

# Education of persons with learning difficulties (SNIE 2053)

## CHAPTER ONE: Introduction

### 1.1 What is learning?

Learning has been defined functionally as Changes in behavior that results from experience or mechanistically as changes in the organism that result from experience. Learning has been a central topic in psychological research virtually since the inception of psychology as an independent science (e.g., Ebbinghaus, 1885/1962; Thorndike, 1911).

A more objective and accurate definition of learning than that commonly found in psychology textbooks is proposed. The more common definition is similar to the following: **Learning is a relatively permanent change in behavior brought about by practice or experience.** However, (a) learning as a process should be identified and distinguished from the behavioral results or the products of that process; (b) learning does not necessarily produce a change in behavior—the behavior may remain relatively unchanged while there is a change in the effectiveness of the stimuli eliciting it; (c) ambiguous words, such as *practice* and *experience*, are replaced by words that more clearly represent what happens during learning. **Learning** is the process of acquiring new, or modifying existing, knowledge, behaviors, skills, values, or preferences.<sup>[1]</sup> The ability to learn is possessed by humans, animals, and some machines; there is also evidence for some kind of learning in some plants.<sup>[2]</sup> Some learning

is immediate, induced by a single event (e.g. being burned by a hot stove), but much skill and knowledge accumulates from repeated experiences. The changes induced by learning often last a lifetime, and it is hard to distinguish learned material that seems to be "lost" from that which cannot be retrieved. Humans learn before birth and continue until death as a consequence of ongoing interactions between people and their environment. The nature and processes involved in learning are studied in many fields, including [educational psychology](#), [neuropsychology](#), [experimental psychology](#), and [pedagogy](#). Research in such fields has led to the identification of various sorts of learning. For example, learning may occur as a result of [habituation](#), or [classical conditioning](#), [operant conditioning](#) or as a result of more complex activities such as [play](#), seen only in relatively intelligent animals.<sup>[4][5]</sup> Learning may occur [consciously](#) or without conscious awareness. Learning that an aversive event can't be avoided nor escaped may result in a condition called [learned helplessness](#).<sup>[6]</sup> There is evidence for human behavioral learning [prenatally](#), in which [habituation](#) has been observed as early as 32 weeks into [gestation](#), indicating that the [central nervous system](#) is sufficiently developed and primed for learning and [memory](#) to occur very early on in [development](#).<sup>[7]</sup>

## 1.2 What is learning difficulties?

Learning difficulties is an umbrella term for academic problems of different origin. It comprises general learning deficits and low academic performance, e. g. in the context of disabilities as well as specific forms like reading, spelling and arithmetic disorders. As a consequence, many different denotations exist that try to differentiate between general and specific forms or point out the stability of the learning problem. The term learning disability usually highlights general and long-lasting learning difficulties, often

linked to the field of special education. The term learning disorder characterizes learning problems in a specific field that contrast the general aptitude of the person. Apart from the classification in DSM-IV and ICD-10, there is no universally accepted terminology and the connotations of the technical terms even vary within the same language (f. e. between Great Britain and the U.S.). There are genetic and neurobiological correlates as well as cognitive, motivational, affective and socio-economic determinants of learning difficulties, some of which are easier modifiable (prior knowledge, motivation) than others (memory span, socio-economic background). The diagnosis and intervention has to address the individual problems of the affected person. The diagnostic distinction between general and specific learning problems is however subject to substantial criticism. Educational policies vary considerably between different educational systems: While some countries practice segregation of poor performing children and teenagers, there is currently a strong trend towards inclusive education, especially since the UN Convention on the Rights of Persons with Disabilities.

### 1.3 What is the difference b/n learning disability and learning difficulties?

Many people seem to think that both Learning Difficulties and Learning Disabilities are two names for the same thing. But the fact to the matter is that both of them are different. The difference seems to be a bit complicated, since the definitions seem to mean different things depending on what country you live in. Learning Disabled person has 'Learning Difficulties', but not all people with any form of Learning Difficulty are automatically Learning Disabled.

**A Learning Disability** refers to someone who has an IQ lower than 70, who are intellectually delayed in every aspect of his or her life. Learning Disabilities can be mild, moderate, severe or profound.

People with mild Learning Disabilities may be able to live reasonably independent lives whereas people with Profound Learning Disabilities will likely require 24-hour care. Learning Disabilities are said to always be global and affect every aspect of the person's ability to function at the same level all round. This is very different from an autistic person (unless there's an accompanying Learning Disability) who will more than likely have some things that he or she is brilliant at, and other things that he or she really struggles with.

**A Learning Difficulty** normally refers to a difficulty in learning that's more specific and not global. Conditions like Dyslexia, Dyspraxia, Dyscalculia and Dysgraphia are all considered 'Learning Difficulties', but they wouldn't normally be considered 'Learning Disabilities', because they're not global and instead only affect the ability to learn in specific areas, and they wouldn't normally affect a person's overall intelligence. I myself have 'Learning Difficulties' in specific areas, but they're not across the board so I wouldn't be classed as having a Learning Disability, even though as a child, my overall IQ was barely over 70. However, IQs aren't really a great way of measuring an autistic person's intelligence, but that's a good topic for another time.

What makes the difference between the two forms of LD particularly confusing is that in the USA; the term 'Learning Disability' also seems to mean a specific Learning Difficulty. It seems that a lot of people in the USA still use the term 'Mental Retardation' to describe a person with an IQ lower than 70. Either that or they'll use the term 'Intellectual Disability', which I tend to use more often myself now, because it makes a more clear distinction from specific Learning Difficulties.

The term "learning disability" describes a neurobiological disorder in which a person's brain works or is structured differently. These differences interfere with a person's ability to think and remember. Learning disabilities can affect a person's ability to speak, listen, read, write, spell, reason, recall, organize information, and do mathematics.

Because learning disabilities cannot be seen, they often go undetected. Recognizing a learning disability is even more difficult because the severity and characteristics vary.

A learning disability can't be cured or fixed; it is a lifelong issue. With the right support and intervention, however, children with learning disabilities can succeed in school and go on to successful, often distinguished careers later in life. Parents can help children with learning disabilities achieve such success by encouraging their strengths, knowing their weaknesses, understanding the educational system, working with professionals and learning about their strategies for dealing with specific difficulties.

#### **1.4 Facts about Learning Disabilities**

Fifteen percent of the U.S. population, or one in seven Americans, has some type of learning disability, according to the National Institutes of Health.

Difficulty with basic reading and language skills are the most common learning disabilities. As many as 80% of students with Learning disabilities have reading problems. Learning disabilities often run in families.

Learning disabilities should not be confused with other disabilities such as mental retardation, autism, deafness, blindness, and behavioral disorders. None of these conditions are learning disabilities. In addition, they should not

be confused with lack of educational opportunities like frequent changes of schools or attendance problems. Also, children who are learning English do not necessarily have a learning disability.

Attention disorders, such as Attention Deficit/Hyperactivity Disorder (ADHD), Attention Deficit Disorder (ADD) and learning disabilities often occur at the same time, but the disorders are not the same.

## Chapter two: common types of learning difficulties

Learning disabilities are neurologically-based processing problems. These processing problems can interfere with learning basic skills such as reading, writing and/or math. They can also interfere with higher level skills such as organization, time planning, abstract reasoning, long or short term memory and attention. It is important to realize that learning disabilities can affect an individual's life beyond academics and can impact relationships with family, friends and in the workplace.

Since difficulties with reading, writing and/or math are recognizable problems during the school years, the signs and symptoms of learning disabilities are most often diagnosed during that time. However, some individuals do not receive an evaluation until they are in post-secondary education or adults in the workforce. Other individuals with learning disabilities may never receive an evaluation and go through life, never knowing why they have difficulties with academics and why they may be having problems in their jobs or in relationships with family and friends. Learning disabilities should not be confused with

learning problems which are primarily the result of visual, hearing, or motor handicaps; of intellectual disability; of emotional disturbance; or of environmental, cultural or economic disadvantages.

Generally speaking, people with learning disabilities are of average or above average intelligence. There often appears to be a gap between the individual's potential and actual achievement. This is why learning disabilities are referred to as "hidden disabilities": the person looks perfectly "normal" and seems to be a very bright and intelligent person, yet may be unable to demonstrate the skill level expected from someone of a similar age.

A learning disability cannot be cured or fixed; it is a lifelong challenge. However, with appropriate support and intervention, people with learning disabilities can achieve success in school, at work, in relationships, and in the community.

In Federal law, under the Individuals with Disabilities Education Act (IDEA), the term is "specific learning disability," one of 13 categories of disability under that law.

## **2.1 Specific types of learning difficulties**

### **2.1.1 Auditory Processing Disorder (APD)**

Also known as Central Auditory Processing Disorder, this is a condition that adversely affects how sound that travels unimpeded through the ear is processed or interpreted by the brain. Individuals with APD do not recognize subtle differences between sounds in words, even when the sounds are loud and clear enough to be heard. They can also find it difficult to tell where sounds are coming from,

to make sense of the order of sounds, or to block out competing background noises.

### Signs and symptoms

- Has difficulty processing and remembering language-related tasks but may have no trouble interpreting or recalling non-verbal environmental sounds, music, etc.
- May process thoughts and ideas slowly and have difficulty explaining them.
- Misspells and mispronounces similar-sounding words or omits syllables; confuses similar-sounding words (celery/salary; belt/built; three/free; jab/job; bash/batch).
- May be confused by figurative language (metaphor, similes) or misunderstand puns and jokes; interprets words too literally.
- Often is distracted by background sounds/noises.
- Finds it difficult to stay focused on or remember a verbal presentation or lecture.
- May misinterpret or have difficulty remembering oral directions; difficulty following directions in a series.
- Has difficulty comprehending complex sentence structure or rapid speech.
- “Ignores” people, especially if engrossed.
- Says “What?” a lot, even when has heard much of what was said.

### Strategies

- Show rather than explain
- Supplement with more intact senses (use visual cues, signals, handouts, manipulative)
- Reduce or space directions, give cues such as “ready?”

- Reread or help decipher confusing oral and/or written directions
- Teach abstract vocabulary, word roots, synonyms/antonyms
- Vary pitch and tone of voice, alter pace, stress key words
- Ask specific questions as you teach to find out if they do understand
- Allow them 5-6 seconds to respond (“think time”)
- Have the student constantly verbalize concepts, vocabulary words, rules, etc.

### **2.1.2 Dyscalculia**

A specific learning disability that affects a person’s ability to understand numbers and learn math facts. Individuals with this type of LD may also have poor comprehension of math symbols, may struggle with memorizing and organizing numbers, have difficulty telling time, or have trouble with counting.

#### **Signs and symptoms**

- Shows difficulty understanding concepts of place value, and quantity, number lines, positive and negative value, carrying and borrowing
- Has difficulty understanding and doing word problems
- Has difficulty sequencing information or events
- Exhibits difficulty using steps involved in math operations
- Shows difficulty understanding fractions
- Is challenged making change and handling money
- Displays difficulty recognizing patterns when adding, subtracting, multiplying, or dividing
- Has difficulty putting language to math processes

- Has difficulty understanding concepts related to time such as days, weeks, months, seasons, quarters, etc.
- Exhibits difficulty organizing problems on the page, keeping numbers lined up, following through on long division problems

### Strategies

- Allow use of fingers and scratch paper
- Use diagrams and draw math concepts
- Provide peer assistance
- Suggest use of graph paper
- Suggest use of colored pencils to differentiate problems
- Work with manipulative
- Draw pictures of word problems
- Use mnemonic devices to learn steps of a math concept
- Use rhythm and music to teach math facts and to set steps to a beat
- Schedule computer time for the student for drill and practice

### 2.1.3 Dysgraphia

A specific learning disability that affects a person's handwriting ability and fine motor skills. Problems may include illegible handwriting, inconsistent spacing, poor spatial planning on paper, poor spelling, and difficulty composing writing as well as thinking and writing at the same time.

#### Signs and symptoms

- May have illegible printing and cursive writing (despite appropriate time and attention given the task)
- Shows inconsistencies: mixtures of print and cursive, upper and lower case, or irregular sizes, shapes or slant of letters

- Has unfinished words or letters, omitted words
- Inconsistent spacing between words and letters
- Exhibits strange wrist, body or paper position
- Has difficulty pre-visualizing letter formation
- Copying or writing is slow or labored
- Shows poor spatial planning on paper
- Has cramped or unusual grip/may complain of sore hand
- Has great difficulty thinking and writing at the same time (taking notes, creative writing.)

### Strategies

- Suggest use of word processor
- Avoid chastising student for sloppy, careless work
- Use oral exams
- Allow use of tape recorder for lectures
- Allow the use of a note taker
- Provide notes or outlines to reduce the amount of writing required
- Reduce copying aspects of work (pre-printed math problems)
- Allow use of wide rule paper and graph paper
- Suggest use of pencil grips and /or specially designed writing aids
- Provide alternatives to written assignments (video-taped reports, audio-taped reports)

### 2.1.4 Dyslexia

A specific learning disability that affects reading and related language-based processing skills. The severity can differ in each individual but can affect reading fluency; decoding, reading comprehension, recall, writing, spelling, and sometimes speech and

can exist along with other related disorders. Dyslexia is sometimes referred to as a Language-Based Learning Disability.

### Signs and symptoms

- Reads slowly and painfully
- Experiences decoding errors, especially with the order of letters
- Shows wide disparity between listening comprehension and reading comprehension of some text
- Has trouble with spelling
- May have difficulty with handwriting
- Exhibits difficulty recalling known words
- Has difficulty with written language
- May experience difficulty with math computations
- Decoding real words is better than nonsense words
- Substitutes one small sight word for another: a, I, he, the, there, was

### Strategies

- Provide a quiet area for activities like reading, answering comprehension questions
- se books on tape
- Use books with large print and big spaces between lines
- Provide a copy of lecture notes
- Don't count spelling on history, science or other similar tests
- Allow alternative forms for book reports
- Allow the use of a laptop or other computer for in-class essays
- Use multi-sensory teaching methods
- Teach students to use logic rather than rote memory
- Present material in small units

## 2.1.5 Language Processing Disorder

A specific type of Auditory Processing Disorder (APD) in which there is difficulty attaching meaning to sound groups that form words, sentences and stories. While an APD affects the interpretation of all sounds coming into the brain, a Language Processing Disorder (LPD) relates only to the processing of language. LPD can affect expressive language and/or receptive language.

### Signs and symptoms

- Has difficulty gaining meaning from spoken language
- Demonstrates poor written output
- Exhibits poor reading comprehension
- Shows difficulty expressing thoughts in verbal form
- Has difficulty labeling objects or recognizing labels
- Is often frustrated by having a lot to say and no way to say it
- Feels that words are “right on the tip of my tongue”
- Can describe an object and draw it, but can’t think of the word for it
- May be depressed or having feelings of sadness
- Has difficulty getting jokes

### Strategies

- Speak slowly and clearly and use simple sentences to convey information
- Refer to a speech pathologist
- Allow tape recorder for note taking
- Write main concepts on board
- Provide support person or peer tutor

- Use visualization techniques to enhance listening and comprehension
- Use of graphic organizers for note taking from lectures or books
- Use story starters for creative writing assignments
- Practice story mapping
- Draw out details with questions and visualization strategies

### **2.1.6 Non-Verbal Learning Disabilities**

A disorder which is usually characterized by a significant discrepancy between higher verbal skills and weaker motor, visual-spatial and social skills. Typically, an individual with NLD (or NVLD) has trouble interpreting nonverbal cues like facial expressions or body language, and may have poor coordination.

#### **Signs and symptoms**

- Has trouble recognizing nonverbal cues such as facial expression or body language
- Shows poor psycho-motor coordination; clumsy; seems to be constantly “getting in the way,” bumping into people and objects
- Using fine motor skills a challenge: tying shoes, writing, using scissors
- Needs to verbally label everything that happens to comprehend circumstances, spatial orientation, directional concepts and coordination; often lost or tardy
- Has difficulty coping with changes in routing and transitions
- Has difficulty generalizing previously learned information
- Has difficulty following multi-step instructions
- Make very literal translations

- Asks too many questions, may be repetitive and inappropriately interrupt the flow of a lesson
- Imparts the “illusion of competence” because of the student’s strong verbal skills

### **Strategies**

- Rehearse getting from place to place
- Minimize transitions and give several verbal cues before transition
- Avoid assuming the student will automatically generalize instructions or concepts
- Verbally point out similarities, differences and connections; number and present instructions in sequence; simplify and break down abstract concepts, explain metaphors, nuances and multiple meanings in reading material
- Answer the student’s questions when possible, but let them know a specific number (three vs. a few) and that you can answer three more at recess, or after school
- Allow the child to abstain from participating in activities at signs of overload
- Thoroughly prepare the child in advance for field trips, or other changes, regardless of how minimal
- Implement a modified schedule or creative programming
- Never assume child understands something because he or she can “parrot back” what you’ve just said
- Offer added verbal explanations when the child seems lost or registers confusion

### **2.1.7 Visual Perceptual/Visual Motor Deficit**

A disorder that affects the understanding of information that a person sees, or the ability to draw or copy. A characteristic seen in

people with learning disabilities such as Dysgraphia or Non-verbal LD, it can result in missing subtle differences in shapes or printed letters, losing place frequently, struggles with cutting, holding pencil too tightly, or poor eye/hand coordination.

### Signs and symptoms

- May have reversals: b for d, p for q or inversions: u for n, w for m
- Has difficulty negotiating around campus
- Complains eyes hurt and itch, rubs eyes, complains print blurs while reading
- Turns head when reading across page or holds paper at odd angles
- Closes one eye while working, may yawn while reading
- Cannot copy accurately
- Loses place frequently
- Does not recognize an object/word if only part of it is shown
- Holds pencil too tightly; often breaks pencil point/crayons
- Struggles to cut or paste
- Misaligns letters; may have messy papers, which can include letters colliding, irregular spacing, letters not on line

### Strategies

- Avoid grading handwriting
- Allow students to dictate creative stories
- Provide alternative for written assignments
- Suggest use of pencil grips and specially designed pencils and pens
- Allow use of computer or word processor
- Restrict copying tasks
- Provide tracking tools: ruler, text windows

- Use large print books
- Plan to order or check out books on tape
- Experiment with different paper types: pastels, graph, embossed raised line paper

## 2.2 Related disorders

### 2.2.1 Attention deficit hyperactivity disorder (ADHD)

**A disorder that includes difficulty staying focused and paying attention, difficulty controlling behavior and hyperactivity. Although ADHD is not considered a learning disability, research indicates that from 30-50 percent of children with ADHD also have a specific learning disability, and that the two conditions can interact to make learning extremely challenging.**

Attention Deficit Hyperactivity Disorder is a condition that becomes apparent in some children in the preschool and early school years. It is hard for these children to control their behavior and/or pay attention. It is estimated that between 3 and 5 percent of children have attention deficit hyperactivity disorder (ADHD), or approximately 2 million children in the United States. This means that in a classroom of 24 to 30 children, it is likely that at least one will have ADHD.

ADHD is not considered to be a learning disability. It can be determined to be a disability under the Individuals with Disabilities Education Act (IDEA), making a student eligible to receive special education services. However, ADHD falls under the category “Other Health Impaired” and not under “Specific Learning Disabilities.”

Many children with ADHD ⇢ approximately 20 to 30 percent ⇢ also have a specific learning disability.

The principle characteristics of ADHD are inattention, hyperactivity, and impulsivity. There are three subtypes of ADHD recognized by professionals. These are the predominantly hyperactive/impulsive type (that does not show significant inattention); the predominantly

inattentive type (that does not show significant hyperactive-impulsive behavior) sometimes called ADD; and the combined type (that displays both inattentive and hyperactive-impulsive symptoms).

Other disorders that sometimes accompany ADHD are Tourette syndrome (affecting a very small proportion of people with ADHD); oppositional defiant disorder (affecting as many as one-third to one-half of all children with ADHD); conduct disorder (about 20 to 40% of ADHD children); anxiety and depression; and bipolar disorder.

### **2.2.2 Executive Functioning**

An inefficiency in the cognitive management systems of the brain that affects a variety of neuropsychological processes such as planning, organization, strategizing, paying attention to and remembering details, and managing time and space. Although not a learning disability, different patterns of weakness in executive functioning are almost always seen in the learning profiles of individuals who have specific learning disabilities or ADHD.

### **2.2.3 Memory**

Three types of memory are important to learning, “working memory”, “short term memory” and “long term memory.” All three types of memory are used in the processing of both verbal and non-verbal information.

1. **“Working memory”** refers to the ability to hold on to pieces of information until the pieces blend into a full thought or concept. For example, reading each word until the end of a sentence or paragraph and then understanding the full content.

2. **“Short-term memory”** is the active process of storing and retaining information for a limited period of time. The information is temporarily available but not yet stored for long-term retention.
3. **“Long-term memory”** refers to information that has been stored and that is available over a long period of time. Individuals might have difficulty with auditory memory or visual memory.

## Chapter three

### Causes, Characteristics and Effects of children with learning disabilities

#### 3.1 causes of learning disability

As of now, no one is certain what causes learning disabilities. It is thought that learning disabilities may be caused by hereditary, teratogenic factors (for instance, alcohol or cocaine use during pregnancy), medical factors (premature birth, diabetes, meningitis of mother or offspring), and/or environmental factors (malnutrition, poor prenatal healthcare). A leading theory among scientists is that learning disabilities stem from subtle disturbances in the way brain structures are formed. Researchers are also studying genetic links.

Experts aren't exactly sure what causes learning disabilities. Some possibilities include:

- **Heredity:** Often, learning disabilities run in the family, so it's not uncommon to find that people with learning disabilities have parents or other relatives with similar difficulties.
- **Problems during pregnancy and birth:** Learning disabilities may be caused by illness or injury during or before birth. It may also be caused by low birth weight, lack of oxygen, drug and alcohol use during pregnancy, and premature or prolonged labor.
- **Incidents after birth:** Head injuries, nutritional deprivation, and exposure to toxic substances (i.e. lead) can contribute to learning disabilities.

Learning disabilities are **NOT** caused by economic disadvantage, environmental factors, or cultural differences. In fact, there is frequently no apparent cause for learning disabilities.

### 3.2 characteristics of learning disability

Children with learning disabilities are a heterogeneous group. These children are a diverse group of individuals, exhibiting potential difficulties in many different areas. For example, one child with a learning disability may experience significant reading problems, while another may experience no reading problems whatsoever, but has significant difficulties with written expression.

Learning disabilities may also be mild, moderate, or severe. Students differ too, in their coping skills. According to Bowe (2005), “some learn to adjust to LD so well that they ‘pass’ as not having a disability, while others struggle throughout their lives to even do ‘simple’ things. Despite these differences, LD always begins in childhood and always is a life-long condition” (p. 71).

Over the years, parents, educators, and other professionals have identified a wide variety of characteristics associated with learning disabilities (Gargiulo, 2004). One of the earliest profiles, developed by Clements (1966), includes the following ten frequently cited attributes:

- Hyperactivity
- Impulsivity
- Perceptual-motor impairments
- Disorders of memory and thinking
- Emotional lability
- Academic difficulties
- Coordination problems
- Language deficits
- Disorders of attention
- Equivocal neurological signs

Almost 35 years later, Lerner (2000) identified nine learning and behavioral characteristics of individuals with learning disabilities:

- Disorders of attention
- Reading difficulties
- Poor motor abilities
- Written language difficulties
- Oral language difficulties
- Social skills deficits
- Psychological process deficits
- Quantitative disorders
- Information processing problems

According to Gargiulo (2004), not all students with learning disabilities will exhibit these characteristics, and many pupils who demonstrate these same behaviors are quite successful in the classroom. As Smith (1979) observes, it is the quantity, intensity, and duration of the behaviors that lead to the problems in school and elsewhere. The focus of this LD Report will be to discuss the most commonly seen characteristics of children with learning disabilities. In almost all cases, a single student will not have deficits in all areas. Understanding the characteristics of children with learning disabilities is absolutely essential as a future educator in developing prereferral interventions, in making appropriate referrals, and in identifying effective adaptations and intervention strategies (Smith et al., 2004).

### 3.3 Effects of learning disability

The effects of having a learning disability or learning difference are not limited to educational outcomes: individuals with learning disabilities may experience social problems as well. Neuropsychological differences can affect the accurate perception of social cues with peers. Researchers argue persons with learning disabilities not only experience negative effects as a result of their learning distinctions, but also as a result of carrying a stigmatizing label. It has generally been difficult to determine the efficacy of special education services because of data and methodological limitations. Emerging research suggests adolescents with learning disabilities experience poorer academic outcomes even compared to peers who began high school with similar levels of achievement and comparable behaviors. It seems their poorer outcomes may be at least partially due to the lower expectations of their teachers; national data show teachers hold expectations for students labeled with learning disabilities that are inconsistent with their academic potential (as evidenced by test scores and learning behaviors). It has been said that there is a strong connection between children with a learning disability and their educational performance.

Many studies have been done to assess the correlation between learning disability and self-esteem. These studies have shown that an individual's self-esteem is indeed affected by his or her awareness of their learning disability. Students with a positive perception of their academic abilities generally tend to have higher self-esteem than those who do not, regardless of their actual academic achievement. However, studies have also shown that several other factors can influence self-esteem. Skills in non-academic areas, such as athletics and arts, improve self-esteem. Also, a positive perception of one's physical appearance has also been shown to have positive effects of self-esteem. Another important finding is that students with learning disabilities are able to distinguish between academic skill and intellectual capacity. This demonstrates that students who acknowledge their academic limitations but are also aware of their potential to succeed in other intellectual tasks see themselves as intellectually competent individuals, which increases their self-esteem.

## Chapter four

### Identification, Assessment and diagnosis

#### 4.1 Identification

##### Early identification

Becoming aware of the warning signs of learning disabilities and getting children the necessary help early on can be key to a child's future.

Learning disabilities affect one in seven people according to the National Institutes of Health. Parents, therefore, need to be familiar with the early indicators of a learning disability in order to get the right help as soon as possible.

The earlier a learning disability is detected, the better chance a child will have of succeeding in school and in life. Parents are encouraged to understand the warning signs of a learning disability from as early as pre-school. The first years in school are especially crucial for a young child.

The most common learning disability is difficulty with language and reading. A recent National Institutes of Health study showed that 67 percent of young students identified as being at risk for reading difficulties were able to achieve average or above average reading ability when they received help early.

Many children and adults with learning disabilities remain undiagnosed and go through life with this "hidden handicap." The resulting problems can lead to poor self esteem, failure to thrive in school, and difficulty in the workplace. With early detection and intervention, parents can give their children the necessary skills for coping with and compensating for the learning disability.

All children learn in highly individual ways. Children with learning disabilities simply process information differently, but they are generally of normal or above-average intelligence. Having a learning disability can affect a child's ability to read, write, speak, do math, and build social relationships.

Below are several early warning signs commonly associated with learning disabilities between the preschool years and fourth grade. Many young children may exhibit one or two of these behaviors; however, consistent problems with a group of behaviors is a good indication your child may have a learning disability.

### **Early warning signs: Preschool**

- Late talking, compared to other children
- Pronunciation problems
- Slow vocabulary growth, often unable to find the right word
- Difficulty rhyming words
- Trouble learning numbers, the alphabet, days of the week
- Extremely restless and easily distracted
- Trouble interacting with peers
- Poor ability to follow directions or routines

### **Early warning signs: Kindergarten through fourth grade**

- Slow to learn the connection between letters and sounds
- Confuses basic words (*run, eat, want*)
- Makes consistent reading and spelling errors including letter reversals (*b/d*), inversions (*m/w*), transpositions (*felt/left*), and substitutions (*house/home*)
- Transposes number sequences and confuses arithmetic signs (+, -, x, /, =)
- Slow recall of facts
- Slow to learn new skills, relies heavily on memorization
- Impulsiveness, lack of planning

- Unstable pencil grip
- Trouble learning about time
- Poor coordination, unaware of physical surroundings, prone to accidents

Many children have trouble reading, writing, or performing other learning-related tasks at some point. This does not mean they have learning disabilities. A child with a learning disability often has several related signs, and they don't go away or get better over time. The signs of learning disabilities vary from person to person.

Please note that the generally common signs included here are for informational purposes only; the information is not intended to screen for learning disabilities in general or for a specific type of learning disability.

Common signs that a person may have learning disabilities include the following:

- Problems reading and/or writing
- Problems with math
- Poor memory
- Problems paying attention
- Trouble following directions
- Clumsiness
- Trouble telling time
- Problems staying organized

A child with a learning disability also may have one or more of the following<sup>1</sup>:

- Acting without really thinking about possible outcomes (impulsiveness)
- "Acting out" in school or social situations

- Difficulty staying focused; being easily distracted
- Difficulty saying a word correctly out loud or expressing thoughts
- Problems with school performance from week to week or day to day
- Speaking like a younger child; using short, simple phrases; or leaving out words in sentences
- Having a hard time listening
- Problems dealing with changes in schedule or situations
- Problems understanding words or concepts

These signs alone are not enough to determine that a person has a learning disability. Only a professional can [diagnose a learning disability](#).

Each learning disability has its own signs. A person with a particular disability may not have all of the signs of that disability.

Children being taught in a second language may show signs of learning problems or a learning disability. The learning disability assessment must take into account whether a student is bilingual or a second language learner. In addition, for English-speaking children, the assessment should be sensitive to differences that may be due to dialect, a form of a language that is specific to a region or group.

## **Teaching and Identifying Learning Disabilities in Students**

Being able to identify and effectively diagnose learning problems in students can benefit both the child and the teacher. As an educator, if you know what modifications you can make in your teaching to ensure the child learns in a way that he or she is able, you will be able to bridge a gap that others may not be able to. Additionally, by

tailoring your lesson plan, you might help other children, who don't display difficulties, learn in new and innovative ways.

### **Indications of a Learning Disability**

- Difficulty learning new skills, relying on memorization
- Trouble learning about time
- Difficulty remembering facts
- Confusing basic words (dog, cat, run)
- Poor coordination, 'accident prone', unaware of physical surroundings
- Having a hard time learning the connection between letters and sounds (Phonetics)
- Spelling and reading errors such as substitutions (house/home), letter reversals (b/d), inversions (m/w) and transpositions (felt/left)
- Problems with planning
- Impulsive behavior
- Transposes number sequences and confuses arithmetic signs

### **4.2 Assessment**

Many normed assessments can be used in evaluating skills in the primary academic domains: reading, including word recognition, fluency, and comprehension; mathematics, including computation and problem solving; and written expression, including handwriting, spelling and composition.

The most commonly used comprehensive achievement tests include the Woodcock-Johnson IV (WJ IV), Wechsler Individual Achievement Test II (WIAT II), the Wide Range Achievement Test III (WRAT III), and the Stanford Achievement Test–10th edition. These tests

include measures of many academic domains that are reliable in identifying areas of difficulty.

In the reading domain, there are also specialized tests that can be used to obtain details about specific reading deficits. Assessments that measure multiple domains of reading include Gray's diagnostic Reading Tests–2nd edition (GDRT II) and the Stanford Diagnostic Reading Assessment. Assessments that measure reading subskills include the Gray Oral Reading Test IV – Fourth Edition (GORT IV), Gray Silent Reading Test, Comprehensive Test of Phonological Processing (CTOPP), Tests of Oral Reading and Comprehension Skills (TORCS), Test of Reading Comprehension 3 (TORC-3), Test of Word Reading Efficiency (TOWRE), and the Test of Reading Fluency. A more comprehensive list of reading assessments may be obtained from the Southwest Educational Development Laboratory.

The purpose of assessment is to determine what is needed for intervention, which also requires consideration of contextual variables and whether there are comorbid disorders that must also be identified and treated, such as behavioral issues or language delays. These contextual variables are often assessed using parent and teacher questionnaire forms that rate the students' behaviors and compare them to standardized norms.

However, caution should be made when suspecting the person with a learning disability may also have dementia, especially as people with Down's syndrome may have the neuroanatomical profile but not the associated clinical signs and symptoms. Examination can be carried out of executive functioning as well as social and cognitive abilities but may need adaptation of standardized tests to take account of special needs.

## 4.3 Diagnosis

### A. IQ-achievement discrepancy

Learning disabilities can be identified by [psychiatrists](#), [school psychologists](#), [clinical psychologists](#), [counseling psychologists](#), [neuropsychologists](#) and other learning disability specialists through a combination of [intelligence testing](#), academic achievement testing, classroom performance, and social interaction and aptitude. Other areas of assessment may include perception, cognition, memory, attention, and language abilities. The resulting information is used to determine whether a child's academic performance is commensurate with his or her cognitive ability. If a child's cognitive ability is much higher than his or her academic performance, the student is often diagnosed with a learning disability. The DSM-IV and many school systems and government programs diagnose learning disabilities in this way (DSM-IV uses the term "disorder" rather than "disability").

Although the discrepancy model has dominated the school system for many years, there has been substantial criticism of this approach among researchers. Recent research has provided little evidence that a discrepancy between formally measured IQ and achievement is a clear indicator of LD. Furthermore, diagnosing on the basis of a discrepancy does not predict the effectiveness of treatment. Low academic achievers who do not have a discrepancy with IQ (i.e. their IQ scores are also low) appear to benefit from treatment just as much as low academic achievers who do have a discrepancy with IQ (i.e. their IQ scores are higher than their academic performance would suggest).

## **B. Response to intervention**

Much current research has focused on a treatment-oriented diagnostic process known as response to intervention (RTI). Researcher recommendations for implementing such a model include early screening for all students, placing those students who are having difficulty into research-based early intervention programs, rather than waiting until they meet diagnostic criteria. Their performance can be closely monitored to determine whether increasingly intense intervention results in adequate progress. Those who respond will not require further intervention. Those who do not respond adequately to regular classroom instruction (often called "Tier1 instruction") and a more intensive intervention (often called "Tier 2" intervention) are considered "non-responders." These students can then be referred for further assistance through special education, in which case they are often identified with a learning disability. Some models of RTI include a third tier of intervention before a child is identified as having a learning disability.

Primary benefit of such a model is that it would not be necessary to wait for a child to be sufficiently far behind to qualify for assistance. This may enable more children to receive assistance before experiencing significant failure, which may, in turn, result in fewer children who need intensive and expensive special education services. In the United States, the 2004 reauthorization of the Individuals with Disabilities Education Act permitted states and school districts to use RTI as a method of identifying students with learning disabilities. RTI is now the primary means of identification of learning disabilities in Florida.

The process does not take into account children's individual neuropsychological factors such as phonological awareness and memory that can inform design instruction. By not taking into account specific cognitive processes, RTI fails to inform educators about students' relative strengths and weaknesses—Second, RTI by design takes considerably longer than established techniques, often many months to find an appropriate tier of intervention. Third, it requires a strong intervention program before students can be identified with a learning disability. Lastly, RTI is considered a regular education initiative and is not driven by psychologists, reading specialists, or special educators.

### **Types of Tests Used to Diagnose Learning Disabilities**

“If your child is doing poorly in school, and you want to know why. He's not lazy — in fact, he works hard — but he just can't seem to understand the concepts or score well on tests. If this [describes your situation](#), there's a good chance that your child has a [learning disability](#), and it makes sense to have your child evaluated.”

### **Who Conducts Tests?**

When evaluations are conducted, the evaluators are usually experts in several fields including education, speech and language, audiology, and psychology. By conducting a series of tests, evaluations, and interviews, they are working to understand what stands between your child and academic success. Findings from these evaluations may reveal any of a number of issues, ranging from hearing loss or low vision to difficulties with focus, use of language, or reading. Fortunately, there are tools and techniques for

managing almost any learning-related disability — but until the issue have been diagnosed, there's not a much anyone can do.

## **What Tests Are Used?**

Diagnosing a learning disability in public schools requires several types of tests. The IDEA requires that a [diagnosis of a learning disability](#) is not made on the basis of a single test. Common tests used to diagnose a learning disability include **intelligence tests**, **achievement tests**, **visual-motor integration**, and **language testing**. This list includes some of the more common tests used in the diagnosis of a learning disability. Other tests not listed here may also be used depending on the evaluator's preferences and the child's needs.

### **1. Intelligence Tests**

**Intelligence tests (often called IQ tests)** most commonly used to diagnose a learning disability include the **Wechsler Preschool and Primary Scale of Intelligence (WIPPSI)**, **Wechsler Intelligence Scale for Children (WISC)**, and the **Wechsler Adult Intelligence Scale (WAIS)**. Other common intelligence, or cognitive, tests include the **Stanford-Binet Intelligence Test**, **Differential Abilities Scales (DAS)**, the **Woodcock Johnson Test of Cognitive Abilities**, and the **Comprehensive Test of Nonverbal Intelligence (CTONI)**. Findings from these tests can help pinpoint areas of strength and weakness; armed with this kind of information, schools can often suggest educational options or offer special support where it's needed.

## **2. Achievement Tests**

Common achievement tests used to diagnose a learning disability include the Woodcock-Johnson Tests of Achievement (WJ), the Wechsler Individual Achievement Test (WIAT), the Wide Range Achievement Test (WRAT), and the Kaufman Test of Educational Achievement (KTEA). These tests focus on reading, writing, and math. If your child has fallen behind in a particular academic area, schools can offer remedial support, tutoring, and other tools to help your child catch up.

## **3. Visual Motor Integration Tests**

Visual motor integration tests are supplementary tests that many evaluators use to support a learning disability evaluation. Common visual motor integration tests include the Bender Visual Motor Gestalt Test and the Developmental Test of Visual Motor Integration. Findings from these tests may help to determine if your child's brain is properly connecting visual cues to motor coordination. In other words, is she able to draw what she sees? If she is having a difficult time integrating visual and motor skills, it will be very tough for her to learn to write or draw properly without special support.

## **4. Language Tests**

Commonly used language tests used in the diagnosis of learning disabilities include the Clinical Evaluation of Language Fundamentals (CELF), Goldman Fristoe Test of Articulation, the Test of Language Development. These tests explore your child's ability to understand spoken and written language and to respond verbally to questions or cues.

## Chapter Five

### Intervention strategies for student with learning disability

Students with learning disabilities often find learning a difficult and painful process. The presence of their Learning disability can make learning to read, write, and do math especially challenging.

Intervention strategies focuses upon two promising interventions for students with learning disabilities: helping students develop their use of learning strategies and helping them develop their phonological awareness.

Research on the use of learning strategies is described briefly, and a process for teaching students about learning strategies is described in detail. This process will be useful for teaching virtually any strategy or set of strategies to students.

A wide variety of learning strategy interventions have been developed over the past 15 years.

#### ***5.1 Teaching Students with Learning Disabilities To Use Learning Strategies***

There is a unanimous agreement by scholars that learning difficulty is a lifelong and heterogeneous disorder whose actual cause and cure have not yet been determined (Bootzin, Acocella, Alloy 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 & Grigorcenko, 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.

### **5.2 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 specialized teacher is not expected to be scarce or infrequent in attending to the students. There must be 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.

### **5.3 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 specialized 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)

#### **5. 4 Development of Basic Perceptual Skills.**

The problem of real perception as noted by Bootzin, Acocella, Alloy (1990) 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.

#### **5.5 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 colored 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).