READING DISORDER/DYSLEXIA IN THE CLASSROOM Seminar for Cascia Hall Preparatory School Tulsa, Oklahoma August 12-13, 2008 Presented by: Kevin T. Blake, Ph.D., P.L.C. Tucson, Arizona

What Does Neurobiological Mean?

 Stephen Pinker – "The Blank Slate: The Modern Denial of Human Nature", or better stated, "The Lie of the Blank Slate".

Pinker, S. (2002). The Blank Slate: The Modern Denial of Human Nature. New York, NY: Viking.)

 "Although learning disabilities may be exacerbated by other variables, such as ineffective teaching strategies or socioeconomic barriers, this paper supports the position that the essence of learning disabilities is neurobiological in nature" (p. 61).
Fiedorowicz, C., et.al. (2001). Neurobiological Basis of Learning Disabilities. Learning Disabilities, 11 (2), pp. 61-74.

What Does Neurobiological Mean?

"Of particular relevance to this review is the compelling evidence in support of the neurobiological basis of learning disabilities. Studies employing widely divergent methodologies, e.g. research using genetic analysis, neuroanatomical neuroimaging, electrophysiological recording, pathological analysis of brain tissue at autopsy, and neuropsychological evaluation have yielded highly convergent conclusions in support of a neurobiological etiology" (p. 70).

Fiedorowicz, C., et.al. (2001). Neurobiological Basis of Learning Disabilities. <u>Learning</u> <u>Disabilities</u>, <u>11</u> (2), pp. 61-74.

What Does Neurobiological Mean?

60% of Reading Disorder-Dyslexia is genetic.

Willcutt, E.G. and Gaffney-Brown, R. (Summer, 2004). Etiology of Dyslexia, ADHD and Related Difficulties: Using Genetic Methods to Understand Comorbidity. <u>Perspectives</u>, <u>30</u> (3), pp. 12-15.

I.Q. is 60 to 65% genetic.

Barkley, R. A. (2002A-Tape 1). <u>ADHD Symposium: Nature, Diagnosis and</u> <u>Assessment-Nature and Comorbidity and Developmental Course of ADHD</u>. University of Massachusetts, January, Westborough, MA: Stonebridge Seminars.

THE CONTROVERSY OF ADULT AD/HD AND DYSLEXIA: REAL ANSWERS AND SOLUTIONS FOR THERAPISTS

Although 5 percent of our adult population suffers from AD/HD, a neurobiological disorder first recognized in 1902, there continues to be controversies, misunderstandings and myths about this disorder and its treatment. As a result, many adults with AD/HD struggle with chronic difficulties in relationships and in school and in work settings. Without proper treatment, they are at risk for school failure and drop out, career failure, failed marriages, anxiety disorders, affective disorders and substance abuse.



What Is The Readability Level of The Previous Passage?

- Flesch-Kinaid Grade Level=12.0
- The Readability of the New York Times is 13th to 16th grade

WriteItNow (3/12/04). From website: www. ravensheadservices.com/readability.htm, p. 3.

• Reader's Digest: 9th grade

The English Language Learner KnowledgeBase (3/12/04). From website: <u>www.helpforschools.com/ELLK</u> Base/practitionerships/Fog_Index_Readability.shtml .

 1 in 5 Americans reads below the 5th grade level and the average American reads at the 8th grade level!

Pfizer Clear Health Communication Initiative (3/12/04). <u>Improving Health Literacy</u>. From website: <u>www.pfizerhealthliteracy</u> .com_fry.html





RESEARCH PROGRAM IN READING DEVELOPMENT, READING DISORDERS, AND READING INSTRUCTION

Initiated 1965

- Run by the National Institute of Child Health and Development (NICHD)
- Which is part of the National Institute of Health (NIH)
- Study began in 1965 and continues today!
- As of 1999 over **\$150,000,000.00** has been spent!
- Now budgeted for **\$15,000,00.00** per year!

- Conducted at 42 sites in the U.S. and Europe
- Follow-up studies for over 14 years!
- Much of the neurological research in this presentation comes from this study.
- China, England, Israel, Russia, Sweden and Turkey have conducted similar studies...
 - Lyon, G.R. (1999). In Celebration of Science in the Study of Reading Development, <u>Reading Disorders and Reading Instruction</u>. Paper presented at the International Dyslexia Association 50th Annual Anniversary Conference, November 4, 1999, Chicago, IL.

- 30,000 scientific works from NICHD research
- 44,000 studied, 5 yrs old and up; with 5 year follow-ups
- No Child Left Behind
 - 38 to 40% overall illiteracy rate in U.S.
 - 70% illiteracy/African Americans
 - 65% illiteracy/Hispanic Americans
 - They don't have the English language literacy and speech experiences of other ethnicities.
 - Lyon, G.R. (Thursday, February 27, 2003). <u>Application of Scientific Research Methods to the</u> <u>Study of Naming Deficits: Systematic Interventions to Improve Fluency in Word Reading</u> <u>Skills and Comprehension</u>. Paper Presented at the 40th Annual Learning Disabilities Association Conference, Chicago, IL, Session T-39.)

- 48,000 children have been in the study as of 2004. The follow-up study is now 21 years.
- 3,800 in new adult study
- 2 to 6% of the population are the "Hard Core" Dyslexics that will not improve with "Good Instruction". They have the full dyslexic neurology and need "multi-sensory approaches".
- Lyon, G.R. (March 19, 2004). <u>A Summary of Current NICHD Research Findings in Math,</u> <u>Reading Development in English Speaking Children and Plans For Future Research.</u> Seminar Presented at the 41st Annual Learning Disabilities Association of America International Conference, Atlanta, Georgia, March 17 to March 20, 2004.

- 3 to 5% of community samples experience Major Depressive Disorder in lifetime
- Dysthymic Disorder is 3%
- 3 to 13% Social Phobia
- 3 to 5% Generalized Anxiety Disorder
- 0.4 to 1.6% Bipolar Disorder

American Psychological Association (1994). <u>Diagnostic and Statistical Manual of Mental</u> <u>Disorders, IV Edition</u>. Washington, DC: American Psychiatric Association.

- For the first time school curriculum policy and funding for reading programs will be based on science.
- New reading programs will be researched much like the FDA tests new medications.
- New studies: Adolescent Literacy Project, Adult Literacy Project, Teacher Training

Reading Disorder-Dyslexia

"The idea that learning to read is just like learning to speak is accepted by no responsible linguist, psychologist, or cognitive scientist in the research community" (pp. 285-286).

Stanovich, K.E. (1994). Romance and Reality. <u>The Reading Teacher</u>, <u>47</u>, pp. 280-291.

Definition Of Dyslexia

"Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include..."

Definition Of Dyslexia (Continued)

"...problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge."

Adopted by the National Institutes of Health (NIH) and the International Dyslexia Association (IDA) 2002

International Dyslexia Association (April 20, 2005). IDA/NIH Adopts A New Definition of Dyslexia. From website:

www.interdys.org/serlet/compose?section_id=8&page_id=69, Page 1 0f 2

"LEXDEXIA"



- "reversals" (seeing "was" as "saw") and "rotations ("b" as "p"; "p" as "d", etc.) occur in most children up through forth grade. This is typical in the development of visual orthographic memory.
- Only about 7% of adult dyslexics have this concern.

Dyslexia is <u>not</u> seeing the word "WAS" as "SAW".

Anderson, C.W., Jr. (January 23, 2006). Personal Communication.

Badian, N. A. (2005). Does a Visual-Orthographic Deficit Contribute to Reading Disability? <u>Annals of Dyslexia</u>, <u>55</u> (1), pp. 28-52.

<u>Reading Disorder-Dyslexia</u>

The Symptoms of Dyslexía are: 1. Weak Phonemic Awareness 2. Slow Rapid Automatized Naming 3. Poor Orthographic Processing 4. Exceptionally Poor Automatization 5. Poor Coordination

Fawcett, A.J. (2001). <u>Dyslexia: Theory & Good Practice</u>. Philadelphia, PA: Whurr.Blake, K. (2003) Personal Observation.



Dyslexia And Gender



- Sally Shaywitz (1996) reported:
 - Women's brains appear to have bilateral phonological processing.
 - This may explain why women tend to have fewer language deficits after left brain strokes.
 - It may also explain why more women than men compensate for dyslexia

Shaywitz, S.E. (1996). Dyslexia. <u>Scientific American</u>, <u>275</u> (5), pp. 98-104.

The Brain and Dyslexia

Murray, B. (March, 2000). From the Brain to Lesson Plan. Monitor On Psychology, 31 (3), p. 24.



Why Don't Dyslexics Get Better With Age?

 "The identical posterior disruption is observed in children and adults—neurologic proof that the problems do not go away. They are persistent, and now we know why." (p. 82).

Shaywitz, S. (2003). Overcoming Dyslexia. New York, NY: Knopf.

Are There Dyslexics In Other Countries/Languages?

- Yes!
- Cultures with less complex phonemically regular languages (i.e., Italian) will have dyslexics with less severe reading disorder symptoms, than English or French.
- However "...the neurologic mechanisms of dyslexia are similar regardless of native language" (p. 44).

Geller, B. (May, 2001). Dyslexia: A Disease Without a Country. <u>Journal Watch:</u> <u>Psychiatry</u>, <u>7</u> (5), p 44.)

How To Help Dyslexic Adults With Reading

National Reading Panel



Panel of government funded experts released a report to United States Congress (April 13, 2000)

- Reviewed over 100,000 reading research articles published since 1966
- 10 to 15 percent of dyslexics will drop out of high school
- 2 percent will graduate college

How to Help Dyslexic Adults With Reading

National Reading Panel



- First teach phonemic awareness (rhyming, clapping out word sounds, etc.)
- Second teach phonics (sound to symbol)
- Third teach Whole Language
- In this order with dyslexics

National Reading Panel (4/13/2000). www.nichd.gov/publications/pubs/readbro.htm

How To Help Dyslexic Adults With Reading

"Although the NICHD research indicates that there is no cure for RDD (sic-Reading Disorder-Dyslexia), many RDD adults can improve their reading skills by remediation with a systematicsynthetic multisensory-phonics technique. For example the adult with RDD is asked to look at a phoneme (one of the 44 sounds of the English language in letter form), make the sound of the phoneme (i.e., B-"b") and then with their fingers...

How To Help Dyslexic Adults With Reading

...trace the letter as they look at it and say its sound. This 'see it-say it-trace it' technique has been quite successful in teaching those with RDD to read. Perhaps the best known of these teaching methods is the Orton-Gillingham. However, there are over 10 other systematic-synthetic-multisensory-phonics techniques that are equally helpful" (p. 31).

Blake, K.T. (May/June, 2000). Two Common Reading Problems Experienced by Many AD/HD Adults. <u>Attention!</u>, <u>6</u> (5), p. 30-33.

Multisensory Teaching Techniques

- Orton-Gillingham Approach
- Alphabetic Phonics
- Association Method
- Language!
- Lexia-Herman Method
- Lindamood-Bell

International Dyslexia Association (2005). Framework for Informed Reading and Language Instruction: Matrix of Multisensory Structured Language Programs. Baltimore, MD: International Dyslexia Association.



Multisensory Teaching Techniques (Continued)

- Project Read
- Slingerland
- Sonday System
- Sounds in Symbols
- Spalding Method
- Starting Over
- Wilson Foundations & Wilson Reading

International Dyslexia

Association (2005).

Framework for Informed

Reading and Language

Instruction: Matrix of

Multisensory Structured

Language Programs.

Baltimore, MD:

International Dyslexia

Association.

Why Don't Dyslexics Get Better With Age?

 "The identical posterior disruption is observed in children and adults—neurologic proof that the problems do not go away. They are persistent, and now we know why." (p. 82).

Shaywitz, S. (2003). Overcoming Dyslexia. New York, NY: Knopf.

Why Don't Dyslexics Get Better With Age?

 Dyslexics also use an auxiliary system for reading in the Right Frontal lobe that allows for accurate, but slow reading.

Shaywitz, S. (2003). Overcoming Dyslexia. New York, NY: Knopf.

Other Reading Problems

- Reading Disorder of Whole Word Decoding
- Reading Disorder of Recall /Comprehension
- Reading Disorder of Oral Reading-Word Finding//Paralexia
- Reading Disorder-Hyperlexia
- Reading Epilepsy
- Aphasia/Alexia/Acquired Dyslexia
- Linguistic Coding Difference (Foreign Language)
- Reading Disorder-Reversals ("was" as "saw") and Rotations ("b" processed as "p")
- Depression/Anxiety caused Reading Comprehension and Rate Problems

Is There Any Evidence That Using Synthetic Multisensory Phonics Works With Dyslexics?

• YES!

 Shaywitz (2003) wrote of research where dyslexic children were taught with Multisensory Phonics for a year matched the brain patterns of children who were good readers. They became fluent and accurate readers.

Shaywitz, S. (2003). Overcoming Dyslexia. New York, NY: Knopf.



Multisensory Teaching Of Dyslexics

- Brain Imaging studies have demonstrated that with intense phonological training dyslexics can process as well as non-dyslexics, but this does not improve spelling and reading rates of dyslexics.
- Non-activation of the left insula during reading may be related to the lack of verbal efficiency in dyslexics.

Berninger, V.W., Abbot, R.D., Abbot, S.P., Graham, S, and Richards, T. (January/February, 2002). Writing and Reading: Connections Between Language by hand and Language by Eye. Journal of Learning Disabilities. <u>35</u> (2), pp. 39-56.

Where Can You Find Those That Teach Reading This Way?

 International Dyslexia Association 8600 La Salle Road,Suite 382
Baltimore, MD 21286-2044
Phone: 410-321-296-0232
Fax: 410-321-5069
Web: www.interdys.org
E-mail: info@interdys.org



Where Can You Find Those That Teach Reading This Way?

 Learning Disabilities Association of America 4156 Library Road Pittsburgh, PA 15234 Phone: 412-341-1515 Web: www.ldanat.org



Where Can You Find Those That Teach Reading This Way?

 American Speech-Language Hearing Association 10801 Rockville Pike Rockville, MD 20852
Voice: 800-638-8255
TTY: 301-897-0157
Fax: 301-897-7355
Web: www.asha.org
Where Can You Find Those That Teach Reading This Way?

- Vocational Educational Services in your state
- Many "world class" hospitals (i.e., Mayo Clinic, etc.) have LD clinics
- Universities with special education programs
- Private schools that specialize in teaching dyslexics (i.e., Landmark University, etc.)
- Association of Educational Therapists, 1804 West Burbank Blvd., Burbank, CA 91506; Phone: 800-286-4267; Fax: 818-843-7423; aet@aetonline.org

Where Can You Find Those That Teach Reading This Way?

 International Multisensory Structured Language Education Council (IMSLEC), Suite 346, 1118 Lancaster Drive, North East, Salem, OR 97301-2933





LD Life Insight



Therapeutic goal: Change "being LD" to "having LD".

Rodis, P. (2001). Forging Identities, Tackling
Problems, and Arguing with Culture:
Psychotherapy with Persons Who Have
Learning Disabilities. In P. Rodis, A.
Garrod, and M.L., Boscardin (Eds.), Learning
<u>Disabilities & Life Stories</u>. Boston, MA: Allyn
and Bacon, pp. 205-230.

Emotional Overlay And Learning Disorders

- Seigel (1974) concluded that the most common problems for LD adults are social/emotional.
- Roffman (2000) wrote "It is difficult to grow up with LD and experience repeated failure and relentless taunting from peers without secondary psychological issues often referred to as *emotional overlay*. Emotional overlay does not always develop into diagnosable mental health problems..., but the symptoms can be quite debilitating nonetheless" (p. 44). Seigel, E. (1974). The Exceptional Child Grows Up. New York, NY: W.H. Freeman.
 - Roffman, A.L. (2000). <u>Meeting the Challenge of Learning Disabilities in Adulthood</u>. Baltimore, MD: Paul H. Brookes.

Comorbidity And Learning Disorders

- Porter and Rourke studied a large group of LD children from ages 6 to 15 and found:
 - Approximately 44% had no emotional problems.
 - Approximately 26% were depressed, anxious, shy, or suffered low self-esteem.

- Approximately 17% had Conduct Disorder

Hence 56% of LD individuals have comorbidities

Porter, J.E., and Rourke, B.P. (1985). Socioemotional Functioning of Learning Disabled Children: A Subtype Analysis of Personality Patterns. In B.P. Rourke (Ed.), <u>Neuropsychology of Learning Disabilities: Essentials of Subtype Analysis</u>. New York, NY: Bruner/Mazel, pp. 218-235.

Comorbidities Of Dyslexia

- AD/HD 40%
- Conduct Disorder 20%
- Depression 20%
- Generalized Anxiety 25%
- At Least One Comorbidity 60%

Willcutt, E.K. and Gaffney-Brown, R. (Summer, 2004). Etiology of Dyslexia, ADHD, and Related Difficulties: Using Genetic Methods to Understand Comorbidity. <u>Perspectives</u>, <u>30</u> (3), pp. 12-15.

Grief And LD

Goldstein spoke of adults with LD and/or AD/HD who struggle with prolonged grief. "It has been suggested that adults with AD/HD and LD struggle with grief over their perceived incompetence and a lifetime difficulty with meeting everyday expectations" (p. 260).

Goldstein, S. (1997). <u>Managing Attention and Learning Disorders in Late Adolescence and</u> <u>Adulthood: A Guide for Practitioners</u>. New your, NY: John Wiley and Sons.

LD Life Insight



"It is a common trait among the LD to know how to endure hardship and keep dark secrets" – Oliver Queen

Kegan, R. (2001). Easing a World of Pain: Learning Disabilities and the Psychology of Self-Understanding. In P. Rodis, A. Garrod, and M.L. Boscardin (Eds.), <u>Learning Disabilities &</u> <u>Life Stories</u>. Boston, MA: Allyn and Bacon, p. 194.

LD And Low Self-Esteem

- "Reasonably assume that most individuals with learning disabilities have had a more difficult course and are more likely to experience feelings of low self-esteem" (p. 24).
- "However, when the dyslexic succeeds, he is likely to attribute his success to luck. When one fails, he simply sees himself as stupid" (p. 9).

Goldstein, S. (1998). Emotional Problems In Adults with Learning Disabilities.: An Often Unseen but Not Insignificant Problem. <u>LDA Newsbriefs</u>, <u>33</u> (4), p. 24.

Ryan, M. (1994). <u>The Other Sixteen Hours: The Social and Emotional Problems of</u> <u>Dyslexia</u>. Baltimore, MD: Orton Dyslexia Society.

LD, Low Self-Esteem And Anxiety

 No difference was found between the levels of selfesteem, academic anxiety, and trait anxiety between large groups of LD and and non-LD college students.

Blake, K.T. (1989). <u>Self-Esteem and Anxiety in Learning Disabled and Non-Learning Disable</u> <u>College Students</u>. Dissertation Abstracts International.

Dyslexia And Dysthymia

- "The often unsympathetic attitude and behavior of other people undermines their confidence and contributes to the development in many dyslexics of profound and deeply ingrained low self-esteem. Negativity is more potent when significant people in the dyslexic's life...have dismissed them as having low intelligence" (p. 49).
 - McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). <u>The Adult Dyslexic: Assessment,</u> <u>Counseling, and Training</u>. San Diego, CA: Singular.

Dyslexia And Suicide

- Poor reading teens have more suicidal ideation and higher drop-out rates than good readers.
- There are higher rates of mood disorders in those with Reading Disorder than those without.
- Prevention and intervention with RD youths is needed and should focus on psychoemotional problems related to school-life.

Goldston, D., et.al. (2002). <u>Reading Disabilities, Drop-out, and Suicidal Behavior</u>. Poster Presentation at the 53rd Annual International Dyslexia Association Conference, Atlanta, GE., November 13-16.

LD And Anxiety

- LD college students have more problems with anxiety than do their non-disabled peers.
- Generalized Anxiety Disorder is frequently found in LD adults.
- Dyslexics tend to have significant problems with anxiety.
 - Hoy, C. Gregg, N., et. al. (1997). Depression and Anxiety in Two Groups of Adults with Learning Disabilities. Learning Disability Quarterly, 20, pp. 280-291.
 - Hooper, S.R., and Olley, J.G. (1996). Psychological Comorbidity in Adults with Learning Disabilities. In N. Gregg, C. Hoy, and A.F. Gay (Eds.), <u>Adults with Learning</u> <u>Disabilities: Theoretical and Practical Perspectives</u>. New York, NY: Guilford, pp. 162-183.
 - Ryan, M. (1994). <u>The Other Sixteen Hours: The Social and Emotional Problems of</u> <u>Dyslexia</u>. Baltimore, MD: Orton Dyslexia Society.)

LD And Anxiety

Roffman wrote, "Adults with LD/ADHD often experience pressure as they work with their symptoms. Anxiety develops out of such dayto-day occurrences as the loss of yet another set of keys..." (p. 49).

Roffman, A. (2000). <u>Meeting the Challenge of Learning Disabilities in Adulthood</u>. Baltimore, MD: Brookes.

LD And Social Anxiety



"One final ongoing issue that is worthy of mention for many with LD/ADHD is the problem of fatigue.The extra effort to cope with the continued social and academic demands of schooling can be chronically exhausting" (p. 217).

Roffman, A. (2000). <u>Meeting the Challenge of Learning Disabilities in Adulthood</u>. Baltimore, MD: Brookes.

LD Life Insight



"The process of continually compensating can be deeply tiring. Betty notes that she often is exhausted as a direct result of the enormous effort that she expends on building on her strengths and working around her weaknesses. She notes, 'You're always compensating and you're tired a lot" (p. 261).

Roffman, A. (2000). <u>Meeting the Challenge</u> of <u>Learning Disabilities in</u> <u>Adulthood</u>. Baltimore, MD: Brookes.

LD And Substance Abuse



- Several of the adults with LD/ADHD whom Roffman interviewed spoke of past struggles with substance abuse (p. 51).
- Up to 60% of those with LD are in treatment for substance abuse.
 - Roffman, A.L. (2000). <u>Meeting the Challenge of Learning Disabilities in Adulthood</u>. Baltimore, MD: Paul H. Brookes.
 - Ellis, W., and Cramer, C. (1996). Introduction. W. Ellis, and C. Cramer (Eds.), <u>Learning</u> <u>Disabilities: Lifelong Issues</u>. Baltimore, MD: Brookes, pp. XXVII-XXXI.
 - Esposito, J.T. (1998). Parents Don't Care– Or Do They? <u>LDA Newsbriefs</u>, 31 (1), pp. 20-21.

Secondary features of Dyslexia

- Problems remembering facts, figures, sequences, names, and with working memory
- Problems with organization
- Problems with following conversation

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). <u>The Adult Dyslexic: Assessment</u> <u>Counseling and Training</u>. San Diego,CA: Singular.

Potential Social Interaction Problems of Dyslexics

- 1. Facial Perception and Recognition
- 2. Difficulties with making and interpreting gestures, body language, inflection, and tone of voice
- 3. Difficulty making central inferences in social situations regarding mood and attitude
- 4. Problems with determining correct response

Wren, C., and Einhorn, J. (2000). <u>Hanging by a Twig: Understanding and Counseling Adults</u> with Learning Disabilities and ADD. New York, NY: Norton.

"Many adults with dyslexic difficulties develop coping and compensatory strategies and usually can become quite adept at disguising the presence of dyslexia. Due to this many remain unfulfilled, often underestimating their abilities, perhaps working in an occupation that does not use their real abilities or even declining promotion for fear that their dyslexic difficulties are exposed" (p. 292).

Kirk, J., McLoughlin, D., and Reid, G. (2001). Identification, and Intervention in Adults. In A. Fawcett (Ed.), <u>Dyslexia: Theory and Good Practice</u>. Philadelphia, PA: Whurr, pp. 292-308.

- Often the Dyslexics biggest fear is being "found out"- That others will learn they cannot read...
- They fear change because they fear they will not be able to compensate...
- They are frustrated with their literacy difficulties and social problems...

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). <u>The Adult Dyslexic:</u> <u>Assessment Counseling and Training</u>. San Diego,CA: Singular.

- Transition Planning should begin as soon as the student is identified
- Academic skills should be remediated to the highest level
- Basic life skills should be taught from elementary school on-Basic life skills=work skills
- Social skills training should be geared to workplace starting in high school
- Students need to know what their disability is, what their strengths and weakness are, what they need for accommodations and their rights. Beginning with identification of the disorder

 "High school vocational educational experiences, work-study jobs, and paid work experiences were related to successful employment and should be considered best practices for a transition program. Student who were given tutorial assistance and other support services were more likely to graduate, thereby increasing their likelihood of successful adult outcomes. A school advocate, usually a special educator, seemed to be another component of a successful transition program" (p. 281).

Minskoff, E.H. (1996). Improving Employment Outcomes for Persons with Learning Disabilities. In N. Gregg, C. Hoy and A.F. Gay (Eds), <u>Adults with Learning Disabilities: Theoretical and practical Perspectives</u>. New York, NY: Guilford.

- Do not shield student from failure-Not "real world"
- Career information starting in elementary school
- Students should be part of the IEP process from day one
- Vocational training is a must!
- Transition plans must include training in how to be technologically literate

- School-to Work Opportunities Act of 1994
- Individuals with Disabilities Education Improvement Act (IDEIA) of 2004

Employment And Learning Disabilities



Brown and Gerber (1994) wrote there were 3 types of LD people in the world of work:

- those whose LD does not interfere with work;
- those who struggle long hours to overcome their LD in the workplace;

- those with LD who are chronically unemployed.

Brown, D.S, and Gerber, P.J. (1994). Employing People with Learning Disabilities. In P.J. Gerber and H. B. Reiff (Eds.), <u>Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues</u>. Austin, TX: Pro-Ed, pp. 194-203.

Employment And Learning Disabilities



- "Even residual difficulties, such as slow reading and writing, would make some occupations onerous" (p. 84).
- "Eventually, dyslexics should pursue occupations and careers for which they are appropriately equipped in terms of their abilities, aptitudes and interests" (p. 84).

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). <u>The Adult Dyslexic: Assessment</u> <u>Counseling and Training</u>. San Diego,CA: Singular.

LD Life Insight

"...a person with learning disabilities must work harder than a nondisabled peer to accomplish the same learning" (p. 185).

McGrady, H., Lerner, J., and Boscardin, M.L. (2001). The Educational Lives of Students with Learning Disabilities. In P. Rodis, A. Garrod, and M.L., Boscardin (Eds.), <u>Learning Disabilities & Life Stories</u>. Boston, MA: Allyn and Bacon, p. 185.



Employment And Learning Disabilities



Eight Myths About Careers:

- I need to choose exactly the right job.
- I am making a decision for a lifetime.
- Most people have made the decision by my age.
- I want the test to tell me what to do.
- If I like to do something I should be good at it.
- I need to get this done ASAP.
- If I don't succeed, I failed.
- I'll take some time off then I'll know what to do.
- Crawford, R. (1997). Vocational Programs and Practices. In S. Goldstein (Ed.), <u>Managing Attention and</u> <u>Learning Disorders in Late Adolescence and Adulthood: A guide for Practitioners</u>. New York, NY: John Wiley and Sons, pp. 287-314.

Employment And Learning Disabilities



- Don't rule out certain career paths solely due to LD.
- Don't let them rule out more education just because of past experiences in school.
 - If they fall under this category help improve their academic confidence and self-esteem.

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). <u>The Adult Dyslexic: Assessment</u> <u>Counseling and Training</u>. San Diego,CA: Singular. Employment And Learning Disabilities



Thus, adults with learning disabilities should not be limited in their job/career choices if they have adequate abilities, aptitudes and interest, and their compensation strategies and accommodations work in that environment.

Employment And Learning Disabilities



"Job accommodations refers to the process of matching the communications style and expectations of the supervisor and the production system to ensure that the disability of the employee does not hamper his or her ability to produce quality products or services" (p. 198).

Brown, D.S, and Gerber, P.J. (1994). Employing People with Learning Disabilities. In P.J. Gerber and H. B. Reiff (Eds.), <u>Learning Disabilities in Adulthood: Persisting</u> <u>Problems and Evolving Issues</u>. Austin, TX: Pro-Ed, pp. 194-203.

Employment And Learning Disabilities



"If you do not need accommodations in the application process, generally it is best to wait until after you have the job. If you see that part of the job is a problem for you and believe you need an accommodation, it is best to act promptly and not allow a long period of poor performance. Also, at the time you disclose your disability, request specific reasonable accommodations that will enable you to do your job" (p. 4).

Latham, P.H. (1998). Learning Disabilities and the Law—After High School: An Overview for Students. <u>LDA Newsbriefs</u>, <u>33</u> (4), pp. 3-4.

LD Life Insight



Tessler (1998), a dyslexic psychologist wrote, "Today, people regard me as successful and assume I can do things I can't do" (p. 32). "With or without a learning disability I must perform as well as my colleagues" (p. 33).

Tessler, L.G. (1998). Accommodations Make Success Possible: A Personal Account. <u>Perspectives</u>, <u>24</u> (3), pp. 32-33.)

Employment And Learning Disabilities



- 1. Slow down—give yourself permission to take the time you need.
- 2. Create obtainable goals.
- 3. Break down each task into small, manageable steps.

Employment And Learning Disabilities (Continued)



- 4. Be willing to work very hard.
- 5. Recognize and accept the fact that only extra effort will get you the success that others achieve with much less work.
- 6. Don't quit especially when the going gets tough. Take a break instead.
- Establish a timetable that is realistic and leave as much room for error and re-doing as possible.
Employment And Learning Disabilities (Continued)



- 8. Anticipate and prepare for problems.
- 9. Take a chance. Do something you're not sure you can do well. It's the only way to grow and find your full potential" (p. 33).

Tessler, L.G. (1998). Accommodations Make Success Possible: A Personal Account. <u>Perspectives</u>, <u>24</u> (3), pp. 32-33.

Employment And Learning Disabilities



"The findings suggest that the overriding factor leading to success is control. Successful adults with learning disabilities were able to control their lives, and the greater degree of control, the greater likelihood of success...Control refers to the drive to manage one's life" (p. 207).

Ginsberg, R., Gerber, P.J., and Reiff, H.B. (1994). Employment Success for Adults with Learning Disabilities. In P.J. Gerber and H.B. Reiff (Eds.), <u>Learning Disabilities in</u> <u>Adulthood: Persisting Problems and Evolving Issues</u>. Austin, TX: Pro-ED, pp. 204-213.

Employment And Learning Disabilities

Successful LD Adults:



- have a strong desire to achieve;
- are goal driven;
- reframe disabilities into abilities;
- are extremely persistent;
- find jobs that are good matches for abilities, skills and interests;
- are creative and not afraid to ask for help.
- Ginsberg, R., Gerber, P.J., and Reiff, H.B. (1994). Employment Success for Adults with Learning Disabilities. In P.J. Gerber and H.B. Reiff (Eds.), <u>Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues</u>. Austin, TX: Pro-ED, pp. 204-213.

Employment and Learning Disabilities

"Many individuals with learning disabilities or ADD join the Armed forces and report that the structure and clear expectations help them to do well. However, these conditions may prevent some individuals from obtaining the required score on the Armed Forces Qualifying Test. The Armed Forces are not required to grant accommodations. Further, military regulations provide that academic skills deficits that interfere with school or work after the age of 12 may be a cause for rejection for service in the Armed Forces" (p. 4).

Latham, P.H. (1998). Learning Disabilities and the Law—After High School: An Overview for Students. <u>LDA Newsbriefs</u>, <u>33</u> (4), pp. 3-4.

Employment And Learning Disabilities



A good Resource for Career and Learning Disabilities:

Crawford, R. (1997). Vocational Programs and Practices. In S. Goldstein (Ed.), <u>Managing</u> <u>Attention and Learning Disorders in Late</u> <u>Adolescence and Adulthood: A Guide for</u> <u>Practitioners</u>. New York, NY: John Wiley and Sons, pp. 287-314.



"All of the studies suggested that while students with identified learning disabilities significantly benefited by the provision of extended time, students without disabilities made less dramatic gains" (p. 7).

Jenison, M.E., Westra, M., Russell, J.H. (In Press). <u>Do "Unreasonable" Accommodations</u> for Postsecondary Students Provide Unfair Advantages.

"The results from this study support the previous research about the efficacy of using accommodations, specifically that people who do not have learning disabilities do not significantly improve performance using extended time on examinations. This fact has been known for many years by learning disability researchers, clinicians, and educators. What is missing though is a general awareness of this fact in the community" (p. 18).

Jenison, M.E., Westra, M., Russell, J.H. (In Press). <u>Do "Unreasonable" Accommodations for</u> <u>Postsecondary</u> <u>Students Provide Unfair Advantages</u>.

Social Disorders And Employment



- "...social skills deficits can be the most debilitating part of the learning-disabled experience" (p. 201).
- "Failure at 'office politics' can lead to being fired. Many people with learning disabilities, at high or low levels, reach a plateau and are unable to advance for reasons of personal matching" (p. 201).
- Poor social skills are the reason for under-employment in many with LD.
- Brown, D.S, and Gerber, P.J. (1994). Employing People with Learning Disabilities. In P.J. Gerber and H. B. Reiff (Eds.), <u>Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues</u>. Austin, TX: Pro-Ed, pp. 194-203.)
 Mal available. D. Fitzgildham, O. and Yangge V((1994). The Adult Dyalaxies Assessment Comparison.
- McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). <u>The Adult Dyslexic: Assessment Counseling</u> and Training. San Diego,CA: Singular.)

Accommodatior Dyslexics



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(Jenison, M.E., Westra, M., Russell, J.H. (In Press). <u>Do "Unreasonable" Accommodations</u> <u>for</u> <u>Postsecondary Students Provide Unfair Advantages</u>.

"The results from this study support the previous research about the efficacy of using accommodations, specifically that people who do not have learning disabilities do not significantly improve performance using extended time on examinations. This fact has been known for many years by learning disability researchers, clinicians, and educators. What is missing though is a general awareness of this fact in the community" (p. 18).

(Jenison, M.E., Westra, M., Russell, J.H. (In Press). <u>Do "Unreasonable" Accommodations for</u> <u>Postsecondary Students Provide Unfair Advantages</u>.

 "Fairness is giving each person what he or she needs, not giving each person the same accommodations" (p. 19).

(Jenison, M.E., Westra, M., Russell, J.H. (In Press). <u>Do "Unreasonable" Accommodations</u> <u>for</u> <u>Postsecondary Students Provide Unfair Ac</u>



- State education agencies governing secondary schools often have different disability qualification and documentation requirements for accommodations than do postsecondary institutions.
- Postsecondary institutions often need more information about students to provide appropriate accommodations.
 - Layton, C.A., Lock, R.H. (2003). Challenges in Evaluating Eligibility Criteria and Accommodation Needs for Postsecondary Students.<u>Learning Disabilities: A</u> <u>Multidisciplinary Journal</u>, <u>12</u> (1), pp. 1-5).



- Recording for the Blind & Dyslexic
- 20 Roszel Road
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- 866-RFBD-585
- Voice: 800-221-4792
- Website: <u>www.rfbd.org</u>

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Web: www.kurzweiledu.com



Accommodations for Those with Learning Disabilities

Good resources to help decide which

accommodations work with which weaknesses:

- Brinkerhoff, L.C., McGuire, J.M., and Shaw, S. (2002). <u>Postsecondary Education and Transition</u> for Students with Learning Disabilities (Second Edition). Austin, TX: Pro-ED.
- Mather, N. and Jaffe, L.E. (2002). <u>Woodcock-</u> <u>Johnson-III: Reports, Recommendations, and</u> <u>Strategies</u>. New York, NY: John Wiley and Sons.

Lorry suggested the following:



- extended time for slow reading rate;
- a separate room for those who subvocalize while reading;
- audiotape versions of tests;
- a reader;
- assistance with answer sheets (i.e., a scribe)

Accommodations For Dyslexics (Continued)

- extended breaks;
- large print; and/or
- copy of verbal instructions read by the proctor
- (Lorry, B.J. (1998). Language Based Learning Disabilities. In M. Gordon and S. Kiesser (Eds.), <u>Accommodations in Higher Education Under the Americans with Disabilities Act</u> (ADA): A No-Nonsense Guide for Educators, Administrators and Lawyers. New York, NY: Guilford, pp. 103-153.)



- Centra researched how 79 LD students performed on the SAT in both timed and untimed administrations and found:
 - LD students averaged a 28 to 30 point increase in scores when given untimed administration.
 - This was interpreted as indicating that extended time reduces the effect of being LD.
 - (Centra, J.A. (1986). Handicapped Student Performance on the Scholastic Aptitude Test. Journal Of Learning Disabilities, <u>19</u> (6), 324-327.)

"The major findings of this study were that there is a significant difference between score obtained by students with learning disabilities and by normally achieving students under timed conditions and there are no significant differences in test performance between students with learning disabilities and normally achieving university students when the students with learning disabilities are provided extra time. Normally achieving students did not perform significantly better with extra time" (p. 104).

Runyan, M.K. (1991). The Effects of Extra Time on Reading Comprehension Scores for University Students with and Without Learning Disabilities. <u>Journal of Learning</u> <u>Disabilities</u>, <u>24</u> (2), pp. 104- 106).

- Extended time is to allow the LD student time to respond.
- Time is usually extended to time and a half.
- In England students are typically given all the time they need to complete tests. No concept of "extended time".

(Ofiesh, N. (November1, 2002).Learning Disabilities and Extended Time Testing: AnEverlastingMarriage...Paper presented at First Annual SALT Conference:"Demystifying LearningDisabilities (LD) and Attention Deficit Disorders (ADHD) at thePostsecondary Level, Tucson,Arizona.)

- It is appropriate to use extended time when:
 - The test is designed for accuracy not speed
 - And, the student's disability impacts performance on the test.

 (Ofiesh, N. (November1, 2002). Learning Disabilities and Extended Time Testing: An Everlasting Marriage... Paper presented at First Annual SALT Conference: "Demystifying Learning Disabilities (LD) and Attention Deficit Disorders (ADHD) at the Postsecondary Level, Tucson, Arizona.)

- Why is extended time helpful?
 - LD students process information slower than non-LD students regardless of IQ
 - LD can negatively impact speeded test performance, or cause a *"functional limitation"*.
 - This would include those with reading, writing and spelling, thinking and math disabilities.

(Ofiesh, N. (November1, 2002). Learning Disabilities and Extended Time Testing: An <u>Everlasting</u> <u>Marriage...</u> Paper presented at First Annual SALT Conference:
 "Demystifying Learning Disabilities (LD) and Attention Deficit Disorders (ADHD) at the Postsecondary Level, Tucson, Arizona.)

 "When qualified students with learning disabilities were provided accommodations, the majority of those student persisted and did well in college" (p. 287).

(Richard, M.M. (1995). Students with Attention Deficit Disorders in Postsecondary Education: Issues in Identification and Accommodations. In K.G. Naueau (Ed.), <u>A</u> <u>Comprehensive Guide to Attention</u> <u>Deficit Disorder in Adults: Research, Diagnosis and</u> <u>Treatment</u>. New York, NY: Bruner/Mazel, pp. 284-304/ Quoting: Vogel, S.A., and Adelmam, P.B. (1993). <u>Success for College Students</u> <u>with Learning Disabilities</u>. New York, NY: Springer-Verlag.)

 "The major findings of this study were that there is a significant difference between scores obtained by students with learning disabilities and by normally achieving students under timed conditions and that there are no significant differences in test performance between students with learning disabilities and normally achieving university students when the students with learning disabilities are provided extra time..."

"...Normally achieving students did not perform better with extra time" (p. 104).

(Runyan, M.K. (1991). The Effects of Extra Time on Reading Comprehension Scores for
 University Students With and Without Learning Disabilities. <u>Journal of Learning</u>
 <u>Disabilities</u>, <u>24</u> (2), pp. 104-



"Students with learning disabilities have been identified as being deficient in the automatization of cognitive processes necessary for rapid reading with high levels of comprehension. They also have difficulties with the storage and retrieval of information involving short-and long-term memory" (p. 52).

(Weaver, S.M. (Spring, 2000). The Efficacy of Extended Time on Tests for Postsecondary
Students with Learning Disabilities. <u>Learning Disabilities: A Multidisciplanary Journal</u>, <u>10</u>
(2), pp. 47-56.)

"...students without learning disabilities are able to achieve in the above average range even when strict time limits are imposed. The extended and untimed test conditions allowed the group of students with learning disabilities to demonstrate their true knowledge of word meanings" (p. 53).

 (Weaver, S.M. (Spring, 2000). The Efficacy of Extended Time on Tests for Postsecondary Students with Learning Disabilities. <u>Learning Disabilities: A Multidisciplanary Journal</u>, <u>10</u>
 (2), pp. 47-56.)

"These results indicate that timed testing, rather than measuring students' with learning disabilities abilities, is measuring their inability to perform under time pressure; a condition which exacerbates the effects of their disability" (p. 53).

(Weaver, S.M. (Spring, 2000). The Efficacy of Extended Time on Tests for Postsecondary Students with Learning Disabilities. <u>Learning Disabilities: A Multidisciplanary Journal</u>, <u>10</u> (2), pp. 47-56.)

"Students with learning disabilities also reported lower levels of concentration than their peers without learning disabilities. Students with learning disabilities exhibit difficulties with selective attention...Because decoding difficulties slow the reading process comprehension, in turn, is impaired" (p. 53).

 (Weaver, S.M. (Spring, 2000). The Efficacy of Extended Time on Tests for Postsecondary Students with Learning Disabilities. <u>Learning Disabilities: A Multidisciplanary Journal</u>, <u>10</u>
 (2), pp. 47-56.)

- Books on Disk and Speech Synthesis
- Variable Speech Tape Players
 - See:



- Bryant, B.R., Bryant, D.P., and Rieth, H.J. (2002).

The Use of Assistive Technology in PostsecondaryEducation. In L.C. Brinckerhoff, et.al. (Eds.),PostsecondaryEducation and Transition forStudents with LearningDisabilities, Second Edition.Austin, TX: Pro ED, pp. 389-429.

HELPFUL BOOKS FOR PROFESSIONALS AND LOVED ONES



HELPFUL BOOKS FOR PROFESSIONALS AND LOVED ONES

- Mather, N & Goldstein, S. (2001). <u>Learning</u> <u>Disabilities</u> and Challenging Behaviors. Baltimore, MD: Brookes.
- Reid, G. & Fawcett, A. (2004). <u>Dyslexia in Context</u>. Philadelphia, PA: Whurr
- Nosek, K. (1997). <u>Dyslexía ín Adults</u>. Dallas, TX: Taylor.
- Bartlett, D. & Moody, S. (2000). <u>Dyslexia in the</u> <u>Workplace</u>. Philadelphia, PA: Whurr.
- Goldstein, S. (1997). <u>Managing Attention and Learning</u> <u>Disorders in Late Adolescence & Adulthood</u>. New York, NY: John Wiley & Sons.

*BOOKS IN THIS FONT ARE GOOD FOR THE LAYPERSON

HELPFUL BOOKS FOR PROFESSIONALS AND LOVED ONES

- Ríchards, R.G. (1999). <u>The Source for Dyslexía and</u> <u>Dysgraphía</u>. East Molíne, IL: LínguíSystems.
- Roffman, A.L. (2000). <u>Meeting the Challenge of</u> <u>Learning Disabilities in Adulthood</u>. Baltimore, MD: Brookes.
- Wren, C. & Einhorn, J. (2000). <u>Hanging by a Twig:</u> <u>Understanding and Counseling Adults with Learning</u> <u>Disabilities</u>. New York, NY: Norton.
- Rodís, P., Garrod, A., & Boscardín, M.L. (2001).
 <u>Learníng Dísabílítíes & Lífe Storíes</u>. Boston, MA: Allyn and Bacon.
- Shaywitz, S. (2003). <u>Overcoming Dyslexia</u>. New York, NY: Knopf.

*BOOKS IN THIS FONT ARE GOOD FOR THE LAYPERSON

Helpful Organizations

- Learning Disabilities Association (LDA): www.lda.org
- International Dyslexia Association (IDA): <u>www.interdys.org</u>
- Children and Adults with Attention Deficit Disorders (CHADD): <u>www.chadd.org</u>
- National Attention Deficit Disorder Association (ADDA): <u>www.add.org</u>
Helpful Organizations

- Nonverbal Learning Disabilities Association (NLDA): <u>www.nlda@nlda.org</u>
- Asperger Syndrome Coalition of the United States (ASC-US): <u>www.asperger.org</u>
- ADD WareHouse: <u>www.addwarehouse.com</u>
- LinguiSystems: <u>www.linguisystems.com</u>

- "Moreover, in the reading area, research is converging on a comprehensive model of the most common LD – dyslexia – that is grounded in reading development theory and accounts for neurobiological and environmental factors as well as for the effects of intervention (p. 1)."
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

"Moreover, in the reading area, research is converging on a comprehensive model of the most common LD – dyslexia – that is grounded in reading development theory and accounts for neurobiological and environmental factors as well as for the effects of intervention (p. 1)."

• Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford. "Neither Orton's theory of reading disabilities nor his observation that reversals were symptomatic of the disorder has stood the test of time...However, Orton's writings were highly influential in stimulating research, mobilizing teacher and parent groups to bring attention to reading disorders and other LDs, and on the development of instructional techniques for teaching children with reading disabilities" (p. 13).

Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From</u> <u>Identification to Intervention</u>. New York, NY: Guilford.

•

Samuel Kirk, Ph.D.

"I have used the term 'learning disabilities' to describe a group of children who have disorders in the development of language, speech, reading and associated communication skills needed for social interaction. In this group I do not include children with sensory handicaps such as blindness, because we have methods of managing and training the deaf and blind. I also excluded from this group children who have generalized mental retardation" (p. 2-3).

Kirk, S.A. (1963). <u>Behavioral Diagnosis and Remediation of Learning Disabilities</u>. Conference on Exploring Problems of the Perceptually Handicapped Child, 1, 1-23

What Happens to Dyslexics Long Term?

S.E. Shaywitz et al. (1999) reported that more than 70% of those who read poorly in grade 3 read poorly in grade 12 despite the fact that many of these children received special services through special education and other resources. Other longitudinal studies also failed to demonstrate differences in long term prognosis...in comparisons of poor readers defined as discrepant or low achieving" (p. 36).

- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.
- Shaywitz, S.E., Fletcher, J.M., Holahan, J.M., Scheider, A.E., Marchione, K.E., Stuebing, K.K., et al. (1999). Persistance of Dyslexia: The Connecticut Longitudinal Study at Adolescence. <u>Pediatrics</u>, <u>104</u>, 1351-1359.

"In recent imaging studies involving both early intervention and remediation of older students..., we likewise found that individuals who were nonresponders showed more severe reading difficulties prior to intervention. The differences in neuroimaging correlates between those who responded to intervention and those who did not respond to intervention were more dramatic. We found that nonresponders ..."

- "persist with a brain activation pattern that generally demonstrated a failure to activate left hemisphere areas know to be involved in the development of reading skills. In fact, nonresponders showed predominate right hemisphere activity much like that observed in children and with adults identified reading disabilities" (p. 53).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

- Listening comprehension problems are often found in children who have reading comprehension difficulties that do not have problems with single word reading.
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From Identification</u> <u>to Intervention</u>. New York, NY: Guilford.

• "Many individuals with LDs do have problems with social skills" (p.67).

 Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From Identification</u> <u>to Intervention</u>. New York, NY: Guilford.

- The child having difficulty should be assessed at least twice a year.
- The child having difficulty should be closing the gap significantly to those children progressing normally.
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From Identification</u> <u>to Intervention</u>. New York, NY: Guilford.

- Progress can be monitored by:
 - Norm referenced tests (i.e., WJ-III, etc.)
 - Criterion referenced tests
 - National Center for Student Progress Monitoring: <u>www.studentprogress.org</u>
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

- We have more research about "word recognition LD" than any other LDs.
- It is also the most common of the LDs.
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

- Spelling is also related to dyslexia
- Spelling is the ability to encode words
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

- "The distinction between word recognition and spelling, however, is important, because there are individuals for who spelling, but not word recognition, is the problem. These patterns are especially apparent in the identification of LDs in people who use languages that have more transparent relationships between phonology and orthography, such as German or Spanish" (p. 86).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

- Dyslexia manifests itself among those who read totally transparent phonetic languages primarily as problems with fluency.
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

- "The predominate core cognitive correlate of dyslexia (and word recognition) involves deficiencies in phonological awareness, a metacognitive understanding that the words we hear and read have internal structures based on sounds" (p. 87).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From Identification</u> <u>to Intervention</u>. New York, NY: Guilford.

- "Many individuals with dyslexia not only have difficulties in manipulating the sound structures of language, but also show difficulties on tasks that require them to name letters or digits (or even objects) as rapidly as possible" (p. 89).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

Prevalence of Dyslexia

- 10 to 15 percent of school-age children are dyslexic.
- 80 to 90% of the children in special education are dyslexic.

Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

- "Longitudinal studies show that, of children identified as reading disabled in graded 3 more than 70% maintain this status through grade 12. Studies of adults with WLRD find that the word reading difficulties persist and that the core cognitive correlates in the domain of phonological processing; also persist (p. 107).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

"Altogether, postmortem studies have found clear evidence of anomalies at both the subcortical and cortical levels in many parts of the brain" (p. 109).

Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> Disabilities: From Identification to Intervention. New York, NY: Guilford.

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Dyslexia in Other Countries

 English, French and Italian dyslexics have reduced activation during reading in the left occipitotemporal region.

Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

How to Teach Dyslexics to Read

Where to find evidenced based programs to help dyslexics learn to read: Florida Center for Reading Research: www.fcrr.org

- "The NPR (National Reading Panel-sic) found that phonemic awareness was most effective when it included a letter component, when instruction focused on one or two types of phonemic manipulations as opposed to multiple types, and when student were taught in small groups. Programs lasted less than 20 hours were typically more effective than longer programs, with single sessions lasting 25 minutes. There was little difference in effectiveness between classroom teachers and computers" (p. 130).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

- "The NRP (National Reading Panel-sic) found that phonemic awareness instruction was most effective when it included a letter component, when instruction focused on one or two types of phonemic manipulations as opposed to multiple types, and when students were taught in small groups. **Programs lasting than 20 hours were** typically more effective than longer programs, with single sessions lasting about 25 minutes" (p. 130).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

- "Remedial studies show that skills can be improved in students with LDs in reading, typically characterized by word recognition difficulties. The effects are most apparent in word recognition, but also show transfer to comprehension. Fluency gains are often smaller, but vary across studies and may reflect the age and severity of reading difficulties of the students addressed by the study" (p. 161).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From</u> <u>Identification to Intervention</u>. New York, NY: Guilford.

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What The Dyslexia Research Shows

"This research shows that the primary academic skill deficits that lead to identification of dyslexia involve problems with the accuracy and fluency of decoding skills, and spelling. Cognitive research identifies reliable correlates and predictors of these marker variables, the most robust involving phonological awareness. Additional cognitive processes involve rapid naming of letters and digits as well as memory for phonological material. Dyslexia has reliable neurobiological correlates, with a burgeoning evidence base on the neural correlates of word recognition and dyslexia. There is also substantial research identifying specific genetic markers of dyslexia that involve several different genes. Intervention studies have shown that dyslexia can be remediated when it is identified later in development" (p. 162)

Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning Disabilities: From</u> <u>Identification to Intervention</u>. New York, NY: Guilford.

- "The importance of fluency, however, extends beyond the development of word recognition skills and involves the concept of automaticity. When decoding is an automatic process, oral reading of text is effortless and requires little conscious attention, thereby permitting more resources to be allocated to higher-order processing of the text" (p. 165).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> Disabilities: From Identification to Intervention. New York, NY: Guilford.

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- In those who are native transparent language speakers (i.e., Italian, Spanish, etc.) the dyslexics manifest primarily as having a fluency difficulty when they start to learn to read. In those who are native language speakers of phonemically irregular languages (i.e. English, Dutch, etc.) dyslexic manifest primarily as having a problem with phonemic awareness when they start to learn to read.
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). Learning

- "the most frequently studied interventions involve different ways of encouraging students to practice reading such as by repeated reading or guided oral reading, and simply trying to increase the amount of time a student spends in independent reading" (p. 177).
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

• The research tends to indicate practice improves reading fluency.

Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford.

Where to Find Good Currículum Research

- Florida Center for Reading Research www.fcrr.org
- What Works Clearinghouse, Institute of Education Sciences, U.S. Department of Education: <u>http://ies.ed.gov/ncee/wwc/</u>

Where to Find Good In Class Skills Assessment Tools

Criterion Based Assessment (CBM)

National Center For Student progress
Monitoring: <u>www.studentprogress.org</u>

How to Enhance Outcomes for LD Students

- 1. Increase the amount of time on task
- 2. Provide instruction that is explicit, well organized, and routinely provides chances for review of previously mastered material.
- 3. Encourage students to self-monitor.
- 4. Use peer mediation to increase practice and generalization of learning.
- 5. While teachers work to strengthen foundational skills they should simultaneously work explicitly to improve the students text comprehension, written expression, and math problem solving.

How to Enhance Outcomes for LD Students

- 6. "Gains are specific to what is taught" (p. 273).
- 7. Make sure you work to integrate all the skills taught into a complete package of competence (i.e., word recognition, fluency and comprehension = reading).
- 8. Make sure your interventions and accommodations are designed for the individual.

How to Enhance Outcomes for LD Students

- 9. Frequently monitor progress to track needed changes in interventions.
- 10. Interventions designed for student must be systematically used in all educational settings.
- Fletcher, J.M., Lyon, G.R., Fuchs, L.S., and Barnes, M.A. (2007). <u>Learning</u> <u>Disabilities: From Identification to Intervention</u>. New York, NY: Guilford, pp. 272-273.