

LEARNING DISABILITIES ASSOCIATION OF ONTARIO

Recommended Practices For Assessment, Diagnosis and Documentation of Learning Disabilities

Diagnosis of Learning Disabilities

Accurate diagnosis of learning disabilities is necessary in order to distinguish this disorder from other potential causes of the presenting symptoms or problems. It is also necessary to document the individual's strengths and to identify needs that result from impairments in specific psychological processes. Accurate diagnosis is fundamental to the development of specialized interventions at home, school, community, and workplace settings.

According to the definition, learning disabilities are due to genetic, congenital and/or acquired neurobiological factors that result in impairments in one or more psychological processes related to learning. In view of the biological/neuropsychological nature of the disability, the formulation and communication of a diagnosis of learning disabilities is a complex process that requires professional training and skill. Professionals from a variety of disciplines (e.g., psychology, education, speech-language pathology, occupational therapy, medicine, audiology, etc.) play a significant role in identifying "at risk" individuals and in contributing to the evaluation, as well as to the development and implementation of a range of interventions. In Ontario, however, the communication of a diagnosis is controlled under the Regulated Health Professions Act, and may be performed only by appropriately qualified members of the College of Psychologists and the College of Physicians and Surgeons.

Diagnostic Criteria for Learning Disabilities

All of the following criteria must be met for a diagnosis of a learning disability to be made.

- A A non-random, clinically significant discrepancy between one or more of the specific psychological processes related to learning (phonological processing; memory and attention; processing speed; language processing; perceptual-motor processing; visual-spatial processing; executive functions) and otherwise average abilities essential for thinking and reasoning.
- B Academic achievement that is unexpectedly low relative to the individual's thinking and reasoning abilities OR academic achievement that is within expected levels, but is sustainable only by extremely high levels of effort and support.

- C Evidence that learning difficulties are logically related to observed deficits in specific psychological processes.
- D Evidence that learning difficulties cannot primarily be accounted for by:
 - (1) other conditions, such as global developmental delay, primary sensory deficits (e.g., visual or hearing impairments), or other physical difficulties;
 - (2) environmental factors, such as deprivation, abuse, inadequate or inappropriate instruction, socio-economic status, or lack of motivation
 - (3) cultural or linguistic diversity.
 - (4) any other co-existing condition such as Developmental Coordination Disorder, Attention Deficit Hyperactivity Disorder or anxiety.

Note: Learning disabilities may be co-exist with many conditions, including attentional, behavioural and emotional disorders, sensory impairments or other medical conditions.

"Clinically significant discrepancy" -- It is generally accepted that differences of one standard deviation or more between two standard scores based on the same scale reflect significant differences in the attributes measured.

Assessment of Learning Disabilities

Thinking and Reasoning Abilities

Measures utilized to assess thinking and reasoning abilities should meet the requirements of standardized, individually-administered, psychometrically-sound, psychological test instruments, be supported by appropriate research, and interpreted by appropriately-trained psychological service providers.

There are times when deficits in specific psychological processes mask normal functioning in more general thinking and reasoning abilities, making an accurate assessment of global intellectual ability difficult. It is important to note that a diagnosis of a learning disability does not always require an individual's global intellectual ability (e.g., full-scale IQ) to fall in the average range or above. In such cases other estimates of thinking and reasoning abilities independent of the underlying processing impairment (such as a relevant index, component, or composite score, or other combination of appropriate subtest scores) can be taken as evidence of average functioning in these areas, provided these results are supported by evidence and interpreted with sound clinical judgment. *(See supporting document)*

In addition, there may be individuals for whom the tools currently in use do not fully demonstrate their cognitive strengths. For these cases, real world situations may need to be investigated as a part of a complete assessment in order to demonstrate cognitive abilities.

Examples of currently available appropriate test instruments are contained in the supporting documentation.

Psychological Processes Related to Learning

It is mandatory to document performance in one or more of the following areas that is significantly and reliably below the levels predicted by obtained measures of thinking and reasoning outlined above:

- Phonological Processing
- Memory and Attention
- Processing Speed
- Language Processing
- Perceptual-Motor Processing
- Visual-Spatial Processing
- Executive Functions

It is also necessary that statements related to such deficits in psychological processes are based on more than one source of information, and that they be logically related to the observed learning difficulties. It should be noted that a number of different professionals may be involved in this part of the assessment, with the relevant results

being incorporated in the final documentation of the learning disability by the regulated health care professional qualified to communicate the diagnosis.

Academic Achievement

The parent, teacher, and student themselves may be in a position to provide critical information about past and present academic successes and challenges, as well as the level of support provided to reach current levels of academic functioning.

It is mandatory to document under-achievement or achievement sustained by extremely high levels of effort or support in one or more academic areas (as evident in the classroom and in standardized test results) and to relate academic performance to underlying deficits in specific psychological processes. In most cases there will be evidence of a significant disparity between cognitive potential and measures of achievement in academic areas. In circumstances where there has been an extremely high level of effort and support, there may not be a significant disparity between cognitive ability and academic achievement.

The academic assessment measures should be individually administered, standardized tests. Canadian norms should be used wherever they are available. Where Canadian norms are not available, caution should be exercised when interpreting standardized scores. Measured achievement levels should, however, be consistent with the individual's observed on-going performance and areas of weakness

Comprehensive testing should be undertaken in observed areas of weakness, assessing all components of identified skills wherever possible. For example, if reading is identified as an area of weakness, assessment should include measures of decoding, comprehension, reading fluency, oral vocabulary, etc.

Age-equivalents and grade-equivalents should not be used as a basis for comparison between tests, due to their imprecision. It is considered best practice to compare standard scores from co-normed tests, using proper statistical procedures.

Other Factors in Assessment

Additional evaluation may be used to identify or rule out co-existing conditions (*See supporting documentation*).

Documentation of Learning Disabilities

Any diagnostic report should include all of the following components, unless a valid rationale is provided for not doing so.

- Relevant information regarding:
 - Information about home language use (original language, dialect, language(s) spoken in the home) medical/developmental/family history, including results of any vision/hearing evaluations
 - Educational history, including information about remedial programs, special class placements, or other support that have been provided
 - Other professional evaluations (e.g., speech-language, occupational therapy, educational consultant, etc.), including previous psychological assessments
- Examiner's statement regarding the validity of the present assessment results
- Behavioural observations during the testing session, as well as available observations (both anecdotal and from rating scales) from parents, teachers, classroom visits, etc.
- Reporting and interpretation of formal test results, including a description of the individual's strengths and needs, an indication of how the observed pattern of abilities and achievement demonstrates the presence of a specific disability, and adequately documented evidence as to the cause of the learning difficulties
- A specific, clear, diagnostic statement that the individual has a Learning Disability
- A description of how the individual's strengths and needs will impact on the challenges he/she confronts in present and future activities of daily living
- Based on the individual's strengths and needs, recommendations / suggestions / indications for further action and intervention in the areas of skill instruction, compensatory strategies, and self-advocacy skills, along with requirements for appropriate accommodations at home, and in school, community and/or workplace settings
- Signature of an **appropriately qualified member** of the College of Psychologists of Ontario (CPO) or the College of Physicians and Surgeons of Ontario (CPSO). The qualified member must be present (preferably in person, or via telephone or teleconference) when oral diagnostic reports are delivered (*see supporting document for more details*).

Note: Appropriately documented, informed consent for psychological assessment must be obtained in advance from the individual concerned, or from his or her parents or legal guardians, by the individual who will be conducting the assessment. In addition to information regarding the assessment procedures themselves, such informed consent

must include an explanation regarding: the potential release of information and/or the report to any third party; the potential distribution and storage of the assessment information and documentation, including circulation within a school system or inclusion in the Ontario Student Record (OSR); the individual's rights regarding withholding or withdrawal of consent; and the right of direct access to the qualified member of the CPO or CPSO who is responsible for the diagnosis.

Note: The above components for documentation of a learning disability are consistent with the LDAO definition of Learning Disabilities, as well as with the Practice Guidelines Regarding Psychological Assessment Reports Written for Clients with Learning Disabilities that was adopted by the Ontario Psychological Association.

Criteria For Frequency Of Assessment

A learning disability may be diagnosed at any age. If a thorough and comprehensive assessment is completed after age seven, and a diagnosis rendered, repeated assessment to re-establish the presence of a learning disability should not be required. Reassessment is recommended, however, at times when the individual is making significant transitions (such as from elementary to high school, or high school to post-secondary school), or whenever specific questions arise that cannot be answered by other means. Such reassessments will likely be undertaken to understand better how the individual's specific learning disability presently manifests itself, and the types of programming and accommodations that are most appropriate for the needs of the individual at that time.

A clear diagnosis of a learning disability, made on the basis of a comprehensive assessment performed by a qualified professional, should be transferable across school boards and other organizations.

Although the presentation of the disability may continue to change over time, a diagnosis based on competent and comprehensive evaluation that was performed after age 18 is considered definitive. Therefore, further reassessment undertaken to re-establish a diagnosis past this age is not typically required.

Involving Parents and Clients in the Assessment Process

An initial interview with parents can provide very valuable information about the young person's developmental history, family history of similar difficulties, and recent family changes. In addition, information on functioning in day-to-day life situations such as school, home and community groups, both from the perspective of the parents and the young person, can help in understanding the presenting difficulties. In the initial interview with an adult client it is useful to find out why the individual is seeking the assessment, and what expectations they have of the process.

When the family comes from a different culture, it can be useful to talk to someone who knows the cultural context, and to arrange for an interpreter for interviews if understanding English is an issue. It should also be borne in mind that many parents of children with learning disabilities have diagnosed or undiagnosed LD's themselves, so they may have difficulties processing information.

A feedback interview at the end of the assessment is a very important part of the assessment process. Parents need to be told about the strengths as well as the difficulties of their child, and to have explanations of how the difficulties might affect academic and everyday areas. Some concrete suggestions about what they as parents can do may be welcome. It is also the responsibility of the qualified assessor to convey and explain the diagnosis. Most parents will not be able to digest the findings in one interview, so there should be an opportunity for them to ask questions later.

With younger children, the assessor should make suggestions on how the parents can explain the results in simple words to their child. With older children and teenagers, a feedback session including them is important – again emphasizing strengths as well as difficulties, and making concrete suggestions on strategies that can be tried.

Similar principles apply to feedback interviews with adults. Growing up with learning disabilities often affects self-esteem and self-confidence, so feedback on test results should emphasize strengths and ways of coping with difficulties. Concrete illustrations of how difficulties might manifest themselves in specific life areas can be very helpful. Most adults have already developed many coping strategies on their own, and these need to be acknowledged. Additional suggestions can be offered for skill development, ways of compensating, and appropriate accommodations in academic pursuits or the workplace. As with parents, adult clients should have an opportunity to ask questions later, once they have had a chance to digest the findings.

To be useful to parents and individuals being assessed, written reports on assessments should include clear explanations, with a minimum use of jargon.

Important Issues in the Diagnosis of Learning Disabilities

Assessment of Young Children

Assessment of preschool children may well indicate a pattern of strengths and weaknesses that could indicate deficits in specific psychological processes logically related to learning difficulties. A small number of children have a clearly documented history of impairments that can impact early learning (e.g., speech and language disorders, Pervasive Developmental Disorder, Developmental Coordination Disorder, etc.) and that have important implications for placement and programming from the very beginning of formal schooling. In children younger than age seven, a clear diagnosis of a learning disability, in areas other than language processing, may be hampered by relatively weak reliability and/or predictive validity of current measures of thinking and learning, a relatively narrow range of measurable areas of academic achievement, and a broad band of normal developmental fluctuations. In cases where the existence of a learning disability cannot be established, younger children may be identified as "at risk" for later exhibiting a learning disability, *with appropriate interventions being initiated*. Further assessment at or after age seven will normally be required in order to confirm the differential diagnosis.

Later Manifestations of Learning Disabilities

Although the impairments of learning disabilities are generally life-long, they may not be immediately obvious in the early grades of school. Some learning disabilities, especially those affecting organizational, problem-solving and social skills, may not become apparent until later in the individual's education as the demands of the learning environment increase in complexity. There are even instances in which learning disabilities are diagnosed in adulthood, after the individual has left school. The effects of learning disabilities may be expressed differently over time, depending on the match between the demands of the environment and the individual's pattern of strengths and weaknesses.

Assessment of Individual Learning through a Second Language

Many children who will receive instruction at school in English or French speak another language before they enter school. In order to determine whether there are learning difficulties over and above problems that may be related to second-language learning and cultural adjustment issues, extreme caution must be exercised when assessing children (or adults) for whom English is neither the first language of the home nor the individual's primary language of thought. Whenever possible, an assessment of skills in the first language should complement the assessment completed in the language of instruction at school.

When assessing young ESL children, or others for whom the language of instruction at school differs from the home language (e.g. students in French immersion programs), observation of progress over time is key in evaluating strengths and determining areas of instructional need. ESL students in school typically require varying amounts of time to

catch up to their native English-speaking peers in different aspects of English proficiency.

- With respect to *conversational fluency*, students who experience extensive exposure to English both within the school and out-of-school environments can generally function effectively, and use appropriate phonology, within 1-2 years.
- With appropriate instruction, ESL students can also acquire many of the *specific component skills of reading* (e.g. phonological awareness, letter knowledge, basic decoding skills) in the early years of schooling at the same time as they are acquiring conversational fluency in English. These discrete language skills can be taught directly and ESL students who are developing normally show minimal or no lag in acquisition of these skills in the early years of schooling.
- However, extensive research suggests that it typically requires a much longer period of time (at least 5 years) for ESL students to catch up to their native English-speaking peers in *more general verbal abilities and academic aspects of English proficiency* when these abilities are assessed with standardized norm-referenced measures. During this period, standardized measures of verbal abilities are likely to underestimate the academic and verbal/cognitive potential of ESL individuals.

The following diagnostic implications of these patterns are important for accurate assessment and interpretation of test scores:

(a) While conversational fluency in English is of limited relevance to the identification of learning or reading disabilities among ESL students, delays in acquisition of conversational fluency may be indicative of specific speech or language processing problems.

(b) Significant delay in development of discrete language skills such as phonological processing and rapid automatized naming of letters and words *that cannot be attributed to inadequate instruction*, is potentially indicative of learning or reading disability among ESL students.

(c) Significantly better performance on listening comprehension than on reading comprehension measures may be diagnostically relevant in identifying learning or reading disability among ESL students.

(d) Until the ESL student has been learning English in an academic context for a period of at least 5 years, performance on measures of verbal cognitive abilities (e.g. vocabulary tests) should be interpreted as reflecting present level of familiarity with the English language rather than the student's overall verbal or processing capabilities.

In situations where it is feasible to administer an assessment in the ESL individual's first language, this information can add significantly to the knowledge base for interpreting the nature of the individual's learning difficulties. Again, however, first language assessment must be interpreted very carefully due to the fact that, particularly with younger students, ESL individuals' first language verbal abilities may decline over time. This decline results from the fact that they are no longer being schooled through their

first language and English may be taking over communicative functions that previously were conducted through the first language. In addition, as with the assessment of English verbal abilities, assessment of first language abilities must take account of the range of regional varieties in any language.

In situations where first language assessment is not feasible, an interpreter can assist with the collection and translation of relevant background information as well as with test administration. However, the presence of a third party during the assessment can significantly alter the outcome, and this must be factored into any interpretation of the results.

Potential test bias is not confined only to language-based tests; in addition, many nonverbal test items may contain subtle cultural or linguistic biases that may not be immediately obvious, even to a seasoned practitioner. Therefore, a broad-based assessment of ESL individuals is extremely important, incorporating a variety of sources, including observational and anecdotal data, reports from relevant home and community contacts, standardized measures of adaptive behaviour, and so on. In particular, it is often necessary to take account of emotional factors, especially when there is a chance that there have been traumatic experiences (e.g. refugee camp, war, displacement issues) in the individual's life. There is also a need, wherever possible, to be cognizant of and to respect individual cultural norms with respect to the assessment situation as a whole.

Individuals with Abilities Above the Average Range

Clinicians must exercise a great deal of caution when attempting to diagnose learning disabilities in persons whose intellectual abilities fall above the average range (i.e., one or more standard deviations above the mean). Psychometric phenomena, such as regression toward the mean, make the likelihood of over-diagnosis (false positives) greater in persons whose thinking and reasoning abilities are in the superior or very superior ranges (*See supporting documentation*).

Individuals whose abilities essential to thinking and reasoning are assessed to be above average or higher may demonstrate one or more psychological processes related to learning and academic achievement that are in the low average or average range. It is important to be aware that, for these individuals, these low average-to-average scores do reflect a significant weakness relative to their high level of cognitive ability, and may be indicators of a learning disability.

Students who may be both diagnosed as having learning disabilities and identified within the educational system as gifted present a unique challenge. The needs of these students may be masked, as their superior intelligence allows them to hide their early academic difficulties. As well, the underlying processing deficits may reduce their overall scores on tests of intelligence used as one criterion for admission to the gifted program within school boards.

Differential Diagnosis of Developmental Delay

Individuals whose abilities essential to thinking and reasoning are assessed to be globally below average and whose cognitive-developmental milestones and adaptive behavior are lagging behind their peers, are classified by the Ontario Ministry of Education as having either a mild intellectual disability (MID) or a developmental disability (DD), depending upon the degree of impairment. They tend to have difficulties in all academic areas. They are therefore unlikely to meet the diagnostic criteria for learning disabilities. For students whose intellectual functioning places them in the MID category, there will be some instances where it is possible to diagnose a learning disability. However the definition of DD clearly excludes a diagnosis of a learning disability.

Non-Categorical Screening for Early Intervention

Children entering Junior and Senior Kindergarten programs arrive with highly diverse environmental, social and linguistic experiences, with various degrees of enrichment or deprivation, with a history of individual learning opportunities, and with a significant range of developmental maturity. Physical health factors can affect energy and motivational levels, while personality, emotional and family issues also have an impact on an individual's attitude to and readiness for learning. While the majority of these children adapt to the level of programming offered during these early school years, a minority show evidence of learning difficulties that place them significantly behind their peers in key areas of readiness for the acquisition of appropriate literacy and numeracy skills.

These learning difficulties may result from many different factors, including developmental, physical, biological, psychological, environmental, emotional, social, cultural and behavioural, and may be manifested in academic, home, and/or social settings. The extent of such learning difficulties can be established within the classroom by comparing individuals to their age peers on various global and standardized measures of academic progress, or by determining whether they meet age-appropriate "benchmarks" or milestones. From the results of such comparisons, specific criteria may be applied in order to determine which children are at risk of failure, for whatever reason, and for whom additional support will be provided. Such a screening is non-categorical in nature; that is, children are determined simply to be "at risk" without specifying a particular diagnostic category or identification label. Specific programming can then be implemented, either within the classroom in general, or to small groups of children with common learning needs, geared toward skill-building in preparation for entry to the Grade 1 program. The degree of success will usually depend to a great extent on the specific types of difficulty, the causes of the difficulties, the timeliness of the intervention, and the appropriateness of fit of the remedial programs used.

While generic intervention programs may result in improvements in some individuals, there will be a subgroup of children who will require more in-depth assessment to pinpoint each child's specific areas of difficulty related to learning, and individualize intervention programs so that the probability of success is maximized.