READING DIFFERENCES IN THE CLASSROOM Seminar for Cascia Hall Preparatory School Tulsa, Oklahoma August 11-12, 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). <u>The Blank Slate: The Modern Denial of Human Nature</u>. 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. <u>Learning Disabilities</u>, <u>11</u> (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 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>, 30 (3), pp. 12-15.

I.Q. is 60 to 65% genetic.

Barkley, R.A. (2002A, Tape 1). <u>ADHD Symposium: Nature, Diagnosis, and Assessment:</u> <u>Comorbidity and Developmental Course of ADHD</u>. University of Massachusetts, January, Distributed by Stonebridge Seminars, Westborough, MA 01581.

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Prevalence of Dyslexia

10 to 15 percent of schoolage children 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.

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 treatment. As a result, many adults with AD/HD struggle with chronic difficulties in relationships and in school and 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

WriteltNow (3/12/04). From website:

www.ravensheadservices.com/readability.htm, p. 3.

Reader's Digest: 9th grade

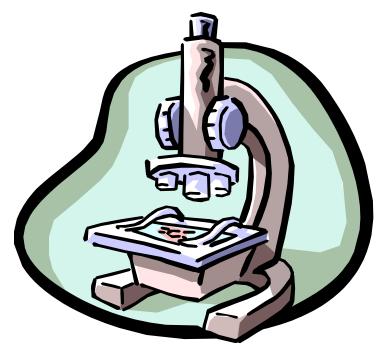
The English Language Learner Knowledge Base (3/12/04). From website: www.helpforschools.com/ELLK Base/practitionerships/Fog_Index_Readability.shtml .

 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





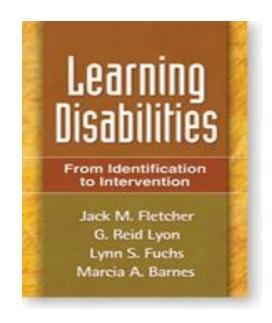
RESEARCH PROGRAM IN READING DEVELOPMENT, READING DISORDERS, AND READING INSTRUCTION

Initiated 1965

A Good Book That Summarizes this Research

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

http://www.guilford.com/cgibin/cartscript.cgi?page=pr/fletcher. htm&dir=pp/neuropsych&cart_id= 169929.5486



- 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!
- Study 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). <u>In Celebration of Science in the Study of Reading Development,</u>

 <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 Study of Naming Deficits: Systematic Interventions to Improve Fluency in Word Reading 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 and 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 Disorders, IV Edition</u>. Washington, DC: American Psychiatric Association.

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.

Reading Disorder-Dyslexia



The Symptoms of Dyslexia 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.

Rapid Automatized Naming Difficulties

"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.

Rapid Automatized Naming Difficulties

Problems with 'Demand Speech':

- "Bill in one minute I will be asking you who is buried in Grant's tomb."
- One minute later: "Bill who is buried in Grant's tomb?"

Anderson, C.W., Jr. (2000). Personal Communication.

THE PAOMNNEHAL PWEOR OF THE HMUAN MNID

 Aoccdrnig to rscheearch at Cmabrigde Uinervisy, it deosn't mttaer in waht oredr the Itteers in a wrod are, the olny iprmoatnt tihng is taht the frist and Isat Itteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm.

Davis, M. (2003). www.mrc-cbu.cam.ac.uk/~mattd/Cmabrigde/ (2188), p. 55. From website: www.mrc-cbu.cam.ac.uk/~mattd/Cmabrigde/newscientist_letter.html



"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.

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

Dyslexia And Gender

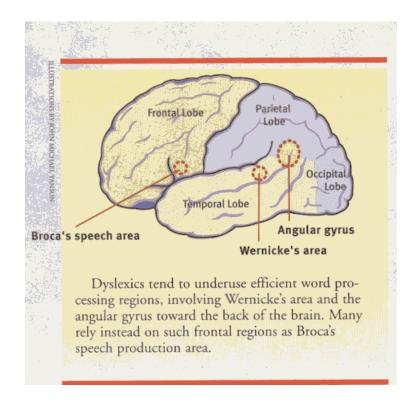


- Sally Shaywitz (1996) reported:
 - Women's brains appear to have bilateral phonological processing.
 - ◆ This may explain why women tend to have fewer language deficits after left brain strokes.
 - It may also explain why more women than men compensate for dyslexia

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.

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. Attention!, 6 (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

<u>Language Programs</u>.

Baltimore, MD:

International Dyslexia

Association.

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")
- Reading Comprehension and Rate Problems due to Depression/Anxiety

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

YES!

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



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. <u>Journal of Learning Disabilities</u>. <u>35</u> (2), pp. 39-56.

The Quality of Dyslexia Science

"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.

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 Identification to Intervention</u>. New York, NY: Guilford.

International Dyslexia Association

8600 La Salle Road, Suite 382

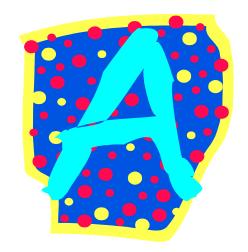
Baltimore, MD 21286-2044

Phone: 410-321-296-0232

Fax: 410-321-5069

Web: www.interdys.org

E-mail: info@interdys.org



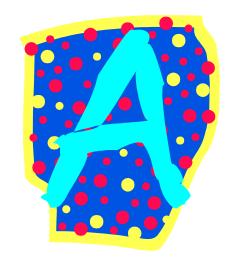
Learning Disabilities Association of America

4156 Library Road

Pittsburgh, PA 15234

Phone: 412-341-1515

Web: www.ldanat.org



American Speech-Language Hearing Association

10801 Rockville Pike

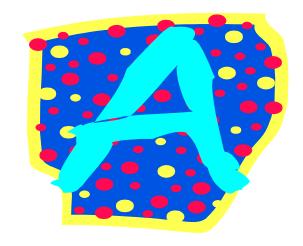
Rockville, MD 20852

Voice: 800-638-8255

TTY: 301-897-0157

Fax: 301-897-7355

Web: www.asha.org



- 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

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



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

Where to Find Good Curriculum Research

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

Where to Find Good In Class Skills Assessment Tools

- Criterion Based Assessment (CBM)
 - National Center For Student progress
 Monitoring: www.studentprogress.org

Accommodations for Dyslexics



 "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> for Postsecondary Students Provide Unfair Advantages.

Accommodations

 "When qualified students with learning disabilities were provided accommodations, the majority of those students 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 Comprehensive Guide to Attention Deficit Disorder in Adults: Research, Diagnosis and Treatment</u>. New York, NY: Bruner/Mazel, pp. 284-304/ Quoting: Vogel, S.A., and Adelman, P.B. (1993). <u>Success for College Students with Learning Disabilities</u>. New York, NY: Springer-Verlag.

Accommodations For Dyslexics

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
- copy of verbal instructions read by the proctor

Lorry, B.J. (1998). Language Based Learning Disabilities. In M. Gordon and S. Kiesser (Eds.), Accommodations in Higher Education Under the Americans with Disabilities Act (ADA): A No-Nonsense Guide for Educators, Administrators and Lawyers. New York, NY: Guilford, pp. 103-153.

Accommodations For Dyslexics





Recording for the Blind & Dyslexic

20 Roszel Road

Princeton, NJ 08540

866-RFBD-585

Voice: 800-221-4792

Website: www.rfbd.org

Accommodations for Dyslexics

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 Postsecondary Education. In L.C. Brinckerhoff, et.al. (Eds.), Postsecondary Education and Transition for Students with Learning Disabilities, Second Edition. Austin, TX: ProED, pp. 389-429.

Accommodations For Dyslexics

Quicktionary Reading Pen II
 WIZCOM Technologies, Inc.

257 Great Road

Acton, MA 01720

Voice: 978-635-5357

Fax: 978-929-9228

Web: www.wizcomtech.com



Dyslexía & Spelling are Related

- 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.

Accommodations For Dyslexics

 Franklin Speaking Language Master Special Edition

Franklin Electronic Publishers

One Franklin Plaza

Burlington, NJ 08016-4907

Voice: 800-266-5626

Fax: 609-239-5948

E-Mail: service@franklin.com

Web: www.franklin.com



THE UNDERLINING OPTION

"The 'Underlining Option' provides that, when students write essay tests or reaction papers, they should use the appropriate vocabulary but may underline all words they know or suspect they have misspelled. No points are deducted. This enables the teacher to better judge the student's intellectual capability or, at least, the knowledge acquired. In addition, a whole area of writing deficiencies emerge which can then be remediated. Subsequently, students produce better quality work, allowing the instructor to assess more accurately the mastered knowledge of the student. In-class papers can be used as a basis for referral to the skill center resource staff. Requiring in-class writing on a regular basis allows the teacher to assess the student's true abilities and ensures that the student's needs are detected."

Anderson, C.W., Jr. (1992). The Underlining Option. Reprinted from: <u>Their World</u>. From: http://www.edconsultmidwest.com/articles/option.htm

Accommodations For Dyslexics

Kurzweil 3000 and Kurzweil KNFB Reader

Kurzweil Educational Systems, Inc.

14 Crosby Drive

Bedford, MA 01730-1402

Voice: 800-894-5374

Fax: 781-276-0650

E-Mail: info@kurzweiledu.com

Web: www.kurzweiledu.com



Accommodations for Dyslexics

- Teach student how to use Cliff and Monarch notes appropriately:
 - Thoroughly read the Cliff/Monarch notes
 - Read first and last 20 pages of the book and 20 pages toward the middle of the book
 - Take copious notes from these readings
 - Review the materials several times before the test

Accommodations For Dyslexics



"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 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 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 Disabilities</u>, <u>24</u> (2), pp. 104-106.

- 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, 19 (6), 324-327.

Accommodations For Dyslexics

- 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. Learning Disabilities: A Multidisciplinary Journal, 12 (1), pp. 1-5.

Accommodations for Those with Learning Disabilities

Good resources to help decide which accommodations work with each weakness:

- Brinkerhoff, L.C., McGuire, J.M., and Shaw, S. (2002). <u>Postsecondary Education and Transition for Students with Learning Disabilities (Second Edition)</u>. 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.

- 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. There is no concept of "extended time."

(Ofiesh, N. (November 1, 2002). <u>Learning Disabilities and Extended Time Testing: An Everlasting Marriage.</u> Paper presented at First Annual SALT Conference: "Demystifying Learning Disabilities (LD) and Attention Deficit Disorders (ADHD) at the Postsecondary 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. (November 1, 2002). <u>Learning Disabilities and Extended Time Testing: An Everlasting Marriage.</u> 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, spelling, thinking and math disabilities.
- Ofiesh, N. (November 1, 2002). <u>Learning Disabilities and Extended Time Testing: An Everlasting Marriage.</u> Paper presented at First Annual SALT Conference: "Demystifying Learning Disabilities (LD) and Attention Deficit Disorders (ADHD) at the Postsecondary Level, Tucson, Arizona.

"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 Multidisciplinary 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 Multidisciplinary Journal</u>, <u>10</u> (2), pp. 47-56.

"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 Multidisciplinary Journal</u>, <u>10</u> (2), pp. 47-56.

Music and Dyslexia



- Often written music causes problems for dyslexics.
- Just as dyslexics have trouble with sound-symbol associations they can have the same difficulty with the notemusical sound connection.
- RAN can cause problems with rapid recall of music facts and names.
- They often can have problems reading words and notes simultaneously.
- Good Article: Brand, V. (Winter, 2000). Music and Dyslexia.
 Perspectives, 26 (1), pp. 36-37.

HELPFUL BOOKS FOR PROFESSIONALS AND LOVED ONES



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- Mather, N., and Goldstein, S. (2001). <u>Learning Disabilities and Challenging Behaviors</u>. Baltimore, MD: Brookes.
- Reid, G. & Fawcett, A. (2004). <u>Dyslexia in Context</u>. Philadelphia, PA:
- Nosek, K. (1997). <u>Dyslexia in Adults</u>. Dallas, TX: Taylor.
- Bartlett, D. & Moody, S. (2000). <u>Dyslexia in the 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.
- Silver, L.B. (2006). <u>The Misunderstood Child, 4th Edition</u>. New York, NY: Crown.
- *BOOKS IN THIS FONT ARE GOOD FOR THE LAYPERSON

HELPFUL BOOKS FOR PROFESSIONALS AND LOVED ONES

- Richards, R.G. (1999). <u>The Source for Dyslexia</u> and Dysgraphia. East Moline, IL: LinguiSystems.
- Roffman, A.L. (2000). <u>Meeting the Challenge</u>
 <u>of 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 Disabilities</u>. New York, NY: Norton.
- Rodis, P., Garrod, A., & Boscardin, M.L.
 (2001). <u>Learning Disabilities & Life</u>
 <u>Stories</u>. Boston, MA: Allyn and Bacon.
- Shaywitz, S. (2003). <u>Overcoming Dyslexia</u>. New York, NY: Knopf.

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Helpful Organizations

- Learning Disabilities Association (LDA): www.lda.org
- International Dyslexia Association (IDA): www.interdys.org
- 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): www.nlda@nlda.org
- MAAP Services for Autism and Asperger's Disorder: <u>www.maapservices.org</u>
- ADD WareHouse: <u>www.addwarehouse.com</u>
- LinguiSystems: <u>www.linguisystems.com</u>