

Learning Disabilities/Specific Learning Disorder/Dyslexia 101

Beth Pollock, Ph.D., C.Psych.
Clinical Director, RARC



Regional Assessment Resource Centre (RARC)

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Transition



Research



Training



Assessment

Outline:

1. What are Learning Disabilities/Specific Learning Disorders/Dyslexia?
2. How is it diagnosed?
3. How can we support individuals diagnosed with such a condition?



Learning Disability (OPA Consensus)

All of the following criteria must be met to make a diagnosis of Learning Disability:

- A. History of academic functioning below the level typically expected for individuals of the same chronological age, or the need for excessive time or support to develop or maintain typical levels of academic functioning.**
- B. Below average academic achievement (i.e., at least one standard deviation below the mean) in at least one of:**
 - **Reading** - word identification or pseudo-word reading; fluency in reading individual words or text; timed or untimed literal or inferential reading comprehension.
 - **Writing** - production fluency for handwriting or typing; spelling from dictation and in text; sentence structure; conventions of print; vocabulary; ideation; organization of written text.
 - **Mathematics** - calculation, including but not limited to: numeracy, algebra, geometry and calculation fluency; applications such as the understanding of time, money, measurement, data analysis; and word problem-solving including geometry and data interpretation.



Learning Disability (cont'd)

- C.** Evidence that the difficulties in reading or writing or mathematics are **logically related to deficits in psychological processes**. These processes include:
- phonological processing;
 - orthographic processing;
 - rapid automatized naming;
 - memory;
 - processing speed;
 - receptive language;
 - expressive language;
 - visual-spatial abilities;
 - visual-motor integration;
 - executive functioning.
- D.** **At least average abilities** essential for thinking and reasoning.
- E.** Evidence that the difficulties in reading, writing, or mathematics **cannot be accounted for primarily by other factors**.

[OPA-Guidelines-for-Diagnosis-and-Assessment-of-Learning-Disabilities-03-2020-1.pdf](#)



Specific Learning Disorder (DSM-5)

A. Difficulties learning and using academic skills, as indicated by the presence of at least one of the following symptoms that have **persisted for at least 6 months, despite the provision of interventions** that target those difficulties:

1. Inaccurate or slow and effortful word reading (e.g., reads single words aloud incorrectly or slowly and hesitantly, frequently guesses words, has difficulty sounding out words).
2. Difficulty understanding the meaning of what is read (e.g., may read text accurately but not understand the sequence, relationships, inferences, or deeper meanings of what is read).
3. Difficulties with spelling (e.g., may add, omit, or substitute vowels or consonants).
4. Difficulties with written expression (e.g., makes multiple grammatical or punctuation errors within sentences; employs poor paragraph organization; written expression of ideas lacks clarity).
5. Difficulties mastering number sense, number facts, or calculation (e.g., has poor understanding of numbers, their magnitude, and relationships; counts on fingers to add single-digit numbers instead of recalling the math fact as peers do; gets lost in the midst of arithmetic computation and may switch procedures).
6. Difficulties with mathematical reasoning (e.g., has severe difficulty applying mathematical concepts, facts, or procedures to solve quantitative problems).

Specific Learning Disorder (DSM-5)

- B.** The **affected academic skills are substantially and quantifiably below those expected for the individual's chronological age**, and **cause significant interference** with academic or occupational performance, or with activities of daily living, as confirmed by individually administered standardized achievement measures and comprehensive clinical assessment. For individuals age 17 years and older, a documented history of impairing learning difficulties may be substituted for the standardized assessment.
- C.** The **learning difficulties begin during school-age years** but may not become fully manifest until the demands for those affected academic skills exceed the individual's limited capacities (e.g., as in timed tests, reading or writing lengthy complex reports for a tight deadline, excessively heavy academic loads).
- D.** The learning difficulties are **not better accounted for** by intellectual disabilities, uncorrected visual or auditory acuity, other mental or neurological disorders, psychosocial adversity, lack of proficiency in the language of academic instruction, or inadequate educational instruction.

Note: The four diagnostic criteria are to be met based on a clinical synthesis of the individual's history (developmental, medical, family, educational), school reports, and psychoeducational assessment.

Developmental Dyslexia (ICD-11)

- Developmental dyslexia has received various names and has been given different definitions.
- According to the World Health Organization's (WHO) most recent classification (ICD-11), it is currently known as:
 - “developmental learning disorder with impairment in reading” and defined by **“significant and persistent difficulties in learning academic skills related to reading, such as word reading accuracy, reading fluency, and reading comprehension”**.
 - It markedly affects performance in reading, and is not due to “a disorder of intellectual development, sensory impairment (vision or hearing), neurological disorder, lack of availability of education, lack of proficiency in the language of academic instruction, or psychosocial adversity.”
- According to the DSM-5-TR, Dyslexia is an alternative term used to refer to a pattern of learning difficulties characterized by problems with accurate or fluent word recognition, poor decoding, and poor spelling abilities.

Ability-Achievement Discrepancy?

- The ability-achievement discrepancy criterion has been discredited and is not consistent with best practices (see OPA Consensus for a more comprehensive summary):
 - Due to the normal variability in test scores in typically developing children and adults, individuals with an ability-achievement discrepancy often score in the average or above average range on all areas of achievement (Binder et al., 2009; Brooks et al., 2009; Brooks, 2011; Fletcher et al., 2005).
 - There are serious psychometric problems, including measurement error, regression to the mean, and low classification stability (Cotton et al., 2005). For example, more than 30% of students with a significant ability-achievement discrepancy in Grade 3 no longer showed this discrepancy in Grade 5 (Francis et al., 2005).
 - Ability-achievement discrepancy is not a strong predictor of impairment (B. J. Lovett et al., 2009; Sparks & B. J. Lovett, 2009).
 - There are no differences between individuals with or without an ability-achievement discrepancy on functional MRI (Tanaka et al., 2011).

Prevalence Rates

- **Specific Learning Disorder / learning disabilities (broad):** commonly cited prevalence in school-age populations is roughly 5–15% overall, but estimates vary because of differences in diagnostic criteria, cut-offs, and whether the studies use psychometric tests, school identification, or parent/teacher report.
- **Impairment in reading:** commonly-cited range is approximately 5–15% of school-age children depending on severity cut-offs, with many frequently used estimates centered near 5–10%.
- **Impairment in writing:** less consistently studied; prevalence estimates are variable (often cited ranges roughly 5–20%) and depend strongly on whether the study counts isolated handwriting problems, broader written expression disorders, and the age/grade assessed.
- **Impairment in math:** frequently reported prevalence is roughly 3–7% in school-age children; some studies report lower or higher rates depending on operational definition.

Can you grow out of an SLD?

JOURNAL OF CLINICAL AND EXPERIMENTAL NEUROPSYCHOLOGY
<https://doi.org/10.1080/13803395.2026.2688955>

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Stability and accuracy of specific learning disability diagnoses from childhood to young adulthood

Allyson G. Harrison , Nathaniel Davin  and Emma Jamieson 

Regional Assessment and Resource Centre, Queen's University, Kingston, Ontario, Canada

ABSTRACT

Objective: Specific learning disorder (SLD) diagnoses made in childhood are often assumed to be stable across development; however, diagnostic stability has frequently been conflated with diagnostic validity. This study examined (a) the accuracy of childhood SLD diagnoses at the time they were made, relative to objective academic impairment and (b) the stability of SLD diagnoses from childhood to young adulthood.

Method: Archival data were analyzed from 325 postsecondary students who underwent comprehensive adult psychoeducational assessment and for whom childhood assessment documentation was available. Childhood reports were coded for assessment content, diagnostic clarity, and evidence of objective academic impairment. Diagnostic stability was evaluated by comparing childhood and adult SLD diagnoses across reading, written expression, and mathematics.

Results: Most childhood assessments included standardized measures of cognitive, academic, and behavioral functioning; however, fewer than half included measures of phonological processing, and only 52.3% contained a clear diagnostic statement. Across domains, 82–89% of childhood SLD diagnoses were supported by objective academic impairment at the time of assessment. Despite this, diagnostic stability from childhood to adulthood was moderate, with approximately 59% of childhood diagnoses retained across reading, writing, and mathematics, and roughly 40% not confirmed at adult reassessment.

Conclusions: Findings indicate that while many childhood SLD diagnoses are supported by contemporaneous academic impairment, that impairment does not always persist into adulthood. These results underscore the importance of distinguishing diagnostic accuracy from diagnostic stability and highlight the need for careful reassessment of learning difficulties in postsecondary contexts rather than reliance on childhood diagnoses alone.

ARTICLE HISTORY

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KEYWORDS

Learning disability diagnosis;
diagnostic stability;
psychoeducational
assessment; postsecondary;
reassessment



Can you grow out of an SLD?

Key takeaways:

- Only moderate stability — about 59% of childhood domain-specific SLD diagnoses were retained at adult reassessment ($\approx 40\%$ were not confirmed).
- Overall, 60.9% of those with any childhood LD were confirmed as having a LD in adulthood; 39.1% were not.
- Thus, childhood diagnosis $\neq$ automatic lifelong diagnosis. Many childhood SLD labels were supported at the time but did not persist; reassessment may be required to confirm current functional impairment and appropriate accommodations.

Diagnosis of SLD (OPA Consensus)



Step 1 History of academic impairment?



Step 2 Evidence of developmental, health, educational, or contextual factors that are risk factors for LD and other learning difficulties?



Step 3 Assess academic achievement (using individual standardized achievement tests).



Step 4 Assess basic psychological and cognitive processes that are risk factors for the specific difficulties in reading, writing or mathematics.



Step 5 Assess abilities essential for thinking and reasoning.

Diagnosis of SLD (OPA Consensus)



Step 6 Assess and rule out other factors that could better explain the pattern of results, including effort, motivation, and noncompliance with instructions.



Step 7 Assess the social, emotional and behavioural strengths and difficulties that are common in individuals with LD.



Step 8 Develop a formulation and diagnostic statement in accordance with the above criteria for a diagnosis of LD.



Step 9 Identify the types of evidence-based and realistic supports and interventions that are required.



Step 10 Communicate the results of the assessment, the diagnosis and the recommendations.

Diagnosis of SLD

- Administration of psychometric testing to evaluate:
 - Performance validity
 - Overall ability (typically viewed as IQ)
 - Cognitive processes related to learning
 - Verbal abilities/language skills
 - Visual-spatial/visual-motor integration skills
 - Attention/working memory
 - Processing speed
 - Memory
 - Executive functioning
 - Pre-literacy skills (phonological and orthographic)
 - Academic skills
 - Reading (word decoding, word identification, fluency, and comprehension)
 - Written expression (spelling, sentence composition, fluency, and essay composition)
 - Mathematics (numerical operations and math problem solving)

Structured Evidence-Based Approach

Accessibility Advisor Worksheet

Student Name: _____

Student ID: _____

Date of Meeting: _____

Advisor Name: _____

Diagnosis & Relevant Accessibility Information

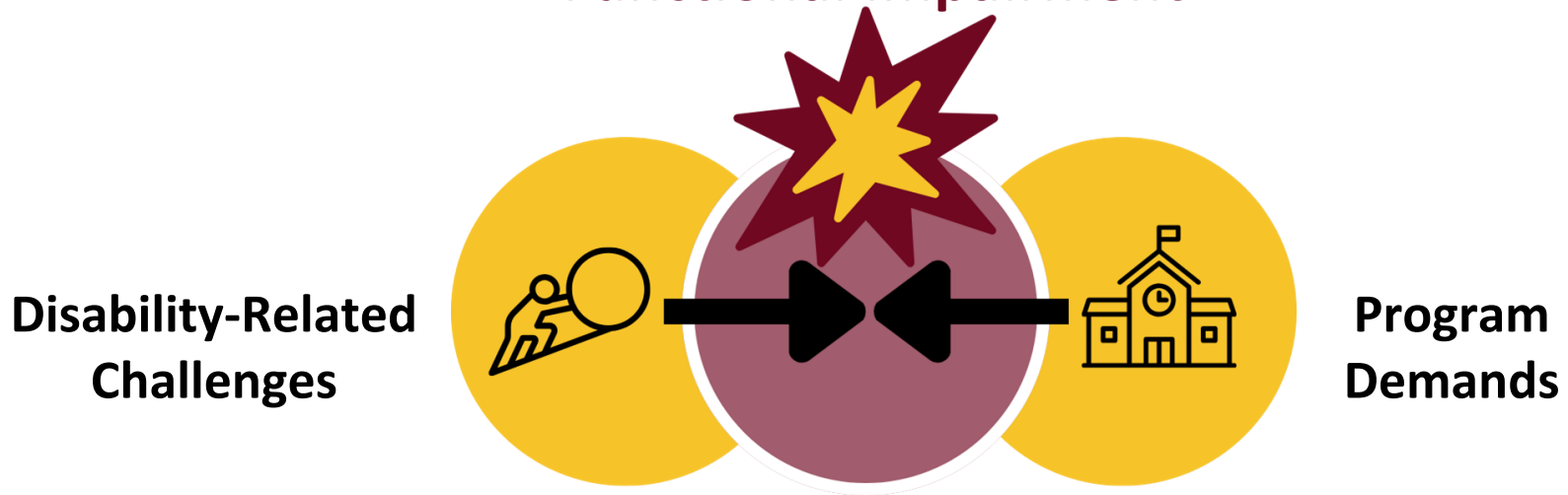
- **Diagnosis:**
 -
- **Additional Notes on Diagnosis:**
(Include any details that provide context to the student's disability. For example, severity, frequency, or any situational triggers.)

Identified Disability-Related Challenges	Disability-Related Functional Impairments Anticipated in the Context of their Program	Linking Functional Impairments to Supports & Accommodations		
(Describe the challenges that the student experiences in relation to their disability, based on documentation and discussion with the student.)	(Identify the primary functional impairments that are anticipated to significantly impact the student's ability to access the curriculum. This should include academic, environmental, and social aspects of their program.)	(Link the student's identified functional impairments to potential accommodations, learning strategist support, or other relevant institutional/community resources.)		
		Useful tool: https://queensu.qualtrics.com/jfe/form/SV_do3AfDFH8pUpwMe		
	Program:	Accommodations	Learning Strategies	Other Supports

Determining the Impairment

- Where disability related challenges and environmental or program demands collide is where barriers (functional impairments) form.

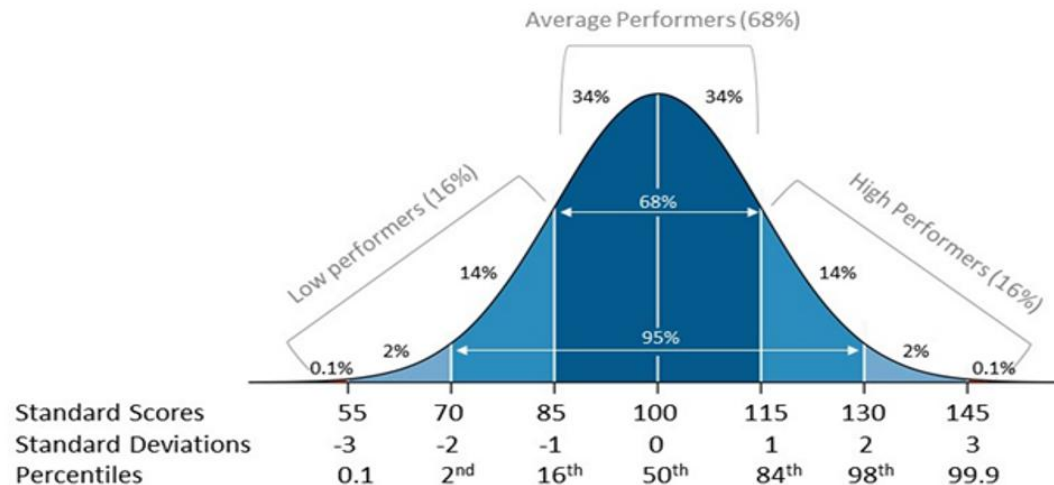
Functional Impairment



Functional Impairments in PSE

- Functional impairments focus on how a student's disability manifests in their specific learning environment.
- For our purposes, we will define functional impairments as:

“Academic barriers resulting from a disability”



Capturing Functional Impairment: Student's Perspective

How do your reading challenges affect your ability to complete day-to-day academic activities?

You indicated that you tend to use a computer to complete written work. What issues would you experience without access to this support?

When completing coursework with a math component in the past, what has been the biggest challenge?

Case Study #1

Nevaeh is starting the Psychology program at your institution. She provides a recent Psychoeducational Assessment which indicates overall intellectual functioning within the Average range (32nd percentile), with very weak performance on measures of phonological and orthographic processing. Word reading and spelling skills are in the Very Low range (1st percentile), while math skills are somewhat stronger (18th percentile). She has a diagnosis of a Specific Learning Disorder with impairment in reading and writing.



Case Study #2

Caleb is starting the Social Work program at your institution. He has a Psychoeducational Assessment from 2017 which indicates Average intellectual functioning (57th percentile), with a particular weakness in visual-spatial analysis (5th percentile). Academically, he displays intact reading and writing skills but very weak math skills, including calculation and applied reasoning (4th and 3rd percentiles, respectively). He has been given a diagnosis of a Specific Learning Disorder with impairment in math.



Case Study #3

Harine is starting the Early Childhood Education program at your institution. She presents with a Psychoeducational Assessment report from 2024 which indicates overall intellectual functioning within the Borderline range (6th percentile), with Very Low fluid reasoning, verbal abilities, and visual spatial skills (all at the 1st percentile) and Low Average working memory and processing speed (16th and 18th percentiles, respective). Academically, she presents with Low Average reading (9th percentile) and writing (12th percentile) skills, and Very Low math (1st percentile) skills. She was given a diagnosis of a Specific Learning Disorder with impairment in reading, writing, and math.



Case Study #4

Abraham is starting the Engineering program at your institution. He provides a Psychoeducational Assessment from 2019 which indicated overall intellectual functioning within the Very Superior range (99th percentile), with Superior to Very Superior verbal comprehension and perceptual reasoning skills, High Average working memory, and Average processing speed. Word reading, reading comprehension, spelling, written expression, numerical operations, and math problem solving are all High Average to Very Superior, while reading fluency and math fluency are Average. He has a diagnosis of a Specific Learning Disorder with impairment in reading and math fluency.



Questions?



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Join via Zoom

Meeting Link:

[https://
queensu.zoom.us/
j/99795703855?
pwd=ocZ8aoUbbgxA
5afbSEppZ8zdaFN3M
g.1](https://queensu.zoom.us/j/99795703855?pwd=ocZ8aoUbbgxA5afbSEppZ8zdaFN3Mg.1)

Meeting ID: 997
9570 3855

Passcode: 171372

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Regional Assessment and Resource Center (RARC): www.queensu.ca/rarc

Queen's University, Kingston, Ontario Canada

Beth Pollock, Clinical Director (RARC) : beth.pollock@queensu.ca

Connect with RARC:



rarc@queensu.ca



www.queensu.ca/rarc



613-533-6311



Mackintosh-Corry Hall,
B100
68 University Avenue
Kingston, Ontario, Canada
K7L 3N6

