

LEARNING DISABILITIES

The term learning disabled is used to describe individuals who in spite of normal or near normal intelligence have a puzzling array of problems. The National Joint Committee on Learning Disabilities, U.S. has defined disability as 'general term that refers to heterogeneity of disorders manifested by significant difficulties in acquisition + use of listening, speaking, writing, or mathematical abilities. These disorders are intrinsic to the individual + are presumed to be due to central dysfunctioning + may occur across life span.

Causes of Learning Disabilities:-

There are three possible categories:-

- (1) Organic + Biological
- (2) Genetic
- (3) Environmental

Organic + Biological Factors:-

For years it has been suspected that neurological factors are a major cause for the disability. Today with the use of more sophisticated techniques as PET, CAT it has found that central nervous system dysfunctioning may be a major cause of learning disabilities. EEG recordings suggest that students with learning disabilities have abnormal waves. Willis et al (1992) using CATSCAN + MRI Hybrid et al using CATSCAN + MRI found evidence of neurological cause for learning disabilities.

2. Genetic Causes:-

Over the years accumulated evidence have shown

- 2 - Informal Reading Inventories.
- 3 - Formative Evaluation Methods.
- 4 - Authentic Assessment.

Standardized Achievement Tests:-

Teachers + psychologists commonly use standardized achievement tests with the students who are learning disabled + whose primary characteristic happens to be academic deficits. The test used for this purpose is Wechsler Individual Achievement Test. This test assesses achievement in all the areas relating to learning disabilities such as reading, comprehension, written expression, spelling, mathematical reasoning, numerical operations, listening comprehension + oral expression. It is used in conjunction with Wechsler's Individual Scale for children - wisc + the two help to locate the discrepancies between achievement and ability.

The major limitation is that they cannot be used to gain much insight into why students have difficulty. They can only help identify students with learning problems + to provide gross indicators of academic strengths + weaknesses.

Informal Reading Inventories:-

A common method of assessment in which series of reading passages or word list graded in the order of difficulty are presented to students. The teacher makes the student start with the most simple list or passage.

He is exposed to increasingly more difficult passages or list. This method helps the teacher estimate the level of the student + also the kind of errors the student is likely to make. The information about by this method can be used

in designing instructional interventions for the student.

2) Formative Evaluation Methods :-

This method directly measure the student's behavior & keep track of his/her progress. Formative Evaluation less concern with how student's performance compares with that of the other student & infact is more concern with how the student's performance stands in the light of his/her abilities. Though there are many formative evaluation methods, they share certain common properties.

1) Assessment is usually done by child's teacher & not the school psychologist.

2) Teacher assesses the classroom behaviour directly.

3) Teacher observes & records the child's behaviour more frequently & over a period of time.

4) Usually his performance is measured two-three times.

5) Teacher uses formative evaluation to assess child's progress towards educational goals. After initial testing the teacher establishes goals for the child to reach in a given period of time & then teacher monitors the child's progress in the light of these goals.

6) The teacher monitors effectiveness of educational programming on the basis of feedback received. The teacher can try different educational interventions.

Curriculum based Assessment :-

In this method most of the principles of formative evaluation method are used. It has been designed by Deno et al. to measure children's performance on a particular curriculum.

when they are exposed to it. Curriculum based assessment compares the performance of the student with that of their peers in the same school or division. This method allows the teacher to bring about positive changes within himself & in students with learning disabilities. The method allows the teacher to know the progress the student have made wrt. the goals set for them & this information helps him design the new method of instruction or modify already existing method so students can meet those goals. (Fuchs et al 1989)

Authentic Assessment

Many educators question the authenticity of the typical test scores asserting that they do not reflect what the students do in situations in which they work. The purpose of an authentic assessment is to assess the students' critical thinking abilities & problem solving abilities in real life situations. One example of authentic assessment is the portfolios which are a collection of the sample of the situation students activities & the work done by him over a period of time. They are collected systematically at pre-dated intervals.

Hoy & Greig (1991) found that portfolios can show to us the various stages of learning of concepts & skill. They can help to modify instructions to match the need of every individual learner.

They can help to identify the students' strengths & weaknesses.

Psychological + Behavioural characteristics of people with learning disabilities: -

These people show not only great inter-individual but also great intra-individual variations + in the light of these variations its not easy to find out common characteristics, however some of them are -

Academic Achievement Problems:

By definition if there are no academic problems a learning disability does not exist. Academic difficulties are the hallmark of learning disabilities.

Reading: -

difficulty for most students with learning disabilities. Most authorities believe that this problem is related to deficient language skills especially phonological skills i.e. the individuals with learning disabilities lack the ability to understand the sound of how various sounds go with certain letters to make words. Even though phonological problems may be the cause of many reading problems, there is a mounting evidence that a small proportion of reading problems may be due to difficulties in processing information from the letters.

Written language: -

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Hand writing (illegible + slow speed)

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Written language: -

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Hand writing (illegible + slow speed)

Spelling - (because of phonological problems)

Composition

While even normal people have poor hand writing, people with learning disabilities not only have poor hand writing but they are slow in writing things. Spelling is a problem with them, because of difficulty in understanding the correspondence between sounds & letters.

Studies have also found that people with learning disabilities frequently have difficulties in creative aspects of comprehension.

Spoken language

Many people with learning disabilities have problems with mechanical & social usage of language. Mechanically they have trouble with syntax, semantics & phonology & written social uses of language. It has been found that people with learning disabilities are not very good in conversation & are often incapable of production & reception of the discourse.

Mathematics: -

Authorities now recognize mathematic problems in learning disabilities are only secondary to the reading disabilities. It has also been found that such students have trouble with computing mathematics facts (Mercer & Miller 1992). It has also been found that they have difficulty in selecting & applying problem solving strategy (Montague & Bos 1990).

Other students have also shown, as by Cawley (1992) that they have difficulty in Maths problems.

Perceptual, Perceptual Motor + General Co-ordination problems

Hallahan (1975) found that children with learning disabilities exhibit visual + auditory perceptual disabilities. A child with auditory perceptual problem may have difficulty discriminating between two words that sound nearly alike.

Motivational Problems:-

Such children have low motivation which often is responsible for their poor academic achievement. Repeated failures is responsible for their low motivation, also generates in them a sense of learned helplessness + may lead them to develop external locus of control + a passive attitude. They tend to give up as they feel that they will fail no matter how hard they try.

Rehabilitation of Learning disabilities:-

The student with learning disabilities is an inactive learner lacking in strategies for attacking academic problems. He is someone who does not believe in his own abilities + has inadequate grasp of what strategies for problem solving to be used. To help him in his academic problems two approaches have been tried.

Cognitive training

Direct instructions.

Cognitive training:-

This training involves three components.

Changing the thought processes

material.

Socio-Emotional Problems:-

Peer (1992) found that while normal learners may also have socio-emotional problems, the disabled learners are more likely to have them. Their socio-emotional problems result due to the rejection by their peers which in turn leads to poor self-concept. One major cause apart from peer rejection for socio-emotional problems is the deficits in social cognition. Such children misread the social cues & misinterpret the feeling of others.

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Perceptual, Perceptual Motor & General Co-ordination problems
Hallahan (1995) found that children with learning disabilities exhibit visual & auditory perceptual disabilities. A child with auditory perceptual problem may have difficulty discriminating between two words that sound nearly alike.

Teachers & parents have also noted that students with learning disabilities have difficulty with physical activities involving motor skills. These include both fine motor skills & gross motor skills.

Disorders of Attention & Hyperactivity :-

Learning disabled students can be easily distracted, impulsive & hyperactive. Such students cannot stick to one task for long & have poor listening habits. Individuals with learning disabilities with attention problems of severe nature are called as Attention Deficit Hyperactivity Disorder.

Cognitive, memory & Metacognitive problems :-

A person with learning disabilities has problems related to memory. Hallahan found that they have problems in remembering appointments. It has also been found that they have difficulties with STM which involves recalling of information shortly after exposure. They also have problems with working memory. Problems with working memory affect a person's ability to keep information in mind while consciously doing other cognitive tasks. Findings have shown that learning disabled children have memory problems, they don't use strategies. Absence of strategies also accounts for cognitive & metacognitive problems they face.

Learning disabled people have difficulties with comprehension as they fail to keep track of their own comprehension of the text.

Providing strategies for learning.

Teaching self initiative.

Authorities give at least two reasons as to why cognitive training is particularly appropriate for students with learning disabilities.

It helps them to overcome cognitive + metacognitive problems by providing with specific strategies for learning.

It helps them to overcome motivational problems of learned helplessness + by promoting self initiative by involving them in their techniques as much as possible.

A variety of techniques fall under these, these are -

Self Instruction.

Mnemonic Key word Method.

Scaffolded Instruction.

Self Instruction :-

The idea is to make the student aware of the various problem solving tasks as they are performing them + to bring the behaviour under verbal control. All this is done gradually. Typically the teacher first models the use of verbal outline while solving the problem + then closely supervises the student using the same verbal routine while doing the task + then the student do it on their own.

Mnemonic key word method :-

This method is designed to help the students with memory problems remember information by presenting to them the pictorial representation of abstract concepts.

By making abstract information more concrete students are able to remember the content of the subject better.

Scaffolded Instruction

It is the assistance provided to the students when they are first learning the tasks. Gradually the support is withdrawn & the students do the tasks independently. The type of scaffolds the teacher provides can vary and one of the prominent & popular methods of scaffolded instruction is Reciprocal Teaching.

In this teaching, teacher & student change positions periodically. Reciprocal teaching is useful because it allows the students to follow the strategies used by the teacher effectively. It allows them the opportunity to try new strategies while being monitored by the teacher. The aim is to enable the student to achieve self-sufficiency in the learning process.

Direct Instruction:-

Advocates of Direct Instruction method stress on systematic analysis of the concept to be taught rather than the analysis of the students. The variety of Direct Instruction methods are available for reading, maths & language teaching. These programmes consist of pre-sequenced, fast-paced lessons taught to a small group of students. There is a heavy emphasis on drill & practice.

In direct instruction method the teacher teaches from a well-rehearsed script & pupils follow the lead of the teacher who often uses hand signals to prompt participation.

The teacher offers immediate corrective feedback for the errors + praises the correct performance.

Rehabilitation of students with Attention Deficit-Hyperactivity disorder
Crickshank developed an approach for the treatment of people with ADHD. His approach is based on three principles of structured programme.

Reduction of environmental situation.

Enhancement of the intensity of teaching materials.

Structured programme :-

This is a heavily teacher centred programme in which the teacher determines most of the activities for the student. The rationale of this approach is that the children with attention problems cannot make their own decisions until carefully educated to do so. In structured program, teacher monitors the progress of the student + makes the intervention wherever necessary.

Reduction of environmental situation :-

Because learning disabled children get easily distracted + have attention problems their input from the environment must be reduced + this can be done by -

- having opaque windows.

- Sound proof rooms.

- Limited use of the colourful boards.

- enclosed cupboards + book cases etc.

Enhancement of the intensity of teaching materials :-

To catch their attention its important that the curriculum must be interesting, novel + important points must be high-

regulated, only then their attention can be sustained.

Other methods of intervention:-

D) Behaviour Modification:-

Many authorities point out that behaviour modification be one of the ways of controlling inattentive behaviour. Use of reinforcement to increase attentive behaviour, the use of punishment to check inattentive behaviour have been found very useful. Response shaping have given good results with people with ADHD.

Cognitive Training

Many authorities recommend cognitive training as one of the effective methods of helping ADHD people to take control over their behavior. These authorities believe that if these students can think about their behaviours more clearly, they can regulate their impulses & inattentive behaviour. Hallahan has found that self monitoring can help the student with attention problems as it can enable them to keep track of their behaviour. Researchers have documented the effectiveness of self monitoring with the students of both elementary & secondary grades.

Medication:-

Certain drugs have also been found to be effective treatment of ADHD. Anti depressants & psychostimulants have given good results, therefore their use is recommended.