



Early Predictors of Dyslexia

Saturday, January 21, 2017



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The Shelton Way



Mapping the Mind



Frontal Lobe
Thinking, planning, creativity; Primary motor area; Coordinates other brain functions

Parietal Lobe
Bodily sensations

Occipital Lobe
Interpret visual images; Evaluation of pieces


Left Hemisphere
Processes language skills

Temporal Lobe
Interpret auditory signals


Right Hemisphere
Processes spatial information & abstract thoughts

NEUROTRANSMITTERS -


Play a vital role in key bodily function. . .

 **Acetylcholine** - widespread in the brain - involved in muscle action, learning & memory

Dopamine - plays major role in regulation of movements & emotions

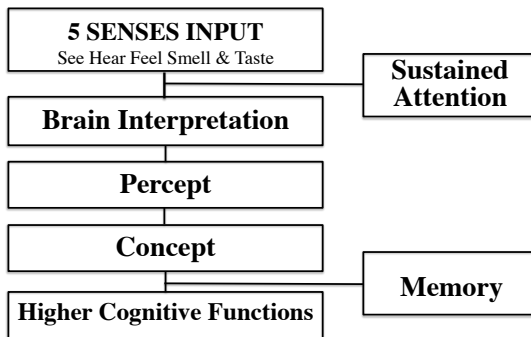
Norepinephrine - involved in reward, mood regulation, arousal, activation fight/flight behavior 

Endorphins (opioids) - minimize pain, produce feelings of pleasure

 **Serotonin** - regulates body temperature, pain perception, onset of sleep

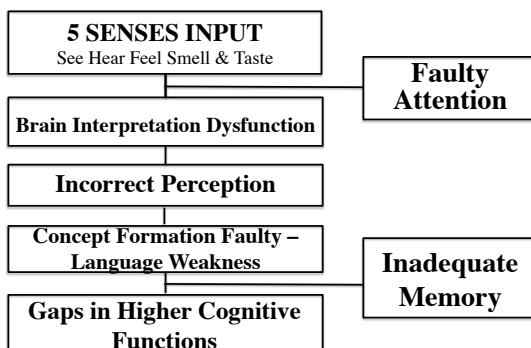
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PROCESSING CHART



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PROCESSING WITH DYSFUNCTIONS



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PROCESSING

- All humans make processing errors.
- Occasionally - not a difficulty.
- When processing errors are frequent it affects the learning in which the processing errors are made.

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PROCESSING

- Visual Discrimination
- Visual Memory
- Auditory Discrimination
- Auditory Memory
- Visual Motor

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Difficulty Learning To Decode In Reading/Spelling

- Underlying Difficulty In Phonological Processing
- Processing Speed

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Difficulty In Math

- Processing Errors In Perceiving Numerals, Patterns & Functions

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Difficulties In Oral Language Development

- Language Processing Of Bringing Meaning To Words
- May Be Delayed Or Disordered
- Leads To Difficulty In Reading Comprehension

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Definition of Language Learning Differences

A language-learning different child shall be defined as a child with average or above-average intelligence, with adequate vision and hearing, without primary emotional disturbance who has failed or is at high risk to fail when exposed to school experiences using conventional educational techniques. Language-learning differences are the result of auditory and visual processing dysfunction and include the specific language disorder, dyslexia, and the related disorders of ADD/ADHD, specific math disability, specific written expression disability, specific oral language disorder, and developmental motor disorder.

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**Dyslexia Definition Adopted by
National Institutes of Health**

- One of several distinct learning disabilities
- Specific language-based disorder of constitutional origin characterized by single word decoding
- Reflects insufficient phonological processing abilities
- Difficulties in single word decoding - unexpected in relation to age & other cognitive & academic abilities.

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**Dyslexia –
NIH Definition continued**

- Not the result of generalized developmental disability or sensory impairment
- Manifested by variable difficulty with different forms of language, including in addition to problems reading, conspicuous problem with acquiring proficiency in writing and spelling.

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Related Disorders refers to learning differences in reading comprehension, attention, math, coordination, social skills and oral language disorders.

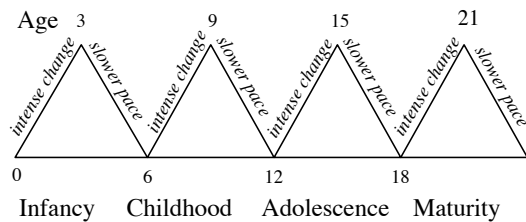
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Attention Deficit / Hyperactivity Disorder (AD/HD)

ADHD refers to a family of chronic neurobiological disorders that interfere with people's capacity to attend to tasks, regulate activity, and inhibit behavior in ways appropriate to their age and circumstances.

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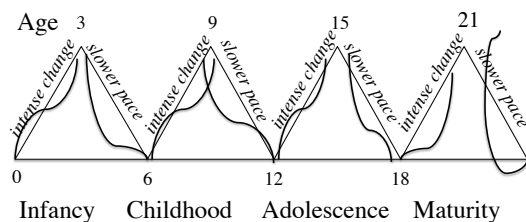
Four Planes of Development



"Montessori education is geared to peaks and valleys of human formation." Dr. Montessori suggested we "divide education into planes and each of these should correspond to the phase the developing individual goes through".

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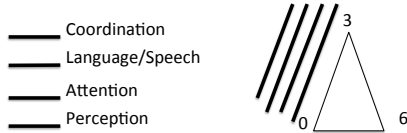
Four Planes of Development



The development of the "at risk" child is uneven. Some areas are developing typically; others are not. The sensitive periods are different. Since the development in the first 6 years is different, all other periods of development are affected.

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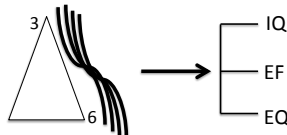
The First Plane 0 - 3 Years



Each area of development proceeding along a separate developmental track as coordination, language, attention and perception mature, which is the beginning of the creation of IQ, EF and EQ.

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The First Plane 3 - 6 Years



By 3 years in the typically developing child Coordination, Language-speech, Attention and Perception have matured to equal levels of ability. Then at 3 - 6, these abilities are able to be integrated, leading to the resulting cognitive ability (IQ), executive functioning (EF), sustained attention, organization skills, ability to prioritize and also social skill competence/adaptive ability (EQ).

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If you would identify children who are high risk for academic learning tasks, with the goal of providing early intervention, evaluate:

- **Coordination**
- **Language**
- **Attention**
- **Perception**

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COORDINATION - GROSS MOTOR

AVERAGE CHILD



- Walks, hops, runs, jumps, skips, throws and catches ball by approximately 5 years of age.

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COORDINATION - GROSS MOTOR

AT RISK CHILD



- Sometimes observed as clumsy in body movements in classroom.
- Often below normal limits when observed on specific items (alternating feet in walking up steps, skipping, learning to jump rope).

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COORDINATION - FINE MOTOR

AVERAGE CHILD



- Cuts on a line, cuts out shapes, holds pencil, maintains line, pressure, makes corners by 5 years of age.

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COORDINATION - FINE MOTOR

AT RISK CHILD

- Difficulty maintaining pattern of cutting motion
- results in jerky motion, jagged cutting.



- Holds pencil in awkward fashion, difficulty maintaining a line, pressure, round corners.

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COORDINATION

- Gross Motor
- Fine Motor
- Life Skills



 ATCH

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ORAL LANGUAGE

AVERAGE CHILD



- Has a vocabulary of approximately 2,500 to 5,000 words.
- Usage of this vocabulary or basic communication with appropriate sentence structure.

ORAL LANGUAGE

AT RISK CHILD



- Vocabulary deficiencies seen in labeling, sentence formation, and usage in running speech.
- Often seen as a quiet child, who is confused by simple directions.
- Child who often says, "you know."
- A portion of at risk population is normal in vocabulary development.
- High incidence of articulation & rhythmical difference.

WRITTEN LANGUAGE

AVERAGE CHILD



- If presented, has mastered most of the letters and the basic sounds of the language.
- Usually can blend these sounds and decode.
- Often is beginning to read by 5 years of age.

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WRITTEN LANGUAGE

AT RISK CHILD



- Inconsistency in performance seen in learning letter symbols and sounds.
- Variable performance with all written symbols activities.
- Difficulty perceiving the patterns of words.

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ORAL LANGUAGE

- Receptive
- Expressive
 - Speech
 - Morphology
 - Syntax
 - Semantics
 - Voice
 - Fluency



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WRITTEN LANGUAGE

- Pre-reading
- Reading
- Pre-writing
- Writing
- Composition

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ATTENTION

AVERAGE CHILD



- Inhibition control begins to develop at 2 1/2 - 3 years.
- Focuses on activity presentation & concentrates
- Works with activities for periods of 10 minutes or longer.

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ATTENTION

AT RISK CHILD



- Deficits may be present.
- Behavior often noted as hyperactive, hypoactive, or distractible.
- Inhibition control does not develop in a normal manner, therefore focus & concentration are faulty.

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ATTENTION

- Inattention
- Hyperactive
- Combined



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PERCEPTION

AVERAGE CHILD



- Matches, discriminates sensory information.
- Perceives patterns in shape, color, numbers.

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PERCEPTION

AT RISK CHILD



- Matching is usually within normal limits.
- Difficulty with discrimination of sensory information noted.
- Discrimination/memory difficulty in math or letter symbols frequently seen.
- Association of symbol to name often a problem.

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PERCEPTUAL



- Visual Processing
- Auditory Processing
- Language Processing



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Strategies for All Learners

A method which provides for:

- ✓ **individualization** of instruction through the **child's interaction with the didactic materials** proceeding at his **own rate** for mastery.

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Individualization



Strategies for All Learners

- ✓ Specific procedures / techniques for training **attention**
- ✓ A classroom **structure**, clear in limits and privileges, which assists the child with faulty inhibition control to develop those skills

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Attention



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Classroom Structure



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Strategies for All Learners

- ✓ An emphasis on **work organization** which gives a child a model for learning how to set up and go about work tasks, the result of which can be a lifelong habit of investigation

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Work Organization



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Strategies for All Learners

- ✓ **Manipulative materials** which provide the child with multisensory perceptions which help concretize abstract concepts

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Manipulative Materials



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Strategies for All Learners

- ✓ Specific techniques for increasing **gross motor skill** development, eye-hand coordination and fine motor skill facility

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Fine Motor Skill



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Strategies for All Learners

- ✓ A concentration on the specific labels for people, objects, and ideas and their attributes and functions that foster **oral language development**

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Oral Language Development



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Strategies for All Learners

- ✓ Presentations of **academics in small sequential steps** with scientifically researched materials to further skill development in language, math, geography, history, physical and biological sciences, art and music.

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Academics in Small Sequential Steps



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Written Language Development



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Strategies for All Learners

- ✓ **An environment of encouragement**
to try - a de-emphasis of failure,
which encourages the child's desire
for independence, an emphasis on
respecting the teacher and classmates
that fosters consideration for others.

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Environment of Encouragement



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Work Ribbon

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The At Risk Child Requires:

- Teacher is present in their learning environment for greater time periods
- Direct assistance on attention, focus, & concentration
- Structure for behavior
- Guidance in selecting & performing tasks
- Specific & direct oral language development
- Direct teaching of language and/or math symbols
- Pre-writing & writing practice with a multisensorial technique
- Language presentations modified with the techniques or programs for children with specific reading disabilities

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Results of Lack of Early Intervention

- Untreated disorders of articulation become ingrained habits
- A lack of vocabulary becomes more severe communication disorders

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Results of Lack of Early Intervention

- Visual/auditory processing disorders result in mild to severe written language disorders (reading, writing, spelling)
- Non Verbal/verbal communication deficits often cause difficulties with social skills

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If a **parent or teacher waits** for the child with a language disorder to spontaneously develop the skills for which he does not have the discrimination & integration abilities, it **means the child will struggle with confusion & frustration.**

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Coming in Early 2017

Using Montessori Strategies for Children With Learning Differences

Joyce S. Pickering & Sylvia O. Richardson

This book includes a history of the development of preschool education, an overview of the Montessori Philosophy and curriculum, assessment of learning differences and other exceptionalities, Montessori strategies applied to children At Risk for Learning Difference, Communication Disorders, Intellectual Differences, and the Autism Spectrum. In addition using Montessori strategies in the classroom and in the home are presented.



Joyce and four of her
Montessori
grandchildren

Montessori Applied To Children At Risk For Learning Differences

MACAR

Shelton School in Dallas, Texas
JULY 6-14, 2017 (no class on Sunday)

MACAR - Helps the Montessorian understand the **specific needs of children diagnosed with Learning Differences** and provides specific strategies for matching the Montessori educational method to those needs.

Materials provided electronically and include:

- ◆ Administrative Manual
- ◆ Practical Life
- ◆ Sensorial
- ◆ Math
- ◆ Oral & Written Language
- ◆ Choices
- ◆ Perceptual Motor Skills

www.shelton.org/MACAR

Sequential English Education (SEE)

Training educators for teaching reading, writing, comprehension, spelling, auditory discrimination and memory.

Shelton.org/SEE

SEE Teaching Level - June 5 -10, 2017

SEE Therapy Level - June 12 - 16, 2017

This program is designed for individuals 5 years of age through adults. It can be taught individually or in small group settings. The Shelton MSLE Training Course in SEE certificate provides eligibility for taking the Alliance Exam and upon successful completion, ALTA certification.

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