

THE ROLE OF THE  
SCHOOL  
PSYCHOLOGIST IN THE  
IDENTIFICATION OF  
DYSLEXIA,  
DYSGRAPHIA, AND  
DYSCALCULIA



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*A guide to  
best practices  
for use in  
schools*

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## Background

In October 2016, the Maryland State Department of Education Division of Special Education/Early Intervention Services published a Technical Assistance Bulletin entitled *Specific Learning Disability and Supplement (focus on “Dyslexia, Dyscalculia, and Dysgraphia)*. The bulletin provided an overview of the special education evaluation and determination procedures for students meeting the criteria for a Specific Learning Disability (SLD) under the Individuals with Disabilities Education Act (IDEA), 20 U.S.C. § 1400; 34 CFR Part 300. The bulletin also highlighted the Individualized Education Program (IEP) Team’s role in addressing specific conditions underlying a student’s disability such as Dyslexia, Dyscalculia, and Dysgraphia. Students can be identified as having a SLD but may, or may not, also be identified with Dyslexia, Dyscalculia, or Dysgraphia.

## Purpose of this Guidance

This document is designed to provide best practices that school psychologists and IEP Teams can use in the identification of SLD, and the specific disorders that may underlie the SLD, such as processing deficits, dyslexia, dyscalculia, and dysgraphia. This guidance document will supplement, and is not meant to replace, the Technical Assistance Bulletin on *Specific Learning Disability and Supplement*. This is intended as a best practices document for local school systems and IEP Teams. For more information on specific local school system practices for the identification of SLD, dyslexia, dyscalculia, and dysgraphia, please contact the local school system’s Office of Special Education.

## Introduction: What is a Specific Learning Disability?

The category of SLD represents the largest category of students with disabilities in the United States, with approximately 34 percent of students in special education identified with a SLD in the United States. In the State of Maryland, there are approximately 28 percent of students in special education who are identified with a SLD. A SLD is defined in the Code of Maryland Regulations (COMAR) as a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations (COMAR 13A.05.01.03). Under the Individuals with Disabilities Education Act (IDEA), a SLD is defined similarly and it adds the following: *including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia*. See 20 U.S.C. §1401(30) and 34 CFR §300.8(c)(10) (emphasis added) and COMAR 13A.05.01.03.

Definitions for Dyslexia, Dyscalculia, and Dysgraphia are as follows:

**Dyslexia:** According to the International Dyslexia Association, 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 relationship to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension, vocabulary growth, and background knowledge ( <https://dyslexiaida.org/definition-of-dyslexia/> ).

**Dysgraphia:** Dysgraphia is a neurologically based SLD that can be characterized as difficulties with spelling, poor handwriting, and trouble putting thoughts on paper. It can be a language based and/or non-language-based disorder. When it is language based, a student may have difficulty converting the sounds of language into written form, or knowing which alternate spelling to use for each sound. When it is non-language based, a student may have difficulty performing the controlled fine motor skills required to write. Students with dysgraphia may speak more easily and fluently than they write (<https://dsf.net.au/what-is-dysgraphia/>).

**Dyscalculia:** Dyscalculia is a neurologically based SLD that is characterized by unusual difficulty solving arithmetic problems and grasping math concepts. The most common problem is with “number sense.” This is an intuitive understanding of how numbers work and how to compare and estimate quantities. Students may know *what* to do in math class, but not understand *why* they are doing it because the logic behind the calculation is missing (<https://www.understood.org/en/learning-attention-issues/child-learning-disabilities/dyscalculia/understanding-dyscalculia> ).

The determination of whether a student has a SLD, the resulting impact, and determinations about whether specific processes are involved which can be further defined as dyslexia, dysgraphia, or dyscalculia is an IEP Team decision. School psychologists, as critical members of IEP Teams, have specialized skills which can assist in determining the identification of the underlying processing or neurobiological deficit of a SLD and whether characteristics and behaviors consistent with dyslexia, dysgraphia, and dyscalculia are present.

## Early Intervention of Students with Reading, Writing, and Math Challenges

The accurate identification of SLD in general, and dyslexia, dysgraphia, and dyscalculia in specific, is a complex task. However, there are several contributing factors that are important to consider when a student is first identified as having academic challenges. For example, the age at which the student is exhibiting the difficulties; access to adequate instruction for reading, writing, and math; and positive response to the implementation of interventions designed to address academic concerns, are all essential for the data-based decision making for early intervention practices. School attendance is also a necessary requirement to avoid some academic challenges. A description of effective early intervention processes, and the fit within a

multi-tiered system of support (MTSS), can be found in the document entitled: *A Tiered Instructional Approach to Support Achievement for All Students: Maryland's Response to Intervention Framework* (June 2008), which can be accessed at the following link: [http://archives.marylandpublicschools.org/NR/rdonlyres/D182E222-D84B-43D8-BB81-6F4C4F7E05F6/17125/Tiered\\_Instructional\\_ApproachRtI\\_June2008.pdf](http://archives.marylandpublicschools.org/NR/rdonlyres/D182E222-D84B-43D8-BB81-6F4C4F7E05F6/17125/Tiered_Instructional_ApproachRtI_June2008.pdf)

Classroom-based interventions are a first step when suspecting that a student might have a SLD or is demonstrating the characteristics of a student with a processing deficit, dyslexia, dysgraphia, or dyscalculia. Many schools have student support teams, grade-level teams, or other school-based teams that include a variety of professionals such as administrators, special educators, classroom teachers, school psychologists, school counselors, school nurses, pupil personnel workers, and other staff who can provide problem-solving support to teachers to help students who are struggling academically. The interventions that result from these meetings should be feasible and practical for implementation in the general education setting and should be monitored regularly by the school-based team for fidelity of implementation and for student progress.

When factors such as attendance and medical concerns are not an issue, and when instruction has been demonstrated to be adequate, but early intervention strategies have not been effective, consideration of an educational disability, such as a SLD, may be appropriate. School psychologists can be instrumental in identifying factors that may be impeding academic progress that are not indicative of a learning disability. Those factors might include, but are not limited to, the following: lack of appropriate instruction or intervention, English Language Learner status, lack of an instructional match with curriculum material or instructional tasks, language development, and motor concerns. School psychologists can also assist with the identification of appropriate interventions and can provide effective consultation support to classroom teachers and other school staff for intervention implementation and monitoring. When the desired outcomes are not achieved, school psychologists can provide support in determining next steps.

The following chart provides an example of areas that could be considered when suspecting a student may have a SLD based on a processing deficit, lack of response to intervention, or another possible cause such as dyslexia, dysgraphia, or dyscalculia. Please note that the presence of one or more data points in an area does not necessarily point to a disability:

## Areas to be Considered When Suspecting a Specific Learning Disability

Area	Data to Consider
Reading	<ul style="list-style-type: none"> <li>• Family history of Dyslexia</li> <li>• Early reading/language concerns</li> <li>• Rapid Automatized Naming (colors/objects/letters)</li> <li>• Phonological processing/phonemic awareness</li> <li>• Printing of upper and lowercase letters</li> <li>• Phonological short-term memory</li> <li>• Normed oral reading fluency</li> <li>• Sight word/nonsense word decoding</li> <li>• Spelling</li> <li>• Written Expression</li> </ul>
Writing	<ul style="list-style-type: none"> <li>• Family history of Dysgraphia</li> <li>• Dictated letter writing</li> <li>• Rapid Automatized Naming of letters</li> <li>• Printing of upper and lowercase letters</li> <li>• Spelling</li> <li>• Copying and letter spacing</li> <li>• Organizing and composing words on paper</li> <li>• Sound/symbol association</li> <li>• Logical order of words and ideas</li> <li>• Attention and working memory</li> </ul>
Math	<ul style="list-style-type: none"> <li>• Family history of Dyscalculia</li> <li>• Rapid Automatized Naming of numbers</li> <li>• Number sense</li> <li>• Comprehension of number quantity</li> <li>• Math procedures and processes</li> <li>• Visuospatial skills</li> <li>• Number manipulation</li> <li>• Number retention</li> <li>• Multi-step problem solving</li> <li>• Math fact fluency</li> </ul>

*Note: Information adapted from Psychological Services Divisions from Anne Arundel County Public Schools; Baltimore City Public Schools; Baltimore County Public Schools, Frederick County Public Schools; Howard County Public Schools; and Montgomery County Public Schools.*

### **The School Psychologists’ Role in Consideration of a Specific Learning Disability Including Dyslexia, Dysgraphia, and Dyscalculia and Implications for Assessment**

The COMAR regulations identifying the criteria for determination of a SLD (13A.05.01.06) allow local school systems flexibility when conducting evaluations. Depending on the age of the student, and whether the evaluation is an initial or re-evaluation, one model may be more appropriate than another. As a result, there may be variations in the evaluations of students suspected of having a processing deficit, dyslexia, dysgraphia, or dyscalculia by different school

systems. However, there are research-based practices that should be consistently applied to ensure accurate identification and the provision of appropriate services. In Maryland, there are three commonly used practices in determining SLD eligibility:

- The **Discrepancy Model** compares cognitive assessment scores to academic assessment scores. As stated in COMAR and the MSDE Division of Special Education and Early Intervention Services Technical Assistance Bulletin (*Specific Learning Disability and Supplement*, 2017), school systems are not required to use a severe discrepancy model, but it remains an available option to identify SLD and may be especially useful for identifying students who are twice exceptional and/or re-evaluating older students who have received and benefitted from services based on previous identification as a student with a SLD.
- **Response to Intervention (RTI) Model** analyzes how a student progresses when given specific, researched-based interventions that have been implemented with fidelity to target skill deficits.
- The **Pattern of Strengths and Weaknesses (PSW) Model** identifies a processing deficit in a specific area of psychological functioning.

As a result, there may be variations in the evaluations of students suspected of having dyslexia, dysgraphia, or dyscalculia across local school systems. Some of the key elements of a comprehensive evaluation for any disability might include the following:

- Family history and background, including any exclusionary factors;
- Record review;
- Identification of a processing deficit;
- Identification of a pattern of strengths and weaknesses using data collected on the student's academic performance and/or on cognitive instruments;
- Student response to previous interventions; and
- Data on the student's academic performance through the use of an evidence-based measure (for example, Curriculum-Based Measurement or Curriculum-Based Assessment ), diagnostic instruments (used to determine a student's progress from instruction and intervention), standardized assessments (allowing a comparison to grade-level expectations for student performance on a nationwide level) to reinforce academic impact of a processing deficit, or a significant pattern of strengths and weakness resulting in deficits in learning.

Some areas to consider when assessing for dyslexia, dysgraphia, and dyscalculia are listed in the chart below:

Area	Areas to Consider for Assessment*
Dyslexia	<ul style="list-style-type: none"> <li>• Rapid Automatized Naming (colors/objects/letters)</li> <li>• Phonological processing/phonemic awareness</li> <li>• Phonological short-term memory</li> <li>• Normed oral reading fluency</li> <li>• Sight word/nonsense word decoding</li> <li>• Orthographical Processing</li> <li>• Spelling</li> <li>• Reading Comprehension as a secondary consequence</li> </ul>
Dysgraphia	<ul style="list-style-type: none"> <li>• Copying (visual motor integration)</li> <li>• Dictated letter writing</li> <li>• Phonics/Sound/symbol association</li> <li>• Printing of upper and lowercase letters</li> <li>• Letter spacing/handwriting</li> <li>• Spelling</li> <li>• Organizing and composing words on paper</li> <li>• Logical order of words and ideas</li> <li>• Writing fluency</li> </ul>
Dyscalculia	<ul style="list-style-type: none"> <li>• Rapid Automatized Naming of numbers</li> <li>• Working Memory</li> <li>• Number sense</li> <li>• Comprehension of number quantity</li> <li>• Math procedures and processes</li> <li>• Visuospatial skills/pattern recognition</li> <li>• Number manipulation</li> <li>• Number retention</li> <li>• Multi-step problem solving</li> <li>• Math fluency</li> </ul>

*\*Assessments may be formal or informal and data sources may be gathered by other service providers and staff.*

The IDEA requires that a processing deficit in the psychological areas be identified that significantly impacts the student’s learning in a way that requires specialized instruction. School psychologists are the designated school assessors to determine cognitive factors impacting learning, social/emotional, and mental performance. School psychologists, like other team members, must also consider exclusionary factors and responsiveness of the student to instruction in the general education setting, with remedial instruction (re-exposing the student to the instruction) or specialized instruction (understanding why the student is not learning and designing a program to help the student learn). Exclusionary factors are defined under the IDEA, and COMAR. Attendance, for example, is a factor to consider because a lack of exposure to the curriculum and practice of taught skills can impact a student’s learning at any grade level. In

early grades, this might impact the acquisition of basic skills, while in higher grades this may result in a lack of content acquisition.

Other factors for consideration include sensory deficits in areas such as vision or hearing, physical motor based challenges, significant cognitive deficits (i.e., an intellectual disability), significant interfering behaviors, limited English language proficiency, a lack of exposure to enriching academic materials or learning opportunities, or environmental disadvantages (i.e. homelessness, neglect). In addition, adequate instruction can affect skill acquisition and can be impacted by absences and moving schools often. These exclusionary criteria need to be reviewed every time a student is considered for a possible educational disability in any area of functioning, including SLD, to ensure that the appropriate decisions are made by the IEP Team (Flanagan, Fiorello, & Ortiz, 2010). They should also be considered prior to undertaking the evaluation if the exclusionary factors are present to a significant degree.

School psychologists also have an important role in helping to review a student's response to intervention (RTI). The IDEA has left it to States to determine if they will: 1) select only RTI to determine if a child requires specialized services or, 2) use traditional psychological and educational tests, or 3) a combination of both. In Maryland, the decision regarding the approach to use is a local school system decision. There has been increased emphasis on early learning within the general education setting to avoid deficits for students by providing adequate instruction and early intervention, and examining factors such as the type of intervention either in *duration* (15 minutes versus one hour), *frequency* (1 time per week versus 2 times per week) or *intensity* (one-to-one instruction versus small group or larger group). School psychologists can assist teachers in early and repeated screenings to ensure that students are making the gains expected.

School psychologists can also be instrumental in helping teachers to understand the student's needs, as well as in identifying targeted, research-informed interventions to address those skill needs. Early intervention has been found to increase student outcomes and decrease the need for special education services. In addition, school psychologists are instrumental using a variety of tests to assist in understanding the cognitive and academic functioning of students. The school psychologist can also assist in determining the presence of a processing deficit, which may, or may not be, labeled as dyslexia, dysgraphia or dyscalculia. Each of the tests used by the school psychologist has a specific underlying theory about cognitive processing and how it should be measured.

The National Association of School Psychologists (NASP) recommends an individualized comprehensive assessment for students referred for special education evaluations. This comprehensive assessment is typically conducted by a multi-disciplinary team (these individuals are typically members of the IEP Team and are required under the IDEA). The

evaluation needs to include measures of academic skills (both norm-referenced and criterion-referenced), a cognitive assessment, a mental health assessment (to evaluate social-emotional and behavioral functions), oral language assessments if necessary, classroom observations, and teacher, parent, and student reports (National Association of School Psychologists, 2011).

Assessments for determination of SLD should not be completed by any one specific discipline, but rather by school personnel with specific training in various assessment areas. Speech-language pathologists, for example, may be the best individuals to assess receptive and expressive language as well as specific types of auditory processing assessments. Motor-based challenges with writing, as an example, are often completed by Occupational Therapists. Teachers trained in standardized administration, scoring, and subsequent interpretation of achievement-based measures may conduct those assessments as part of the evaluation. School psychologists are specifically trained in the administration of cognitive measures as well as the administration of processing based instruments. Tests used by school psychologists assess a variety of cognitive functions. There are cognitive assessments that assess overall cognitive processes, while others assess memory or executive functioning, for example. In addition, the IEP Team may recommend additional measures based upon the presenting concerns of the student, such as socio-emotional and behavioral assessments. An observation of the student in the classroom and in other school settings is also essential in the data gathered for a comprehensive evaluation. In this way, various team members assist in determining, through the collection of specific data, whether a student has a processing deficit that significantly impacts learning, and is eligible for, and in need of, special education services.

With regard to the specific determination, or use, of the terms dyslexia, dyscalculia, and dysgraphia as part of school district's evaluations, it is important to note that a recent ruling indicates "there is no requirement under IDEA that a disability label or "diagnosis" be given (Letter to Undersall, 68 IDEALR 22 (OSERS 2016). In addition, in *Kathryn F. vs W. Chester Area School District*, 62 IDELR 177 (E.D. Pa. 2013), the hearing officer in the case found that the district's failure to identify the student's diagnosis of dyslexia is only relevant if it results in a denial of FAPE (Free Appropriate Public Education). Thus, if school districts provide FAPE for students under ADA Section 504 or IDEA, then it is not necessary for the district to identify the term "dyslexia", "dyscalculia", and/or "dysgraphia" in their evaluation materials.

## **Considerations for the IEP Team**

The determination of a SLD and the presence of dyslexia, dyscalculia, and dysgraphia are IEP team decisions. The determination may include consideration of the following:

- Exclusionary factors listed in COMAR should be considered. The wording is as follows:

*The IEP team shall not determine a student has SLD if the student's lack of achievement is primarily the result of:*

- *visual, hearing, or motor impairment*
- *intellectual disability*
- *emotional disability*
- *cultural factors*
- *environmental, cultural or economic disadvantage*
- *limited English proficiency*

*(Authority: 34 CFR §300.309; COMAR 13A.05.01.06D(2)(b))*

- Response to previous interventions/ Response to Intervention Data
- Need for involving other disciplines when necessary (OT/PT/speech)
- Eligibility for the educational criteria required for SLD. If a student is eligible for services under the category of SLD, then the team can consider whether or not the student demonstrates a processing deficit that meets the criteria for dyslexia, dysgraphia, or dyscalculia.
- Multiple data points used to determine if a student has dyslexia, dysgraphia, or dyscalculia.
- Results from an observation as part of their evaluation conducted by the school psychologist, special Educator, or other IEP Team member.
- An occupational therapist assessment should be considered with Dysgraphia - but it does not rule it out.

Dyslexia, dysgraphia, and dyscalculia involve deficits in areas of psychological and cognitive processing that are directly related to an area of academic weakness. These deficits are typically neurologically based. Data should be compared among all disciplines represented on the IEP Team to get the most accurate picture (e.g., school psychologist, speech language pathologist, occupational therapist, special educator, etc.).

## **The School Psychologist's Role in Understanding When a 504 is Appropriate Versus an IEP**

Students may be eligible for services under either the IDEA or the Rehabilitation Act Section of 1973 (Section 504). Although some students may be identified with a processing deficit, dysgraphia, dyslexia, or dyscalculia, they may not require specialized instruction which falls under the IDEA. If accommodations are needed, the student may require a 504 plan. A student qualifies to receive a 504 if they have a physical or mental impairment that substantially limits a major life activity. A SLD is an example of a physical or mental impairment. Dyslexia is also an example of a SLD. Thus, depending on the severity of the disability, the student could receive a Free and Appropriate Public Education (FAPE) using a 504 Plan. For example, if a student struggles with writing or spelling they might be granted accommodations that would provide support in the general education curriculum.

## Importance of Team-Based Decision Making

The complex nature of identifying students who are eligible for services under SLD or who can be further classified as having dyslexia, dysgraphia, or dyscalculia requires a team-based approach of skilled and talented school professionals. The IEP Team is the heart of this process. Each member is a valuable contributor in terms of data and expertise to determine the best educational decisions for students.

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