College School Workshop
Dyslexia & the DSM-5

August 18, 2015

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Enough

- I wish you enough sun to keep your attitude bright.
- I wish you enough rain to appreciate the sun more.
- I wish you enough happiness to keep your spirit alive.
- I wish you enough pain so that the smallest joys in life appear much bigger.
Enough

• I wish you enough gain to satisfy your wanting.
• I wish you enough loss to appreciate all that you possess.
• I wish enough hellos to get you through the final good-bye.
Learning Objectives

• Description of the twice-exceptional person: i.e., being Gifted/Dyslexic

• Asperger's (What the heck?)

• Using the DSM-5 to identify Learning Disabilities (Disorders)

• How to explain Dyslexia to parents
Neurobiology

• Lobes:
  » Frontal
  » Temporal
  » Parietal
  » Occipital

• Cortex: Lateral Frontal Cortex (IQ)
• Amygdala & Hippocampus (Emotional Intelligence)
Lateral Brain

Frontal  Parietal  Temporal  Occipital
Amygdala & Hippocampus
Flow chart for LD:

- Input
- Integration
- Memory
- Output

Adapted from Dr. Larry Silver’s book, The Misunderstood Child
The rate at which you learn will become the only sustainable competitive advantage you’ll have in your life.

Peter Senge (The Fifth Discipline).
Neurobiology of LD:

- Dr. Bennett Shaywitz Co-director of the Center for the Study of Learning and Attention at Yale explains:
  - “The brain does not have an innate reading ability-as it does for speech-so it deals with the written word by converting it into the nuts and bolts of a familiar phonetic language.” P.56

- Poor Reading means Poor Prospects
Science Daily, Brain Scans May Help Diagnose Dyslexia, Aug. 13, 2013

Arcuate Fasciculus

BW score=3

BW score=11

www.sciencedaily.com
Arcuate Fasciculus

Definition

Arcuate fasciculus: is a bundle of fibers that serves as the neural pathway connecting the expressive (i.e., Broca's area) and receptive (i.e., Wernicke's area) language areas to one another and plays a vital role in repetition [3].

Arcuate Fasciculus

Description continued
In terms of neurocognitive functioning, the arcuate fasciculus is said to play a vital role in repetition [1]. Specifically, as auditory information comes into the neural system that is to be repeated, it is first processed by the receptive center of the brain (i.e., Wernicke's).

Arcuate Fasciculus
Arcuate Fasciculus

- Broca's area
- Wernicke's area
Dyslexic Brains

Dr. Todd Richards, University of Washington
Dyslexic cerebral cortex

Cross-section of dyslexic cerebral cortex showing the disorganization of cortical lamination and abnormal vessel architecture
Yale Center for Dyslexia and Creativity

Trouble learning common nursery rhymes, such as “Jack and Jill”
Yale Center for Dyslexia and Creativity

Difficulty learning (and remembering) the names of letters in the alphabet.
Seems to be unable to recognize letters in his/her own name.
Yale Center for Dyslexia and Creativity
Mispronounces familiar words;
persistent “baby talk”
 Doesn’t recognize rhyming patterns like cat, bat, rat
A family history of reading and/or spelling difficulties
Speak directly to your child. Speak slowly and clearly, pronouncing each sound very carefully; you want him to notice each word or word part you say.

Exaggerate sounds—for example, *mmmmman*—and have him do the same when he repeats back to you.
Read to your child daily.

Play rhyming games (example: have him pick objects that rhyme with a common word—selecting a shoe for a word that rhymes with “two.”)
The meaning behind words

- I did not say he stole my pencil.
- I **did not** say he stole my pencil.
- I did not **say** he stole my pencil.
- I did not say he **stole** my pencil.
- I did not say he stole **my** pencil.
- I did not say he stole my **pencil**.
No Asperger’s Disorder in DSM-5:

Autism Spectrum Disorder, 299.00
aka Spectrum issues

- Social (Pragmatic) Communication Disorder, 315.39
Social (Pragmatic) Communication Disorder, 315.39

- Deficits in using communication for social purposes
- Inability to change communication to match context
- Difficulties with following rules for conversations and storytelling
- Difficulties with understanding what is not explicitly stated
Emotional Intelligence

• Shame – guilt, embarrassment, remorse, humiliation, contrition.
• Dr. Russell – Motivation to keep a human on task or involved with an activity or another person.
• Dr. Russell – Feelings related to Learning.

 Emotional Intelligence, Daniel Goleman
Head 1
The rate at which you learn will become the only sustainable competitive advantage you’ll have in your life.

Peter Senge (The Fifth Discipline).
Use of Wechsler Subtests to evaluate for exceptionality:

<table>
<thead>
<tr>
<th>Subtests</th>
<th>Mean</th>
<th>STD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similarities</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Comprehension</td>
<td>10</td>
<td>3</td>
</tr>
</tbody>
</table>

Use 120 as Superior IQ—Susan Baum et al.

- Verbal IQ
- Performance IQ
- Full IQ

Einstein’s IQ

Einstein's IQ = 160+
What about yours?

70%

55  70  85  100  115  130  145
mentally inadequate  low intelligence  average  above average  high intelligence  superior intelligence  exceptionally gifted
2.3%  13.6%  34.1%  34.1%  13.6%  2.1%  0.13%
Hot Tip!

• IQ tests are not great predictors of later issues with reading
Higgins & Neilsen (2000) list Weaknesses:

• poor social skills

• high sensitivity to criticism

• lack of organizational and study skills

• discrepant verbal and performance abilities
Higgins & Neilsen (2000) list Weaknesses:

- poor performance in one or more academic areas
- difficulty in written self expression
- stubborn, opinionated demeanor
- high impulsivity
Higgins & Neilsen (2000) list *Strengths*:

- superior vocabulary
- advanced ideas and opinions
- high levels of creativity and problem-solving ability
- extremely curious, imaginative, & questioning
Higgins & Neilsen (2000) list *Strengths*:

- wide range of interests not related to school
- penetrating insight into complex issues
- specific talent or consuming interest area
- sophisticated sense of humor
Linda Kreger Silverman (1989, p.37) describes the characteristic behaviors of this group as:

- Perfectionism
- Supersensitive
- Lacks social skills
- Has unrealistic self-expectation
- Socially isolated
- Hyperactive
- Low self esteem
- Distractible
- Has psychomotor inefficiency
- Chronically inattentive
- Frustrated by demands of the classroom

- Fails to complete assignments
- Excessively critical of others
- Rebellious against drill and excessive repetition
- Become "an expert" in one area and dominates discussion with their expertise
- Disparaging of the work they are required to do
Today’s problems come from yesterday’s “solutions.”

Peter Senge
Learning...

- Disabilities—require accommodations to level the playing field
- Difficulties—may need enrichment in an area of weakness
- Differences—need to understand strengths and weaknesses
Why are learning problems so complicated?

- Time Magazine
- March 26, 2001
- Blame it on the Written Word
- By Unmesh Kher
- English has 1120 different spellings for ~44 phonemes
- Italian has 33 different spelling for 25 phonemes
- English is notoriously illogical
Clinical Judgment:

- The clinician/diagnostician needs to be very specific in describing his or her clinical judgment regarding the standardized test scores and percentile ranks that support the identification of a learning disability. He or she must demonstrate that the person experiences a substantial limitation for a major life activity.
Asynchronous Development

• Chronological age = 12

• Intellectual age = 16

• Emotional age= 9
ADD=ADHD

- 2000 Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision pp. 92&93
ADHD is ADD:

DSM-5 names:

- 314.01 Attention-Deficit/Hyperactivity Disorder, Combined Presentation
- 314.00 Attention-Deficit/hyperactivity Disorder, Predominantly Inattentive Presentation
- 314.01 Attention-Deficit/hyperactivity Disorder, Predominantly Hyperactive-Impulsive Presentation
ADHD is ADD: DSM-5 names:

- 314.01 Other Specified Attention-Deficit/hyperactivity Disorder
- 314.01 Unspecified Attention-Deficit/hyperactivity Disorder
• Test phonological processing:
  - phonological awareness
  - language based memory
  - rapid automatic naming (RAN)
• Take a family history of reading or spelling problems

- Ask about developmental history, family history, and school history
• Assess single word reading, and spelling i.e., decoding

- Measure oral reading of single words and nonsense words

• Assess oral reading in the context of sentences and paragraphs
• Test reading comprehension, using passages longer than sentence level
• Assess the student’s receptive vocabulary
• Assess the student's skill in spelling single words and assess spelling in the context of sentences and paragraph writing.

- Access writing skills beyond the sentence level (because paragraph and essay writing skills become increasingly important as students advance in grades)
• Access mathematical ability in the areas of untimed calculations, mathematical reasoning (word problems read aloud to the students), and mathematical fluency (because some students with language-based problems struggle with mathematical fluency and poor readers struggle to decode mathematical word problems)
Jim Russell Ph.D.

• Is this a brain based problem?
  Yes

• What part of the brain do we want to help?
  Front-Back-Left-Right-Middle

• How are we going to get there?
  Understanding

• Can you make a difference?
  Yes Yes Yes
Statistics
Arthur Schopenhauer
(1788-1860)
The Philosopher Arthur Schopenhauer:
All truth passes through 3 stages:

• It is ridiculed

• It is violently opposed

• It is accepted as being self evident
The rate at which you learn will become the only sustainable competitive advantage you’ll have in your life.

Peter Senge (The Fifth Discipline).
Anyway, by Kent M. Keith
Paradoxical Commandments

• People are illogical, unreasonable, and self-centered
  – Love them anyway

• If you do good, people will accuse you of selfish ulterior motives
  – Do good anyway

• If you are successful, you will win false friends and true enemies
  – Succeed anyway
Anyway, by Kent M. Keith
Paradoxical Commandments

• The good you do today will be forgotten tomorrow
  – Do good anyway

• Honesty and frankness make you vulnerable
  – Be honest anyway
Anyway, by Kent M. Keith
Paradoxical Commandments

The biggest men and woman with the biggest ideas can be shot down by the smallest men and the smallest mind

– Think Big anyway

People Favor underdogs but follow only the top dogs

– Fight for a few underdogs anyway

What you spend years building may be destroyed overnight

– Build anyway
Anyway, by Kent M. Keith
Paradoxical Commandments

• People may really need help but may attack you if you do help them
  - Help people anyway

• Give the world the best you have and you’ll get kicked in the teeth
  - Give the world the best you have anyway
Thank you!

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