

# Dyslexia

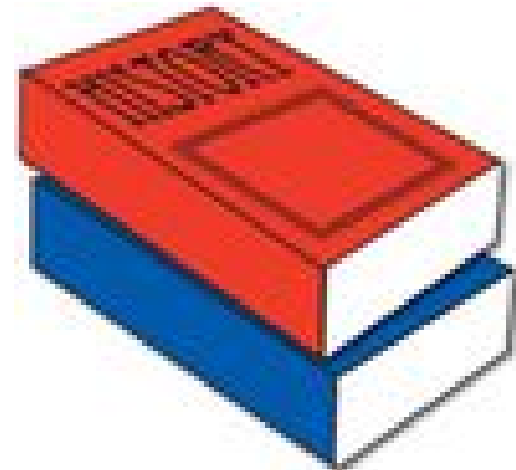
Current Research is more of a Description,  
not necessarily an Explanation

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**SPELD NZ**  
2008 Conference  
Supporting People who Learn Differently

# Overview

- ▶ Historical Perspective (1647–1970)
  - or How did we arrive at “Dyslexia”?
- ▶ Dyslexia – 1970 to present
  - prevalent view involves language problems
- ▶ Today – 2008
- ▶ Tomorrow –



# Seat Work !

- ▶ On a piece of paper, please answer the following 2 questions.
- ▶ 1.) What is my interest/passion in terms of “supporting people who learn differently”.
- ▶ 2.) What do I hope to take away from this conference?



# Are We There Yet?



# Historical Perspective of Learning Disabilities

- ▶ 1.) Genesis 1647–1959
    - Development of a nationwide school system.
  - ▶ 2.) Birth 1960–1969
    - Kirk coined the phrase “learning disabilities”
    - 1969 – Children with Specific Learning Disabilities Act
  - ▶ 3.) Growing Pains 1970 – present
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- ▶ Mercer, Cecil (1979) Children and Adolescents with Learning Disabilities. Merrill Publishing Company



# Genesis: 1647 – 1959

Contributions to research, theory and treatment strategies that helped shape the LD field

- ▶ 1.) Early theoretical foundation of LD lies primarily in 3 disorders –
  - spoken language,
  - written language and
  - perceptual/motor disorders.

- ▶ 2.) Mostly physicians & psychologists researched disorder areas
  
- ▶ Cove School for Brain-Injured Children in Racine , Wisconsin (1940's) – founded by 2 researchers
  - Brain-injured children should be taught in small groups
  - Windows should be covered
  - Teachers should wear plain, unornamented clothes
  - Daily routine should be established
  - Instructional materials should be simple with no distractions
  - Lessons should be slow paced and proceed from simple to complex

- ▶ 3.) Prior to late 1950's, researchers emphasized clinical investigations rather than practical application in school.



▶ 4.) The population investigated by these researchers evolved from

- Brain-injured adults to
- Brain-injured children to,
- Children of normal intelligence



\* 1937, Samuel Orton thought language-disabled children, who had no demonstrable brain injury, had failed to establish hemispheric dominance.

# Labels

- ▶ 1930's – Brain-injured retarded children
- ▶ 1940-s – Brain-injured children
- ▶ 1957 – Strauss Syndrome
- ▶ 1960 – Minimal Brain Dysfunction (MBD)
- ▶ 1962 – Learning Disability
- ▶ 1965 Learning Disorders
- ▶ 1969 Special Learning Disabilities
- ▶ 1977 Specific Learning Disabilities

# Dyslexia

- ▶ While the term *dyslexia* has been used consistently since 1887 to indicate reading disorder at the word-reading level, theories about the exact etiology or causes of dyslexia have changed over time.

Clark & Uhry (1995) *Dyslexia: Theory & Practice of Remedial Instruction*: Brookes Publishing (p.21).



# Are we there Yet?



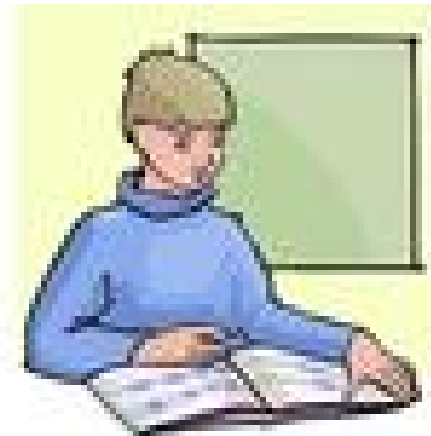
- ▶ Some researchers stay on the bus
- ▶ More researchers get on the bus
- ▶ Experts in Retardation and brain-injury get off the bus.

# Problem of Definition

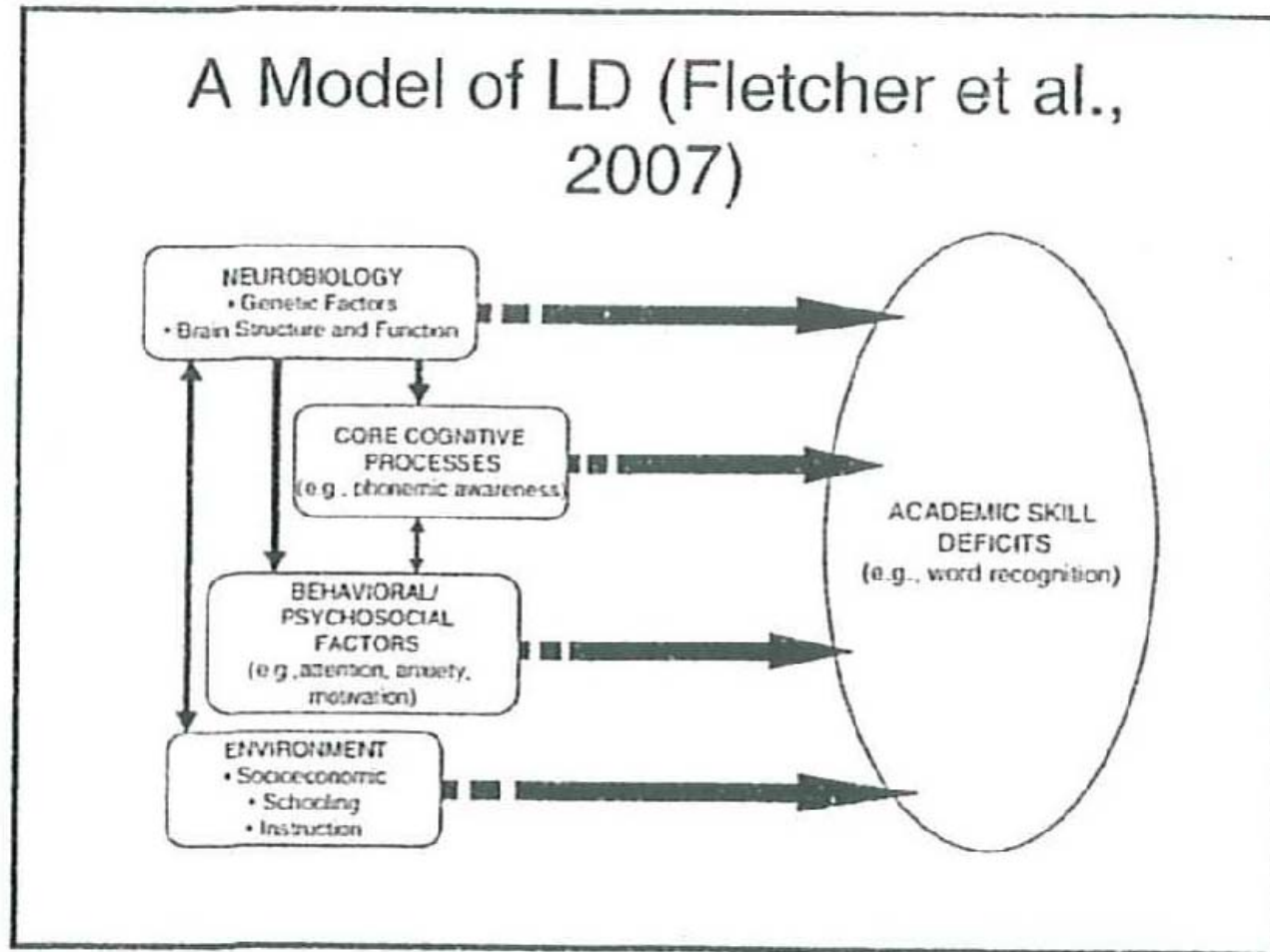
- ▶ No single problem has plagued the study of LDs more than the problem of definition.
- ▶ The persistent lack of definitional clarity has impeded the accurate identification of children and adults in need of services in special education...
- ▶ Fletcher et. al. (2007) Learning Disabilities: From Identification to Intervention: Guilford Press, p.25.

# Why are LD's Difficult to Define

- ▶ 1.) The construct, LD, represents an unobservable latent variable...similar to IQ, achievement or ADHD (Fletcher, 2005).
- ▶ 2.) The traits representing LDs exist on a continuum and do not represent discrete categories (Ellis, 1984)



# A Model of LD (Fletcher et al., 2007)



# Environmental Factors

- ▶ Home environment and quality of language
  - ▶ Socioeconomic factors: parental education, poverty
  - ▶ Quality of instruction (schools, teachers)
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- ▶ Fletcher, Jack (2008) Neurobiological Research in Learning Disabilities – Plain Talk About Rdg. Conference, Houston , TX



# Are we there Yet?



*2 brain structure researchers get off the bus.  
2 Brain metabolism researchers get on the bus  
fMRI technician gets on the bus  
educators get on the bus  
Bus is now LOADED with people*

# Who is on the Bus Now?

- ▶ Neurobiologists
- ▶ Functional imaging experts
- ▶ Speech pathologists
- ▶ Neuropsychologists
- ▶ Reading researchers & reading experts
- ▶ Classroom teachers & administrators
- ▶ Policy makers
- ▶ Parents
- ▶ Others



# National Reading Panel

- ▶ The National Reading Panel (NRP) issued a report in 2000 that responded to a Congressional mandate to help parents, teachers and policymakers identify key skills and methods central to reading achievement.
- ▶ The panel was charged with reviewing research in reading instruction (focusing on K–3<sup>rd</sup> grade) and identifying methods that consistently relate to reading success.

# The Findings

What researchers discovered about how to successfully teach children to read.

Five Components of a SBRR (Science-based reading research) Program

- 1.) Phonemic Awareness
- 2.) Phonics
- 3.) Fluency
- 4.) Vocabulary
- 5.) Comprehension



# The Gap Between Research to Practice

Fletcher, et. al (2007) Learning Disabilities:  
From Identification to Intervention: Guilford Press

7 Possible reasons to explain why this has proven difficult.

- ▶ Inadequate implementation
- ▶ Insufficient reliance on screening and progress monitoring
- ▶ Inadequate attention to prevention
- ▶ Need for integration across instructional components
- ▶ Insufficient consideration of multifaceted problems
- ▶ Lack of sufficient engagement and practice
- ▶ Reliance on clinical experience and knowledge of craft over scientific evidence.

# Professional Development Framework

Have	Knowledge or Understanding of:	Need
	Oral Language Underpinnings for Reading & Writing	
	Neurobiological Research	
	Dyscalculia	
	Phonological Awareness	
	Phonics	
	Fluency	
	Vocabulary	
	Comprehension	
	Spelling	
	Written Language	

# Professional Development Framework – continued

Have	Knowledge or Understanding of:	Need
	Orthography	
	Handwriting	
	Policy Issues	
	Teacher-training	
	Using Data for Instructional Purposes	
	RTI – Response to Instruction	
	Differentiated Instruction	
	3-Tier Intervetion	
	Motivation	

- ▶ Today, each dyslexic child is free to develop his talents and to pursue his dreams – and to know he will succeed.
- ▶ Dyslexia *can* be overcome.

---Sally Shaywitz, M.D.

