What's the Question?

Questions and Answers on Reading, Reading Disability, Learning Disability and Dyslexia



What is a learning disability?

Chapter 34, C.F.R., Part 300.5 (b)(9) defines a learning disability as the following: "A specific learning disability is a disorder in one or more of the basic psychological processes involved in understanding or in using language spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia."

Learning Disabilities encompass a wide range of disorders in listening, speaking, reading, writing and mathematics that are frequently accompanied by deficits in attention and social behavior. Current estimates indicate that children with learning disabilities are 8 to 10% of the school-aged population and represent over half of the children who receive special education services.

Learning disabilities are considered the legitimate concern of many disciplines and professions including education, psychology, neurology, neuropsychology, optometry, psychiatry, and speech and language pathology. Each of these professions has focused on a different aspect of the child with a learning disability, so that there exist highly divergent ideas and often disagreements about the importance of etiology or the cause, diagnostic methods, intervention methods and professional roles and responsibilities. And nowhere is this more apparent than in reading and reading difficulties.

What is Dyslexia?

One of the most common problems attributed to a child identified as being learning disabled is an inability to read. A variety of terms have been used to refer to students with reading problems; one of the most common being dyslexic. The term dyslexia comes from the Greek language and means literally "difficulty with reading."

The following definition was developed in 1994 (Lyon, 1995) and further revised by the research committee of the International Dyslexia Association (Lyon et al., 2003):

Dyslexia is a specific learning disability that is neurobiological 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 problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (p. 1)

In an article written in 1994 entitled "How Successful Dyslexics Learn to Read" dyslexia was defined as "a gap or discrepancy between a person's achievement in reading and his or her mental ability." (Chall & Petersen, 1986.) The classic definition of dyslexia offered by special education and as defined in the dictionary is "an impairment of the ability to read." Dyslexia is sometimes viewed as a symptom of a specific learning disability, thus leading to some confusion of the terms.

To add to the confusion between a learning disability and dyslexia, the National Joint Committee for Learning Disabilities, in 1981, offered their own definition of learning disabilities as a "generic term that refers to a heterogeneous group of disorders." They specifically avoided the mention of "ill-defined conditions (e.g., perceptual handicaps, dyslexia, minimal brain dysfunction) that have caused so much confusion."

It must be noted, however, that identifying a child as dyslexic or learning disabled is not of paramount importance. Meeting the needs of the child regardless of label is the major concern. Researchers and practitioners have found that merely labeling a child dyslexic is "considered to be a rather obsolete diagnosis with no prognosis."

How do children learn to read?

The critical question to answer is how children learn to read, and specifically, read English. This question was a major focus of the now seminal work of the National Reading Panel (2000).

Reading requires the ability to decode words to comprehend text. A good reader does this automatically as they: are phonemically aware; understand the alphabetic principle; apply skills rapidly and fluently; possess strong vocabularies; possess strong syntactical skills; possess strong grammatical skills; and are able to relate reading to their own experiences. In addition, children who have stimulating literacy experiences from birth onward have an edge in vocabulary development, understanding the goals of reading, and developing an awareness of print and literacy concepts.

The work of the National Reading Panel has had a major influence on reorienting how we merge science into practice (2004). The Panel summarizes decades of reading research that summarizes key reading skills that need to be taught and learned to decrease the prevalence of reading difficulties including:

- Phonemic awareness: Understanding that spoken words are composed of sound parts called phonemes and understanding the sound structure of words without letters or written words present
- Phonics: The ability to link sound (phonemes) with letters
- Fluency: The ability to read a text accurately and quickly.
- Vocabulary: Refers to the words we must know to communicate effectively, including oral, speaking, reading, and writing vocabulary.
- Comprehension: The ability to understand what is read, and to remember what was read and communicate this with others.

Difficulties in any one of these areas can impede reading development. One of the more current and prolific researchers in this field, G. Reid Lyon from the National Institute of Child Health and Human Development in Bethesda, MD, stated that the lack of development of phoneme awareness can assist in predicting difficulties in learning to read and has a negative effect on reading acquisition. However, he goes on to say that, "whereas phoneme awareness is necessary; for adequate reading development, it is not sufficient." Children must also develop phonics concepts and apply them fluently in text. They must also develop reading comprehension strategies and also phonics, spelling and other language structures. Reid Lyon states that "each of these foundational skills should be taught and integrated into textual reading formats to ensure sufficient levels of fluency, automaticity and understanding."

Who has difficulty learning to read?

LDs now represent approximately one-half of all students receiving special education nationally (Donavon & Cross, 2002; President's Commission on Excellence in Special Education, 2002). For students of school age, the prevalence of dyslexia has been estimated as high as 17.4% (Shaywitz, 2004). It should be noted, however, that reading disabilities, in general, have been estimated at 10-15% (Benton & Pearl, 1978).

Children who are most at-risk for reading difficulties are those who do not have early literacy experiences, have not engaged in language play, or have limited exposure to reading. Students with these needs are often those raised in poverty, are ELL, or are in families with parents who have low literacy skills. Only a small number of these at-risk students have reading difficulties because of speech, hearing or language disability.

The number of students who have an identified learning disability, as stated previously, is about 10-12% of the population. In contrast, Reid Lyon has stated that as many as "35% of the school-aged population . . . struggle to read at a level of enjoyment. Approximately 18-20% of the total population of children struggle as a result of dyslexia." (Lyon, Nov. 2000, Washington, DC). In another 1997 report entitled Informed Instruction for Reading Success: Foundations for Teacher Preparation, prepared as a position paper of the Orton Dyslexia Society, it was estimated that by fourth grade 20% of children are dysfunctional readers. While the two reports project a large number of children with reading difficulties, both relied on data from Connecticut only and projections were based on only word recognition results. Connecticut may not be representative of the U.S. as a whole, word-recognition is only one aspect of the reading process, and 20% of children may have reading difficulties that are not indicative of a true learning disability.

Fortunately, there is strong and compelling evidence that comprehension instruction is associated with positive outcomes as summarized in a meta-analysis by Swanson (1999) and by the National Reading Panel (2000). Further evidence supports the efficacy of intensive intervention programs for students with dyslexia as demonstrated by Simos et al. (2002).

What is recommended?

Regardless of the etiology and regardless of the extent of reading difficulty, a focus on prevention, support and intense intervention is needed at all ages. The following recommendations are offered:

- Prevention In addition to stimulating oral/expressive language, language comprehension and print awareness, preschool and kindergarten teachers need to systematically and explicitly teach phoneme awareness, phonics, syntax, semantics and so forth as part of any reading program.
- **Screening** Systemic and systematic screening for reading concerns of all school-age students at least 3x per year. This universal screening will allow for intervention at the earliest indication of need.
- **Supportive** Teachers need to be provided instruction on the structure of language and the influence it has on the teaching of reading.
- Intensive For students with severe reading problems, reading specialist and special
 education personnel need to pinpoint students' specific areas of weakness and use
 language and reading based strategies and structured methods to target student's
 individual needs.
- High Quality Instruction/Intervention All students should be provided with
 systematic instruction in the five essential components of reading. For any student
 needing additional support, intervention should be targeted at specific skills and
 utilize a scientifically supported intervention approach, and be matched in intensity to
 the presenting concern.
- Data-Based Decision Making Building level teams, including parents, should use
 data collected on student progress over time to frequently review the adequacy of
 progress. When progress is insufficient to accelerate a child's learning and reduce the
 risk level, the teams will engage in appropriate problem-solving and redirect the
 student's plan of action.



Sources

Benton, A.L., & Pearl, D. (Eds.). (1978). Dyslexia. New York: Oxford University Press.

Crawford, P.A. (1995). "Early literacy: Emerging perspectives." <u>Journal of Research in Childhood Education</u>, 10(1), 71-86.

Donavon, M.S., & Cross, C.T. (2002). *Minority students in special and gifted education*. Washington, DC: National Academy Press.

Lyon, G.R. (2000). "Why reading is not a natural process." LDA Newsbriefs, Jan/Feb, 12-15.

Lyon, G.R. (1996). "The current state of science and the future of specific reading disability." Mental Retardation and Developmental Disabilities Research Reviews, 2, 2-9.

Lyon, G.R. (1995). "Research initiatives in learning disabilities: Contributions from scientists supported by the National Institute of Child Health and Human Development." <u>Journal of Child Neurology</u>, 10, 120-126.

Lyon, G.R. (1995). Toward a definition of dyslexia. Annals of Dyslexia, 45, 3-27.

Lyon, G.R. (1994). Toward a Definition of Dyslexia, 3-27.

Lyon, G.R., Shaywitz, S.E., & Shaywtiz, B.A. (2003). A definition of dyslexia. *Annals of Dyslexia*, 53, 1-14.

National Association of State Directors of Special Education (2006). *Response to intervention: Policy considerations and implementation*. Alexandria, VA: Author.

National Reading Panel (NRP). (2000). Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office.

Orton Dyslexia Society (1997). <u>Informed Instruction for Reading Success: Foundations for Teacher Preparation</u>. (A position paper of the Orton Dyslexia Society.) Baltimore, MD: author President's Commission on Excellence in Special Education. (2002). *A new era: Revitalizing special education for children and their families*. Washington, DC: U.S. Department of Education.

Torgerson, J.K. (1997). "Research on the prevention and remediation of phonologically-based reading disabilities." <u>Perspectives</u>, 27-28.

Shaywitz, S.E. (2004). Overcoming dyslexia. New York: Knopf.

Simos, P.G., Fletcher, J.M., Bergman, E., Breier, J.I., Foorman, B.R., Castillo, E.M., Davis, R.N., Fitzgerald, M., & Papanicolaou, A.C. (2002). Dyslexia-specific brain activation profile becomes normal following successful remedial training. *Neurology*, *58*, 1203-1213.

An Equal Employment/Educational Opportunity Agency

The Kansas State Department of Education does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: KSDE General Counsel, 120 SE 10th Ave.,

Topeka, KS 66612; 785-296-3201

Original author: Dr. Alexa Posny January 2, 2001 Revisions/Updates: Dawn Miller, SMSD 2008