers, audio tapes lectures, reduction of assignment and extension of motivation approaches such as internal and external reinforcers.

Students with learning disability need additional help in areas of social adjustment. This may be as a result of weakness in perceived differences in academic difficulties different from other students. There is need for teachers to model social behaviours to students with learning disabilities as well as facilitate support peer activities such as peer pairing, cooperative work groups and classroom social skill programmes. Ukwueze (2020) indicated that these students need to work along with teachers and specialists to raise their low self-esteem, help these adolescents with their identity issues, and plan long term

career through individual and group guidance setting using various therapeutic approaches such as child psychotherapy, cognitive behaviour therapy, solution focused therapy, sensory integration therapy and family integration therapy.

The teachers with the counsellors can plan curriculum to suit the ability level of a particular child rather than his chronological age. This will enable the learning disabled to benefit from knowledge and education as much as others. The learning experiences may be such that it is from simple to complex, relate new concepts to old ones, enhance memory and cognitive abilities. The main goals of instructions for learning disabled could be achieved through breaking the main goals into sub goals until the main goals are achieved. This could be facilitated by instilling confidence and use of rewards to actualize the main goals.

Research questions

1. What are the causes of learning disabilities among students as perceived by teachers?
2. What are the consequences of learning disabilities among students as perceived by teachers?
3. What are the strategies in managing learning disabilities as perceived by teachers?

Hypotheses

Ho1: There is no significant difference between teachers perception of the causes of learning disabilities among students based on their grade level in Anambra state.

Ho2: There is no significant difference between teachers perception of consequences of learning disabilities among students based on their grade level in Anambra state.

Methodology

The descriptive survey research design was adopted in this study. The study was carried out in Anambra state. The population of the study comprised all the public secondary school teachers in Anambra state. The sample was composed through selection of ten schools by simple random sampling. In each school, 20 teachers were randomly selected thus giving a total of 200 teachers for the research. The sample was purposefully divided into two strata, teachers on grade level 7-14 filled 100 copies of the questionnaire while teachers on grade levels 15 and 16 who were combining teaching and administrative work filled another 100 copies of the questionnaire.

The instrument used for data collection was a structured questionnaire on the “Causes, Consequences and Strategies in Managing Learning Disabilities Questionnaire (CCSMLDQ). The questionnaire is designed to elicit and extract vital information from the respondents. A four point scale format was used namely: Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The questionnaire was validated by two experts from Guidance and Counselling while an expert from Measurement and Evaluation also validated the questionnaire. The reliability of the instrument was determined using Cronbach alpha and internal consistency estimate of .88 was obtained.

The questionnaire contains 22 items. It has three sections - A, B and C. The section A measures Causes, B measures consequences while section C measures managing strategies. A face to face administration was adopted by the researchers as they visited the schools on agreed periods in each of the ten schools randomly selected during various staff meetings.

Data collected were analyzed using mean. A mean value is 2.50 was used as the decision rule. Therefore, any item for which the mean score is 2.50 and above was taken to mean that the respondents agreed, while any response item for which the mean score is below 2.5 was taken as disagreed. The hypotheses were tested using t-test statistical tool.

Presentation of results

Research question one: What are the causes of learning disabilities among students as perceived by teachers?

Table 2: Responses on causes of learning disabilities as perceived by teachers

S/N	Items	Mean	Remarks
1.	Inherited abnormal genetic characteristics	3.48	Agreed
2.	Traumatic brain injury	3.12	Agreed
3.	Dangerous circumstances\bad fetal environment	3.47	Agreed
4.	Poor nutrition	3.40	Agreed
5.	Accidents after birth	2.90	Agreed
6.	Lack of exposure to manipulative skills	3.17	Agreed
7.	Educational factors	3.49	Agreed

A look at the table 2 shows that the respondents, on the average, responded affirmatively to all the items regarding the causes of learning disabilities. This was deduced from the fact that the mean scores of all the items on the table were higher than the decision mean of 2.50.

Research question two: What are the consequences of learning abilities among students as perceived by the teachers?

Table 3: Teachers responses on consequences of learning disabilities

S/N	Items	Mean	Remarks
1.	Low self esteem	3.15	Agreed
2.	Poor academic achievement	3.12	Agreed
3.	Attention deficit	3.12	Agreed
4.	Poor working memory	3.47	Agreed
5.	Poor interpretation of social behaviours	3.30	Agreed
6.	Deviant behaviour (truancy)	3.15	Agreed
7.	Frustration	3.17	Agreed
8.	Teachers' abuse of learning disabled person	1.62	Disagreed

From table 3, apart from item 8 which has a mean score of 1.62, all other items have their mean scores higher than the mean of 2.50. This implies that items 1, 2, 3, 4, 5, 6 and 7 were accepted as consequences of learning disabilities based on perceptions of teachers. On the other hand, item 8 has a mean score of 1.62 which is lower than the decision mean (2.50). It was therefore rejected as a consequence of learning disabilities as perceived by the teachers.

Research question three: What are the strategies in managing learning disabilities as perceived by the teachers?

Table 4: Teachers responses on strategies in managing learning disabilities

S/N	Items	Mean	Remarks
1.	Teachers synergies with parents	3.10	Agreed
2.	Raising self esteem	3.40	Agreed
3.	Teachers as role model	3.40	Agreed
4.	Improved teaching method	3.50	Agreed
5.	Tailoring curriculum to suit learning disabled	3.40	Agreed
6.	Breaking the main goals to be achieved to sub goals	3.10	Agreed
7.	Comparing the learning disabled with their non-disabled peers	1.60	Disagreed

Table 4 shows strategies teachers use in managing learning disabilities. Items 1, 2, 3, 4, 5 and 6 were accepted with mean scores of 3.1, 3.4, 3.4, 3.5, 3.4 and 3.1 respectively while item 7 was not accepted because it was not up to 2.50 which was the mean score decision rule. The result showed that items with mean scores above 2.50 enhance the performance of students with learning disabilities. Hence, teachers should adopt these strategies to facilitate their work with these students. Whereas comparing students with non-disabled peers was rejected as a strategy, as it had a mean score of 1.6.

Ho1: There is no significant difference between teachers perception of causes of learning disabilities among students based on their grade levels in Anambra state.

Table 5: t-test analysis of responses on causes of learning disabilities of students of Anambra state

Teachers on grade levels	N	Mean	SD	Df	Cal-t	Crit-t
7- 14	100	24.89	4.90	198	2.10	1.96
15-16	100	23.61	3.53			

Table 5 indicated that there is significant difference between teachers on grade levels 7-14 and 15-16 on their perception of the causes of learning disabilities among students.

The reason was that the calculated t-value of 2.10 is greater than the critical t-value of 1.96. Therefore hypothesis one is rejected.

Ho2: There is no significant difference between teachers perception of consequences of learning disabilities among students based on their grade levels in Anambra state.

Table 6: t-test analysis on responses on the consequences of learning disabilities among students by the teachers

Teachers on grade levels	N	Mean	SD	Df	Cal-t	Crit-t
7- 14	100	86.43	8.51	198	0.18	1.96
15-16	100	86.51	7.47			

It was observed that the calculated t-value of 0.18 was less than the critical t-value of 1.96. Therefore hypothesis two was accepted indicating that respondents did not significantly differ in their responses.

Discussion of the findings

The findings revealed that many factors are the causes of learning disabilities among students but the major causes by the respondents includes inherited abnormal genetic characteristics, educational factors, bad fetal environment, poor nutrition, brain injury, lack of exposure to manipulative skills and accident after birth with mean scores of 3.49, 3.48 , 3.47, 3.4,3.1, 3.1 and 2.9 respectively. The findings are in support of Cottrell (2014) who maintained that biological factors are associated with specific neurological and genetic impairment or dysfunctioning which has prevalent or higher rate within members of the same family. While Asia et al. (2018) maintained that inappropriate instruction at primary level is likely to cause learning disabilities at early level.

The findings in research question two indicated that poor working memory, poor interpretation of social behaviour, frustration, deviant behaviours, low self-esteem and poor academic achievement with mean scores of 3.47, 3.37, 3.17, 3.15, 3.12 and 3.12 are the major consequences of learning disabilities. The findings are in support of Asia et al. (2018) who indicated that learning disabilities may result to negative and harsh behaviours within a peer group which may be as a result of faulty interpretation of social behaviours of an individual with learning disability. The findings also concur with the findings of Kormos (2017) who indicated adverse effect of learning disabilities on children's acquisition of new knowledge hence poor academic achievement. Moreover, if these consequences are not properly handled it could lead to adverse effect on the family and constitute nuisance to the society in general.

The findings also indicated that though learning disabilities cannot be cured, they could be managed through improved teaching methods, teachers acting as models, raising self-esteem of individuals with learning disability, breaking curriculum to suit learning disabled, achievement of main goal bits by bits and synergy between teachers and parents

with mean scores of 3.5, 3.4, 3.4, 3.4, 3.1 and 3.1. All these strategies can go a long way in facilitating their abilities to learn. Whereas comparing the learning disabled with normal peers will not help the children with learning disability. These strategies if properly implemented can enable these students to adjust and realize their potentials and become functional and useful to themselves and the society. The findings are in agreement with Ukwueze (2020) who maintained that strategies such as role models facilitate self-understanding and enhance adjustment of learning disabled.

The first hypothesis was rejected indicating significant differences in responses to causes of learning disabilities among students in secondary schools. This finding may be as a result of the fact that teachers on grade levels 7 to 14 are closer to these students than those on grade levels 15 and 16 who combine teaching work with administrative work. Most teachers on higher grade levels are mainly preoccupied with administrative work unlike those on lower levels who are always with these students and can identify them easily. However the findings differ with Eyo and Nkanga (2020) who reported that there is no difference based on counsellors years of experiences in identifying pupils with learning disabilities. This may be as a result of training the counsellors received during their training programme that equipped them with abilities to identify students with learning disabilities.

The second hypothesis revealed no significant difference on the teachers' responses on the consequences of learning disabilities among secondary school students. The reason might be because of nuisance value learning disabilities cause the individuals and the society. Both the learning disabled, teachers of all grades are negatively affected. This concur with the findings of Papanastasiou (2017) who posited that children with disabilities undergo negative psychological effects such as anxiety, frustration and deviant behaviours which affect both the individuals and the society. Therefore there is need to checkmate and reduce learning disabilities through different strategies by the teachers, parents and members of the community.

Conclusion

Learning disability is a serious problem affecting students' learning, acquisition of knowledge, skills and values. Consequences and strategies in managing learning disabilities were indicated. Out of the two hypotheses one was rejected and one was accepted.

Recommendations

Based on the findings of this study, the following recommendations were made:

- 1) Creation of awareness about what learning disability is, its causes, consequences and way out should be embarked upon.
- 2) There should be early intervention to help learning-disabled to get adjusted and be functional.
- 3) Creation of a department that will be in charge of learning disability in education sector is a necessity.

4) Training of teachers in basic identification and intervention strategies should be emphasized.

5) Schools should be equipped with intervention strategies that can enhance the learning disabled students.

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