Different Learners
Jane M. Healy, Ph.D.
janetomh@vail.net

When/how does my child learn best?

DIFFERENT LEARNERS

Identifying, Preventing, and Treating Children's Learning Problems

Jane M. Healy, Ph.D.

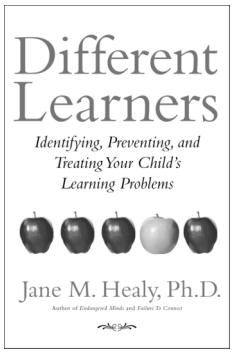
Points to Ponder:

- **"Cerebrodiversity"**
- **Learning-power environments--or not?**
- **Brain-cleaning:helping the "different" learner**
- **The key to success: Executve Function**
- **Your Questions**

"cerebrodiversity"

No two brains are alike.
No one has a perfect brain.

Version #2



Take-away:

1. **"Difference" is not a disease, but too much difference = a learning problem. Children with learning problems need our help.**

Learning problems may include difficulty with

- **Academic skills (e.g., reading, math)**
- **Behavioral skills (e.g., ADHD)**
- **Social-emotional skills (e.g., Asperger's, NVLD)**

Pop Quiz

1. **A recent study of highly successful entrepreneurs found that close to 50% of them were _____.**
2. **Michael Barry, the financial whiz who read the financial statements and sold short the sub-prime mortgage market has _____.**

DYSLEXIA

- **Delayed mastery of language skills**
- **Reading delay (?)**
- **Faulty spelling**
- **Handwriting/composition problems**

DYSLEXIA

- **"Attention" problems**
- **Difficulty with automaticity**
  - **Letter-sound correspondence**
  - **Multiplication facts**
  - **"Careless" errors**

Autistic Spectrum Disorders

- **Eye contact/relatedness**
- **Language delay**
- **Sensory difficulties**
- **Stereotypies, routines**
- **Difficulty processing gesture, facial expression ("Theory of Mind")**

Autism Solutions

Ricki G. Robinson
Harlequin, 2011.

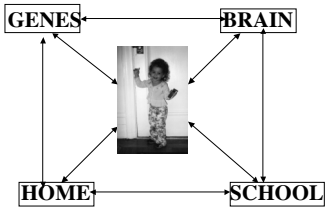
A.D.H.D.

Talent or Liability?

Take-away:

2. Learning problems are real and they are painful for everyone involved. They result from genes interacting with a child's experiences.

The Dance of Nature and Nurture



From *Different Learners*

NEUROPLASTICITY

Changes to the brain as a result of experience

EPIGENETICS

Changes to the genome as a result of experience

Take-away:

3. Biology is not necessarily destiny. Both the brain and the genome are changed by daily experience.

How schools can cause learning problems

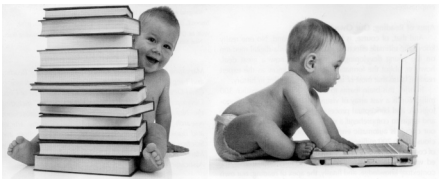
- Physical environment
- Emotional environment
- Curriculum
  - Too much too soon of the wrong stuff
  - Too little too late of the right stuff
- Focus on academics at the expense of habits of mind

Take-away:

4. Learning problems do not occur in isolation. Every child is part of a larger system which must be considered in prevention, identification and treatment.

CHILDHOOD IN THE 21st CENTURY

Intelligence for the 21st century?



Take-away:

5. Today's culture is making the job of parents and educators harder than ever, and is causing/worsening many kids' problems.

Take-away:

6. If your child is at risk for learning problems for any reason, you need to be especially vigilant in setting up a learning-power environment.

"Brain Cleaning"

- **Tackle stress: the "great dys-abler"**
- **Disrupt the disruptors**
- **Feed (and hydrate) the learning brain**
- **Take sleep seriously**
- **Manage the media**

Brain Cleaning

- **Teach self-regulation: The key to success**
- **Get physical**
- **Give the learning brain a prescription for unpressured enjoyment of the natural world**

Brain Cleaning

- **Help your child get a life: LAUGH, LOVE, ENJOY!**

BRAIN DISRUPTOR

STRESS

Meta-analyses show normal children today report more anxiety than child psychiatric patients in the 1950's.

Twenge, Jean. M. The age of anxiety? Birth cohort change in anxiety and neuroticism, 1952-1993. Journal of Personality and Social Psychology, Vol. 79, Dec., 2000.

Stress
and
"learned helplessness"

Bad Stress

or Good Stress?

Take-away:

5. **YOU can make a difference! Never give up.**

The Key to Your Child's Lifetime Success:

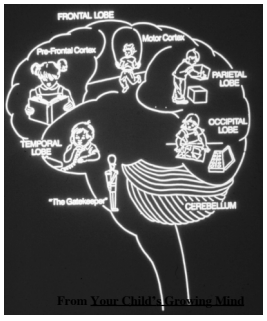
SELF REGULATION

aka

EXECUTIVE FUNCTION

Executive skills are not about how smart you are, but about how you use your smarts.

The Geography of Thinking



Functions of the Brain's Executive System

- **Self-directed attention**
- **Intrinsic motivation**
- **Self-knowledge, reflection**
- **Emotional development**
- **Personal relationships**
- **Moral development (?)**

Functions of the "Executive System"

- Use appropriate social behavior
- Take responsibility
- Use feedback
- Shift set/think flexibly

Functions of the "Executive System"

- Metacognition and "theory of mind"
- Working memory-- "the desktop"

Teaching Strategies for Executive Function

- Talk, talk, talk! (but who is talking?)
- Self-talk/self-questioning
- Verbal mediation in social encounters

Teaching Strategies for Executive Function

- Organizational steps: modeling/direct teaching
- Break down tasks into component parts
- Help student organize material visually (verbal mediation)
- Use cues for working memory

Teaching Strategies for Executive Function

- Model metacognition
- Pair impulsive with reflective student
- Give limited choice, hold responsible

Teaching Strategies for Executive Function

- Internal locus of control ("How could you have made this work out better?")
- Watch out for "punishing" rewards
- Monitor media use