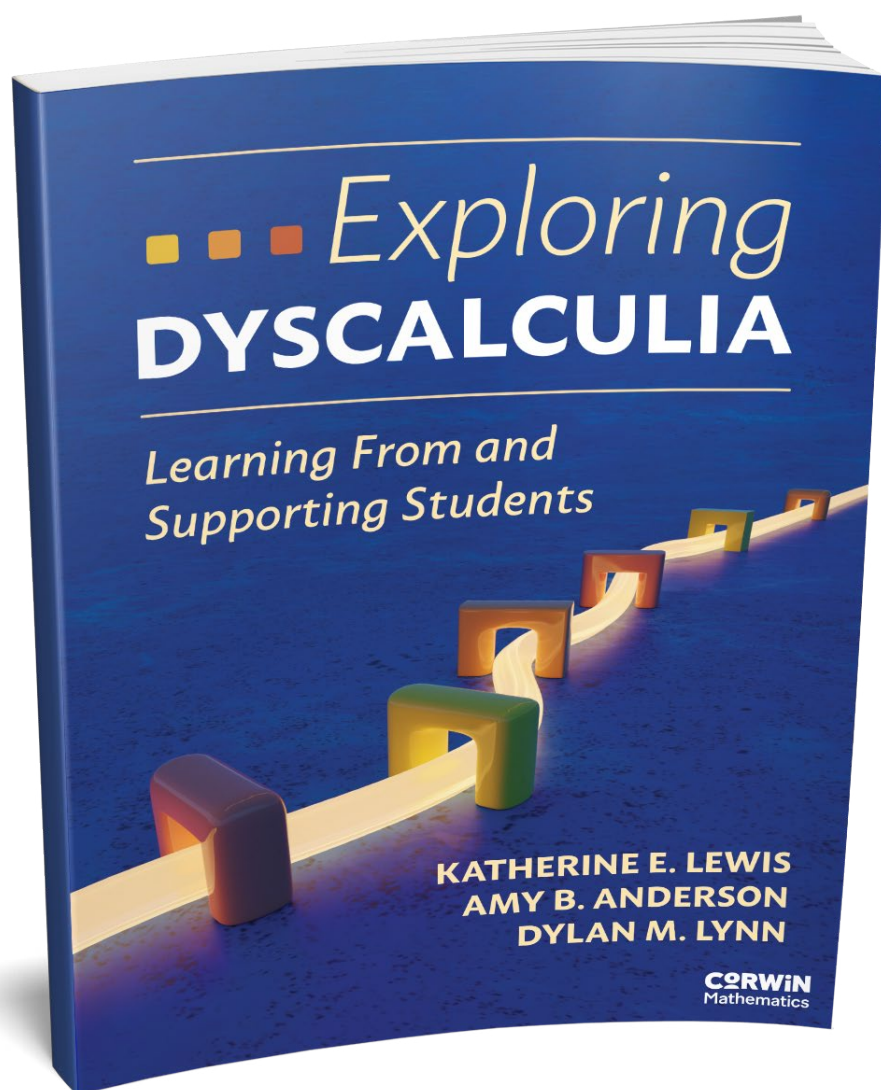


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HOW DO YOU TELL IF A STUDENT HAS DYSCALCULIA?

Perhaps you have been told by a pediatric neurologist or a school psychologist that a student in your class has dyscalculia. You may have a student with a math goal on their IEP and wonder if they might have dyscalculia. You could also have a student who has no identified disability but is struggling with math so profoundly, you wonder about dyscalculia. Unfortunately, defining exactly what dyscalculia is and who has it is not a straightforward process. This is a problem in both research and practice.

The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; *DSM–5*; American Psychiatric Association, 2013) defines dyscalculia as a specific learning disorder in mathematics (see Figure 1.1).

Figure 1.1 • *Definition of dyscalculia from the DSM–5*

Definition of Specific Learning Disorder in Mathematics (Dyscalculia)

Student must:

- Demonstrate a history of difficulties in mathematics (at least 6 months)
- Have low achievement in mathematics compared to peers
- Have sufficient educational opportunity

Student may:

- Have difficulty understanding numbers, magnitude, and relationships
- Count on fingers rather than retrieving math facts from memory
- Get confused when solving problems and switch procedures
- Have difficulty applying math concepts, facts, or procedures to solve problems

Student must not:

- Have another primary disability
- Experience adverse environmental conditions like:
 - Economic disadvantage
 - Insufficient instruction
 - Difficulties with language fluency

SOURCE: *Diagnostic and Statistical Manual*, 5th ed.

Students with dyscalculia have difficulty with number sense, memorization of math facts, accurate and fluent calculation, and math reasoning. The *DSM-5* criteria require that students demonstrate a history of difficulty despite sufficient educational opportunity. The student must have low math achievement compared to their peers, and these difficulties cannot be attributed to another disability or adverse environmental conditions like economic disadvantage or language fluency. In educational research, there are a plethora of terms used to refer to dyscalculia: mathematics learning disability, arithmetic disability, math disability, mathematics difficulty, or learning disability in mathematics. Researchers still disagree about exactly what dyscalculia is and the best way to identify students with it (Lewis & Fisher, 2016). Because there is no test, researchers often use low math achievement test scores to identify students with dyscalculia (e.g., students scoring below the 10th or 25th percentile). Unfortunately, the use of different tests and different criteria to determine which students have dyscalculia makes it very difficult to compare findings across studies (Lewis & Fisher, 2016). In addition, researchers are rarely able to determine if the student's low achievement test score is due to dyscalculia or to environmental factors (e.g., insufficient educational opportunity). It is not surprising that many studies report somewhat different findings and that often the findings mirror patterns of difficulties similar to the achievement measures used to identify students in the first place.