Dyslexia Assessment: What Is It and How Can It Help?

Decades of research and national test scores confirm that reading problems commonly occur and affect as many as one in five bright and motivated students who have average or above average intelligence. Adult literacy problems are also common, affecting one in four who are intelligent but have not been able to attain a functional literacy level. Research demonstrates that additional direct instruction provided appropriately beginning in kindergarten through third grade, can help all but the most severely impaired students catch up to grade-level literacy skills and close the gap for most poor readers. Assessment is the first step in identifying these students early to make sure they receive the effective instruction they need to succeed.

Identifying Dyslexia

The key symptoms of dyslexia are problems with decoding or single word reading and/or poor reading fluency and poor spelling. Phonological weaknesses or disorders, specific language-based difficulties, are usually the underlying cause of the literacy problems associated with dyslexia. Comprehension may be impaired and writing skills will suffer if spelling is not mastered. Language and vocabulary problems can cause comprehension difficulties that can become more severe over time as academic demands increase. Poor readers may have weak vocabulary and background knowledge caused by reading less than average readers.

The problems associated with dyslexia are language-based, not visual and not related to cognitive skills or intelligence. Phonological processing problems are the principal cause of dyslexia. Phonological processing refers to the ability to analyze speech or spoken language, from identifying individual words, to word parts or syllables, and then into the smallest parts called phonemes or speech sounds. Because speech is produced rapidly, and sounds within spoken words are pronounced so quickly, phonemes overlap. Some individuals may experience difficulty with Rapid Automatic Naming that can compound the challenge of learning to read. Phonemes or speech sounds may vary by geographic region, or individual, and are often quite hard to distinguish. Assessment by a skilled professional can determine if the student struggles with phonological processing.

When students continue to struggle with literacy skills despite the provision of additional high quality expert instruction using Response to Intervention (RTI) / Multi-Tiered System of Support (MTSS), a formal clinical evaluation is needed to determine if they have dyslexia. Assessment of Dyslexia involves individual clinical testing, provided by a qualified professional who has had extensive clinical training in assessment as part of a graduate degree program. Clinicians who assess Specific Learning Disabilities (SLD) and dyslexia may have M.A., M. ED., Ed. D., or PH. D. degrees in Education, Reading, Educational Psychology or Psychology. Evaluation by a medical doctor or neuropsychologist is not required for assessment of SLD or dyslexia.

Educational testing can verify the presence of SLD or dyslexia and can provide the needed diagnostic documentation that is required for eligibility for specially designed instruction and accommodations throughout the educational career from elementary school through college and graduate school. Clinical assessment can document student progress; progress is demonstrated by an increase in standard scores or percentile ranks, not by an increase in age or grade equivalent scores. Adults with dyslexia may need accommodations in the work place such as extended time or electronic readers to accommodate diagnosed dyslexia.

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The Best Time to Assess

Federal law states that eligibility for SLD must consider a student's response to intervention or classroom instruction, commonly called Response to Intervention (RTI) or Multi-Tiered Systems of Support (MTSS). These terms reference educational research demonstrating that *appropriate* early intervention, provided in kindergarten through third grade three, is very effective in closing the gap for struggling readers. Early intervention or additional direct instruction should begin as early as kindergarten or first grade for struggling readers when the gap is small and students benefit from brain plasticity advantages for learning language-based information. When a student is not achieving at an average rate additional instruction (e.g. an additional hour of direct instruction for grades one through three) may be provided *immediately* to help them catch up. Student progress must be monitored using reliable and valid progress monitoring measures to be sure the gap is closing. Analysis of data must drive all school team decisions about a student's program and learning profile.

When students do not catch up after additional instruction and support using and RTI/MTSS approach, clinical evaluation is needed to determine and document the nature of the learning problem. After evaluation, the school team, will consider the case history and the testing data and will determine eligibility for Special Education services under IDEA (Individuals with Disabilities Education Act). Data and evaluation results should be shared with parents throughout this process. For students with diagnosed SLD and dyslexia, the plan is typically an Individualized Education Plan (IEP), which provides both remediation and accommodations. Independent (i.e. private) schools are not required to follow IDEA; therefore, they can decide if and how they are able to remediate and accommodate students with learning differences.

Another type of school plan, called a Section 504 Plan, comes under the Americans with Disabilities Act and provides only accommodations, focusing on granting access for individuals with handicapping conditions. A Section 504 Plan does not specify the provision of direct specially designed instruction or remediation.

Areas Assessed

The following areas should be assessed in an educational evaluation of dyslexia:

- Phonological Awareness – an individual's awareness of and access to the sound structure of his/her oral language
- Phonological or Language-Based Memory – ability to recall sounds, syllables, words
- Rapid Automatic Naming – speed of naming objects, colors, digits, or letters
- Receptive Vocabulary – understanding of words heard
- Phonics Skills – understanding of the symbol (letter) to the sound(s) relationship, either individually or in combination with other letters
- Decoding –ability to use symbol-sound associations to identify (read – pronounce) words
  - Real Words
  - Nonsense Words
- Oral Reading Fluency – ability to read accurately, at a story-telling pace – to facilitate / support comprehension
  - Single Words
  - Sentences and Paragraphs
- Spelling
- Writing
  - Sentence Level
  - Paragraph Level

Math assessment can be done as part of a complete educational evaluation and should include measures of untimed math calculations, math reasoning with math word problems read aloud and math fluency. Many students with language-based learning disabilities of dyslexia struggle to memorize language-based information such as multiplication tables, but may haveadequate math calculation and math

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reasoning skills when reading is accommodated (word problems read aloud). Other students may struggle with mathematical language and have problems with math word problems that go beyond decoding difficulties. The skilled clinician can analyze the student's strengths and weaknesses in math, considering the student's performance on each math subtest instead of relying solely on broad math scores that provide only an average of the subtest scores. For example, students who have average math calculation skills, untimed, and average math reasoning (math problems read aloud), may have weak math fluency. When this is the case, students need extended time to accommodate their demonstrated weak math fluency. Broad math scores that report the average of all subtests may mask individual weak areas. Careful analysis of a student's performance on educational subtests is needed for clinical assessment of learning needs. This will lead to appropriate and needed recommendations for remediation and accommodation.

What to Expect

Evaluation of dyslexia involves collecting information about birth history, family history, child development, including speech and language development and early educational history. The clinician, SLD Specialist, Dyslexia Therapist, or other trained professionals, must review school records incorporating any previous assessments or previous diagnoses and note early interventions, such as speech/language therapy, if any were provided. After clinical review or analysis of the collected data and information, the written report summarizes all the intake information and history. The report should clearly describe the referral questions or concerns that led to the assessment. For individual clinical assessment of SLD and dyslexia, a battery of tests is used to ensure reliability and validity. Standard scores and percentile ranks should be included in the report. Age and grade-level scores may be included, but they are just approximations and should never be relied upon as measures of academic achievement.

Scoring and interpretation are completed by the skilled clinician who synthesizes intake information, reports, test scores, interprets results, gives a clearly stated diagnosis when appropriate, and provides a well-written report to parents and the school team. If the student is diagnosed with SLD or dyslexia, the written report clearly states recommendations for remediation, also called specially designed instruction, as mandated by federal law. The written report also specified needed accommodations such as providing additional time for assessments or having tests read to the student.

Understanding the Scores

Cognitive or intelligence testing is not needed as part of the SLD identification process. Average or higher scores on measures of listening comprehension, receptive vocabulary, math calculation and math reasoning can demonstrate the presence of average or higher intellectual potential in the young student. Current federal special education law, IDEA, states that the use of severe discrepancy (the difference between cognitive or IQ scores and educational achievement scores) must not be required for identification of SLD including dyslexia. However, some students with complicated learning profiles such as twice exceptional students (most commonly, gifted students with SLD or dyslexia) will need cognitive or intellectual testing to demonstrate their unique learning profile and needs.

For older students, cognitive or IQ testing is still required for application for accommodations on high stakes tests such as SAT or ACT. Cognitive or IQ testing is also required for admission to most college and university programs that provide support for students with diagnosed SLD or dyslexia. A clear diagnostic statement must be provided in the written report to document the presence of the diagnosed SLD; qualifying language that does not provide a clear diagnosis

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(e.g., "symptoms are suggestive of…" or "may fit the profile of…") will not be accepted when applying for accommodations on high stakes testing or for accommodations at the college and university level.

Additional Supports

Students and adults with diagnosed dyslexia may need support and consultation to help them understand their unique learning profile. Evaluation for the presence of other conditions that commonly co-occur with SLD and dyslexia should be considered when appropriate. Ongoing family and educational support together with updated assessment information is needed to meet increased academic demands and to provide required documentation in academic settings and in the workplace.

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