

Exploring Learning Disabilities

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Defining Learning Disabilities

- An information processing disorder that impacts individuals with average to above average intelligence
- It affects the *process* by which individuals take in, retrieve, sort, and express information.

Defining Learning Disabilities

- It results in a significant discrepancy between intellectual ability and academic performance in areas such as reading, writing, math and spelling.

Defining Learning Disabilities

- A learning disability is *not* the result of cultural or language differences, a lack of motivation or poor academic background.
- The effects of a learning disability are often lifelong.

Defining Learning Disabilities

- Frequently used terminology
 - Specific Learning Disability (SLD)
 - Dyslexia- reading/language
 - Dyscalculia- math
 - Dysgraphia- writing

What is an information processing disorder?

- Presumed to be of neurological origin
- Affects how one:
 - 1) perceives,
 - 2) manipulates,
 - 3) remembers, and
 - 4) expresses information

1) Perception

- We take information in through our senses (seeing, hearing, smelling, tasting and touching) and interpret what we perceived.
- Look at the following slide and identify what you see.





1) Perception continued

- What did you see?
 - A young women?
 - An old women?
 - Neither?
- Although the visual stimuli is the same?
Individuals may *perceive it* differently.

1) Perception continued

- The same thing can happen when listening to information
 - How do you do that!
 - How do you do that?
- How one reacts to the above statements depends on how it was perceived; therefore, individuals will work with the information in different ways.

2) Manipulation (making sense, conceptualizing, grouping)

- The crux of learning is sense-making
- We take what we have perceived and organize it to form concepts and understandings.
- One must organize and make sense of information in order to remember and apply the concept.

3) Memory

- How we work with and store information demands
 - attention,
 - background knowledge and experiences, and
 - rehearsal
- How we store information also affects our ability to retrieve information.

4) Expressing Information- an integral part of learning

- Oral

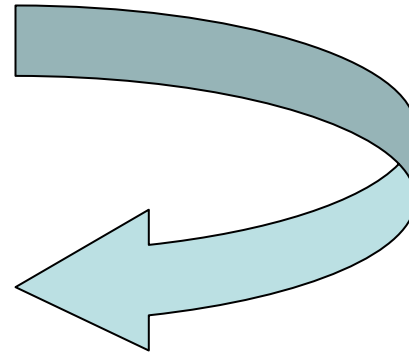
- speaking
- reading
- conversing

- Written

- conceptualizing
- spelling
- writing
- organizing

Processing and Learning

- How students perceive, manipulate, store, retrieve and express information affects



LEARNING

How Processing Affects Learning

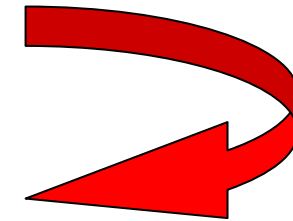
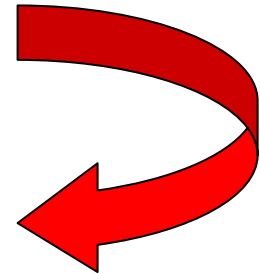
- understanding a topic,
- reading, writing, speaking & math
- reasoning
- classroom interactions

- speed
- following directions
- test taking
- note taking

Processing and Learning

For students with learning disabilities

- the learning process is disjointed and often perceived inaccurately; hence,
- the discrepancy between ability and achievement, and,
- the need for academic adjustments



Meeting the needs of student with Learning Disabilities

Assistive technologies

- RFB&D AudioPlus
- Scanners
 - Kurzweil
 - ReadingPen
- Organizers
 - Inspiration software
- Text-To-Speech
 - Wynn
 - Microsoft Reader
 - AspireREADER
 - Read & Write Gold
- Voice Recognition
 - Naturally Speaking

Meeting the needs of students with Learning Disabilities

- extended time
- recorded lectures
- note takers
- calculator, spell checker & thesaurus
- varied exam/assignment formats
 - multiple choice • essay
 - oral • projects
 - different setting

Meeting the needs of students with Learning Disabilities

- Differentiating Instruction
- Systematic, sequential & explicit instruction
- Curriculum modifications
 - adjusting the program's time frame
 - substitutions and waivers
 - modified goals

LD resources and links

- <http://www.RFB&D.org>
- <http://www.Idonline.org/>
- <http://www.disability.gov/CSS/Default.asp>
- <http://www.cast.org>
- <http://Schwablearning.org>

LD resources and links

- Shaywitz, Sally (2003). Overcoming Dyslexia: A New and Complete Science-Based Program for Reading Problems at Any Level. Alfred Knopf, Publisher. Random House, NY.
- Alliance for Technology Access and Stephen W. Hawking (2004) Computer Resources for People With Disabilities: A Guide to Assistive Technologies, Tools, and Resources for People of All Ages.
- Rose, D., Meyer, A. & Hitchcock, C. (2005) The Universally Designed Classroom: Accessible Curriculum And Digital Technologies.