

Understanding Students with Learning Disabilities

I. Introduction to LD

- The term learning disabilities was only founded in 1963 by *Samuel Kirk*. At that time, children with LD were referred to by such terms as:
 - *“perceptually handicapped,”*
 - *“brain-injured,”* and
 - *“neurologically impaired”*
- were served in classrooms for students with MR or in most cases, were not receiving any specialized services in the public schools.

What is a learning disability?

Having trouble:

- Processing information
- Organizing information
- Applying information



IDEA Definition

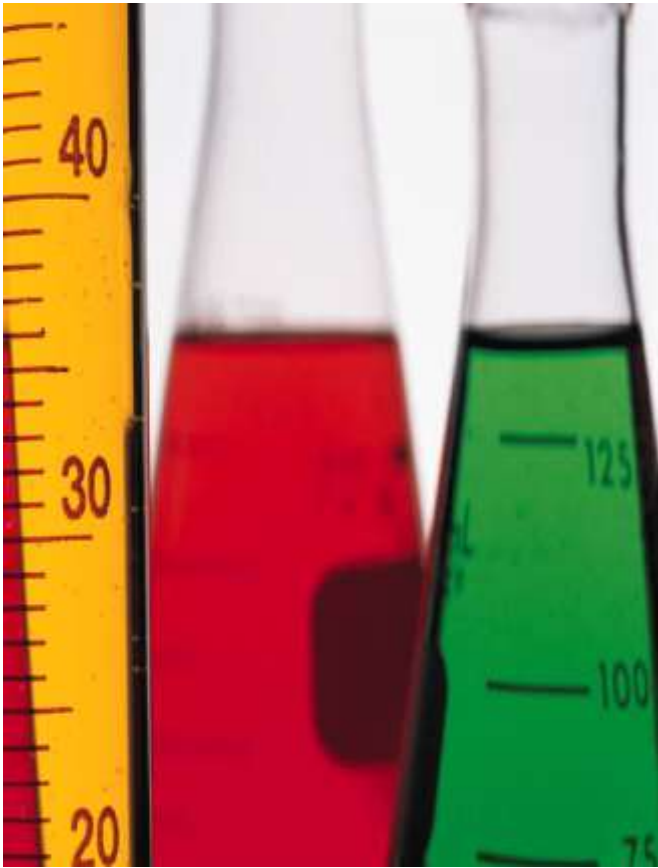
Learning disability (LD) is a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

What Learning Disability Does NOT cover

Learning Disabilities does not include learning problems due to

- visual, hearing, or motor disabilities
- mental retardation or emotional disturbance
- environmental, cultural, or economic disadvantage

Etiologies of LD



- Biology: influences the neural, chemical, and functional aspects of the body.
 - Accounts for traits and conditions which are hereditary.
 - Are transmitted to the child from the mother and the father.
 - Examples of hereditary: schizophrenia, depression, and temperament.

Biological Influences



- Birth
 - Prenatal: maternal drug/alcohol use, disease, maternal poor nutrition
 - Perinatal: brain damage from anoxia
 - Postnatal: brain damage from accident or shaken severely, lead poisoning, and encephalitis



Genetics



75% likelihood of having LD if both parents have LD

51% likelihood if 1 parent has LD

More than 1/2 of reading impairments of identical twins is heredity

Types of Learning Disabilities

➤ Dyslexia

A language and reading disability

➤ Dyscalculia

Problems with arithmetic and math concepts

➤ Central Auditory Processing Disorder

Difficulty processing and remembering language-related tasks

➤ Non-Verbal Learning Disorders

Trouble with nonverbal cues, e.g., body language; poor coordination, clumsy

- Dysgraphia
A writing disorder
resulting in illegibility
- Dyspraxia (Sensory
Integration Disorder)
Problems with motor
coordination
- Visual
Perceptual/Visual
Motor Deficit
Reverses letters;
cannot copy
accurately;
- Language Disorders
(Aphasia/Dysphasia)
Trouble understanding
spoken language; poor
reading
comprehension

Causes or Presumed causes of Learning Disabilities

- NO real causes
- Might be caused by:
 - Hereditary
 - Teratogenic
 - Medical
 - Environmental



Does my student have ADD or ADHD?

- **Hyperactive**
- **Impulsive**
- **Fidgety**
- **Inattentive**
- **Disorganized**
- **Unreasonable emotional negativity**
- **Emotional outbursts**
- **Frustration over minor issues**
- **Bedwetting**
- (All characteristics may vary with age)



Approaches to diagnose ADD and ADHD

- Evaluate student's behavior
- Continuous performance test (CPT)
- Diagnosis should be based on multiple pieces of information and observations



Approaches used to diagnose dyslexia

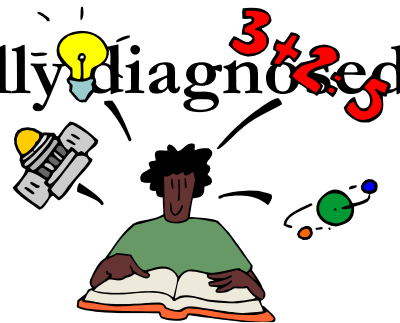
- Today, only *after* a student has reading difficulties can dyslexia be diagnosed
- Dyslexia may have “biological roots”
- Psychological testing can determine if a child has dyslexia



Characteristics of Learning Disabilities

How will I know if my student has a LD?

- Most students exhibit uneven areas of ability
- Student is physically “normal”
- Average or above average intelligence
- Commonly found in gen ed classes: dyslexia and ADD/ADHD
- Many LDs need to be medically diagnosed



Characteristics of SLD

- Average or above average intelligence
- Discrepancies in their ability to perform skills - inconsistent
- Difficulty learning to read and write
- Seem less mature than peers
- Difficulty speaking, fumbles with words
- Works slowly on papers, often performs many errors
- 30% also have ADHD

More Characteristics

- Difficulty taking notes
- Poor handwriting
- Poor organization of schoolwork
- Poor short/long term memory
- Do not achieve to the expectations of parents and teachers
- Can hear, but not understand what they hear (auditory perceptual problems)
- Can see, but not make sense of what they see (visual perceptual problems)
- Understands more, than they write or express

Does my student have dyslexia?

- **Reading characteristics**
- **Writing characteristics**
- **Numbers/Sequencing**



Intelligence

- Above average, average, and near-average intelligence
- May exhibit secondary behavioral or emotional concerns
- Variability between measured intelligence and performance
- Intraindividual differences among skill areas, such as average performance in mathematics but deficiencies in reading.

INSTRUCTIONAL IDEAS: ASSISTANCE WITH AUDIO AND VISUAL ASPECTS OF LEARNING



Teachers may find the following helpful:

- Repeat and summarize oral lecture notes and give students written versions of key points.
- Verbalize what is being written on the chalkboard and read aloud material contained in handouts.
- Send students a copy of booklist for upcoming semester/school year so that students can “get a jump on” the reading assignments.

ASSISTANCE DURING ASSESSMENTS:

The teacher may wish to:

- Choose an alternate exam site away from the general education classroom. Ensure that this alternate locale is free from auditory and visual distracters.
- Avoid confusing or complicated language and/or consider a substitute exam/assessment.
- Allow student extra time to complete exams/assignments, especially if there are unique demands regarding reading and writing skills.



ADDITIONAL INSTRUCTIONAL IDEAS

Teachers should:

- Supporting learning with visuals
- Stressing step-by-step instructions



For students with ADHD, teachers should:

- Give only one assignment at a time.

TECHNOLOGY USED

COMPUTERS:

- For writing assignments, students with LD should be allowed to use a computer (if available) so that they can get spelling support through the spell check program.
- Students with dyslexia may find that writing assignments are more easily completed on a computer.
- Consider trying computer software, like Kurzweil 3000, which reads textbooks and other materials to students.



OTHER ASSISTIVE TECHNOLOGY

Teachers may:

- Allow students to use calculators during Math, when the goal is concept attainment (and not *automaticity* of math facts)
- Allow students to tape record lectures and/or tape notes for students.
- Allow students who cannot speak clearly to use a speech synthesizer

Assessment:

- Allow for alternate forms of assessment by allowing students to demonstrate learning through such things as portfolios, slide presentations, photographic essays, or taped interviews.

1. Disorder in the Processing of Information

- **First, having a learning disability means that the brain "processes" information differently than most other students.**
- **Simply stated, certain kinds of information get stuck or lost while traveling through the brain of the student with LD.**

1. Disorder in the Processing of Information

Information processing refers to how your brain:

- **Takes in information,**
- **Uses information,**
- **Stores the information in memory,**
- **Retrieves the information from memory,**
- **and Expresses the information**

1. Disorder in the Processing of Information

- **Students with LD struggle with certain kinds of learning because their brains have difficulty "processing" certain kinds of information.**
- **It is like when you go on a car trip and get stuck in road construction and need to take a detour. It takes you a lot longer to get where you are going. Its the same with information going through the brain of a student with LD.**

1. Disorder in the Processing of Information

- **Different kinds of information travel through different parts of the brain. That's why some information is learned quickly and easily while other information is much more difficult.**

1. Visual Processing

- **Visual Processing** involves how well a student can use visual information. When he sees something, especially something complex,
- e.g., does he understand it quickly and easily? Can he "visualize" things (like pictures, shapes, words, etc.) in his head? Can he remember information that he sees?

Definition of a Specific Learning Disability

“Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations”

IDEA

Determining the Existence of a Specific Learning Disability

- A child may not be determined to be a child with SLD if underachievement is the result of:
 - A visual, hearing, or motor disability;
 - Mental retardation [ID];
 - Emotional disturbance;
 - Cultural factors; or
 - Environmental or economic disadvantage.

CT Criteria for Determining the Existence of a Specific Learning Disability

- The child does not achieve commensurate with the child's age or meet state-approved grade-level standards in one or more of the following areas AND
- The child does not make sufficient progress toward meeting those standards when provided with **learning experiences based on scientifically, research-based interventions appropriate for the child's age:**

CT Criteria for Determining the Existence of a Specific Learning Disability

- Oral expression
- Listening comprehension
- Written expression
- Basic reading skills
- Reading fluency skills *
- Reading comprehension
- Mathematics calculation
- Mathematics problem solving

CT Criteria for Determining the Existence of a Specific Learning Disability

- To ensure that underachievement in a child suspected of having a SLD is not due to lack of **appropriate instruction** in reading or math, the following must be considered as part of the evaluation:
 - Prior to or as part of the referral process, the child was provided appropriate high-quality, research-based instruction in regular education settings;

CT Criteria for Determining the Existence of a Specific Learning Disability

- Such instruction was delivered by qualified personnel; and
- Data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction [**progress monitoring**], was provided to the child's parents.

34 CFR § 300.309(b)

CT Criteria for Determining the Existence of a Specific Learning Disability

- A child must not be determined to be a child with a disability if the determinant factor for that determination is:
 - Lack of appropriate instruction in reading, including the essential components of reading instruction as defined in NCLB;
 - Lack of appropriate instruction in math; or
 - Limited English proficiency

34 CFR § 300.306(b)(1)

Types of Learning Disabilities

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A language and reading disability
- **Dyscalculia**
Problems with arithmetic and math concepts
- **Dysgraphia**
A writing disorder resulting in illegibility
- **Dyspraxia (Sensory Integration Disorder)**
Problems with motor coordination
- **Central Auditory Processing Disorder**
Difficulty processing and remembering language-related tasks
- **Non-Verbal Learning Disorders**
Trouble with nonverbal cues, e.g., body language; poor coordination, clumsy
- **Visual Perceptual/Visual Motor Deficit**
Reverses letters; cannot copy accurately;
- **Language Disorders (Aphasia/Dysphasia)**
Trouble understanding spoken language; poor reading comprehension

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7 Areas of SLD

- Oral Expression
- Listening Comprehension
- Written Expression
- Basic Reading Skills
- Reading Comprehension
- Mathematics Calculation
- Mathematics Reasoning

Academic Achievement

- Dyslexia
- Dysgraphia
- Dyscalculia

Intelligence

- Above average, average, and near-average intelligence
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Cognition/Information Processing

- Acquires, retains, and manipulates information, is problematic
- Perform poorly on memory tests
- Attention problems, including short attention spans and selective attention
- **Learning Characteristics**
- Perception (Auditory and Visual)
- Discrimination (Auditory and Visual)

Social/Emotional Characteristics

- Low self-esteem and negative emotional consequences
- May not interact effectively with others

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RTI

- Students are provided with “generally effective” instruction
- Progress is monitored
- Students not responding get something more
- Progress is monitored
- Students still not responding either qualify for special education or get evaluated for special education

Celebrities with dyslexia

- Tom Cruise



- Henry “The Fonz”
Winkler



- Walt Disney



- Magic Johnson



Educational Implication



Teachers may find the following helpful:

- Repeat and summarize oral lecture notes and give students written versions of key points.
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Accommodations

- Extended time for testing
- Provide a reader
- Use of calculator
- Use of computer
- Break up testing over several days
- Use tape recorder

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