

Understanding Learning Disabilities in School: Diagnosis and Primary of Areas of Assessment

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A child may be referred for counseling by a teacher, parent, or even through self-referral for his/her learning disabilities (LD) related issues. LD is the most typical and common disorder in school and it can have a profound adverse effect on school performance that often persists into adulthood. In this paper, works in school setting will be described in detail regarding LD categories, diagnosis procedures, and the primary areas in which students will be assessed in relation to the intelligence, academic achievement, and behavioral and emotional development.

Key word: Learning disabilities, Intelligence, Academic achievement, Behavioral and emotional development

Learning disabilities (LD) is the most typical and common disorder in school and it can have a profound adverse effect on school performance that often persists into adulthood. Current estimates indicate that children with LD compose between seven to ten percent of the school-aged population and represent over half of the children who receive special education services in the United States (Shin, 1998).

The diagnosis of "learning disability" is not a diagnosis in the same sense as a disease with a single, known cause and predictable set of symptoms. Instead, it is a broad term that encompasses a wide range of disorders in reading, writing, mathematics, listening, and speaking. Deficits in attention and social behavior often accompany specific learning disabilities.

LD affects people's ability to either interpret what they see and hear or to link information from different parts of the brain (Aylward, 1984). These limitations can show up in many ways - as specific difficulties with spoken and written language, coordination, self-control, or attention. Such difficulties extend to schoolwork and impede learning to read, write, or do math. LD can be a lifelong condition that, in some cases, affect many parts of a person's life: school, work, daily routines, family life, and sometimes even friendships and play.

In this paper, works in school setting will be described in detail regarding diagnosis and the primary areas in which students will be assessed, which are: intelligence, academic achievement, and behavioral and emotional development.

1. Categories of Learning Disabilities

The criteria and characteristics for diagnosing LD

appear in a reference book called the Diagnostic and Statistical Manual of Mental Disorders (or DSM). LD can be divided into three broad categories (Shine, 1998).

- Developmental speech and language disorders (Articulation / expressive language / receptive language disorders)
- Academic skills disorders (Developmental reading / writing / arithmetic disorders)
- "Other," a catchall that includes certain coordination disorders and learning handicaps not covered by the other terms.(Attention disorders)

Each of these categories includes a number of more specific disorders. Today, a leading theory is that LD stems from subtle disturbances in brain structures and functions. Some scientists believe that, in many cases, the disturbance begins before birth.

2. Diagnosis of Learning Disabilities

The classroom teacher may be the first to notice a child's persistent difficulties in reading, writing, or arithmetic. As school tasks become more complex, a child with a learning disability may have problems mentally juggling more information. The learning problems of children who are quiet and polite in school may go unnoticed. Children with above average intelligence, who manage to maintain passing grades despite their disability, are even less likely to be identified. Children with hyperactivity, on the other hand, will be identified quickly by their impulsive behavior and excessive movement.

By law, LD is defined as a significant gap between

a person's intelligence and the skills the person has achieved by a given age. LD may be informally flagged by observing significant delays in the child's skill development. Actual diagnosis of LD, however, is made using standardized tests that compare the child's level of ability to what is considered normal development for a person of that age and intelligence.

Each type of LD is diagnosed in slightly different ways. To diagnose speech and language disorders, a speech therapist tests a child's pronunciation, vocabulary, and grammar and compares them to the developmental abilities seen in most children that age. A physician checks for any infections, and an audiologist may be consulted to rule out auditory problems. If the problem involves articulation, a doctor examines the child's vocal cords and throat.

In addition, vision and hearing are tested to be sure the student can see words clearly and can hear adequately. A psychologist tests the child's intelligence. In the case of academic skills disorders, academic development in reading, writing, and math is evaluated using standardized tests.

3. Primary of Areas of Assessment and Tests Included

LD encompass a wide range of disorders in listening, speaking, reading, writing, and mathematics that are frequently accompanied by comorbid deficits in attention and social behavior. Information from three areas of assessment will be considered in the evaluation of children with LD. A set of tests will be applied to determine LD below.

1) Intelligence

Intelligence tests are most helpful when they are used to determine specific skills, abilities, and knowledge that the child either has or does not have, and when such information is combined with other evaluation data it may then be directly applied to school programming (Sattler, 1988). There are a number of skills that an intelligence test appears to measure -social judgment, level of thinking, language skill, perceptual organization, processing speed, and spatial abilities. Most individually administered intelligence tests can determine, at least to some degree, a child's ability to attend, process information quickly, distinguish relevant from less relevant details, put events in sequence, and retrieve words from memory.

The Wechsler Scales are one of the most widely

Table 1. A set of tests determining LD

Areas	Intelligence	Achievement	Behavior and Emotional Development
Test 1	WISC-III*	WRAT-R**	Connor's Rating Scale-Revised
Test 2	-	-	Child Behavior Checklist
Test 3	-	-	Child Depression Inventory

WISC-III*: Wechsler Intelligence Scale for Children (III)

WRAT-R**: Wide Range Achievement Test-Revised

used individual evaluation measures of intelligence utilized in today's schools (Pierangelo & Giuliani, 1998). The test provides valuable information as one of the measures in the diagnosis of learning disabilities (Compton, 1990). Strengths and weakness of a child's learning style, indications of greater potential, organizational skills, processing skills, processing abilities, reasoning abilities, and adjustment to timed tasks are example of useful information that can be obtained from this test.

The following summary details the features that the WISC-III has to determine whether children have LD.

- The test is well standardized and reliable. It is well organized and easy to use. There are thorough interpretations in the information manual regarding interpretation of scaled score differences.
- The test is a relatively good predictor of academic achievement, and it is an excellent instrument for the diagnosis of intellectual retardation (Vernon, 1996).
- The Full IQ scale can be most appropriately used to estimate the children's overall potential and assist in excluding possible explanations for poor academic performance other than LD (e.g., intellectual disabilities or mental retardation) (Groth-Marnet, 2001).
- There is moderate to equivocal evidence that some profiles (relatively low processing speed and working memory/freedom from distractibility, spatial > conceptual > sequential, ACID, SCAD) occur more frequently in learning-disabled populations compared to the general population.
- The above profiles appear to be not unique to

learning disabilities, but also often occur in other groups as well (juvenile delinquency, attention deficit hyperactivity disorder, emotional handicap).

- The various patterns of Wechsler subtests can be used to further understand individual cases of children experiencing learning disabilities (Pierangelo & Giuliani, 1998).

Meaningfulness versus Nonmeaningfulness of the subtests

In this grouping, all the verbal subtests, with the exception of Digit Span, are considered meaningful tasks. The meaningful nonverbal tests are Object Assembly, Picture Arrangement, and Picture Completion. The performance tests considered nonmeaningful (Block Design, Coding, & Mazes) are categorized as such because they deal with material that is not generally within the typical experience of the student. Analyzing WISC-III subtests within this framework may show a student's ability to process meaningful information successfully and inability to deal with nonmeaningful material (or vice versa).

Social versus Nonsocial Tasks

The verbal subtests all involve social perception, with the exception of Digit Span and Similarities. Only the Picture Arrangement subtest of the performance tests entails this ability. The division into social versus nonsocial may be another useful way of viewing a student's WISC-III patterns in relation to LD.

2) Comprehensive academic achievement

Academic achievement refers to how well the child

is performing in core skill areas such as reading, mathematics, and writing (Oster, Caro, Eagen, & Lillo, 1988). Having a variety of academic skills in one test rather than several different measures may not only save money, but also in many cases can provide a total test score which reflects a student's overall academic achievement discrepancy comparisons.

These comprehensive tests also provide scores for a variety of skills normed on the same population that helps in generalizing results. Using several different tests that are all standardized on different populations may make comparisons between skill areas difficult and not as reliable. The WRAT-3 is included in this category.

The WRAT-3 is designed for use in clinical and school settings as a screening measure of academic achievement in reading, spelling, and arithmetic (Reinehr, 1986). The following summary details features of the WISC-III that determine which children have LD.

- The WRAT-3 is the best-known and most widely used test. It can be administered and scored easily and quickly. The written spelling subtest is an excellent test and one of the few available in this area (Compton, 1990).
- The test is reliable and reasonably valid in measuring achievement in its subtest areas. The Grade Equivalent score is the best vehicle for communicating test results in a useful and appropriate context. The new norms for WRAT-3 appear to be more accurate at the younger age levels (Pierangelo & Giuliani, 1998).
- The test makes for a very useful screening instrument for the determination of a global

achievement level. However, restricted item content and high intercorrelations among the subtests render it unsuitable for use as a diagnostic tool in the identification of specific skill deficits (McLoughlin & Lewis, 1994).

- The test manual deals with the use of the WRAT-3 with LD, although no learning disabled students are included in the standardization sample.
- The WRAT-3 is a valuable tool for instructional planning with LD when the examiner analyzes the types of errors a student make on the three subtests (Compton, 1990).

3) Behavior and Emotional Development

Assessing Problem Behavior

Behavior - how a student conducts himself or herself in school - is often a key factor in educational performance. Certainly, behavior that is off-target academically or socially -inattention, being out of seat, talking too much, hitting or biting, skipping school - can detract from learning. When a student's behavior appears to be interfering with school performance and relationships with others, or when that the behavior is maladaptive, bizarre, or dangerous, it becomes important to assess the student's behavior (when behavior occurs, how often, and for what reasons) as well as his or her emotional and social development.

When a referral is made of a child for LD, a behavioral and emotional assessment is a normal part of the psychoeducational evaluation. When doing psychoeducational assessment of a child in a school, one critical component to address is the child's behavior, because behavior can have a serious impact

on his or her learning process. For example, a child with problems staying on task or focusing may have the intelligence to do math or social studies, but consistently gets low grades because he or she cannot sit still in order to complete the assignments given by the teacher (Pierangelo & Giuliani, 1998).

Behaviors that are not appropriate in school can occur for many different reasons. Some include attention deficit problems, mental illness, environmental factors at home, and problems with teachers of certain classes. When behaviors are believed to be a contributing factor to a child's problems in school, it is critical to do a thorough behavioral assessment. By doing this, the reasons for determining children with LD and the nature of the appropriate services will be more easily determined. Connor's Rating Scale-Revised (CRS-R) and Child Behavior Checklist (CBCL) are used here as appropriate assessment tools for it.

The following summary details the features that the Connor's Rating Scale-Revised (CRS-R) has to determine whether or not children have LD (Pierangelo & Giuliani, 1998).

- The instrument has been used by professionals for over twenty years. It is suited for school settings.
- It is used to screen all behavioral qualities such as hyperactivity, inattention, anxiety and social skills. This test is a thorough measure of a student's behavioral characteristics because of the number of questions rated. All items are easily worded, behaviorally based statements for qualitative assessment.
- This is an easy evaluation to use. Through the scales, counselors can evaluate whether the client's behaviors can be accepted as a norm.

The following summary details the features that the Child Behavior Checklist (CBCL) has to determine whether children have LD (Ollendick & Hersen, 1984).

- The CBCL has adequate reliability and effectively discriminates clinic-referred from non-clinic-referred children.
- It represents the culmination of extensive empirical analysis of data gathered from a variety of informants concerning both child behavioral problems and competencies.
- Normative data are provided for children of different ages and sexes, and its psychometric qualities appear to be more than adequate.
- The development of equivalent forms for different informants will hopefully maximize the amounts of information that can be gathered about the child and permit comparisons across informants and situations.
- The provision both broad-band and narrow band syndromes in the Child Behavior Profile means that the CBCL can be used for both general and more specific purposes, including classification, screening, diagnosis, and treatment evaluation.

Assessing emotional and social development

Assessment of emotional and social development is not an easy task. Through the course of a given day, children are involved in many different situations with many different people. It is not like assessing math or reading whereby we can simply compare numbers of a given child to national norms and make conclusions based on the quantifiable data. With a child, he or she may act completely differently with one person than another. Knowledge for assessment of a child's behaviors can include (Pierangelo & Giuliani, 1998) -

the degree to which children believes that personal behaviors make a difference in their life, their tolerance for frustration, general activity level, how the children views him-or herself, how the child responds emotionally to situations, how much conflict he or she is experiencing, there are many different instruments available to assess a child's emotional and social furcating.

Child Depression Inventory (CDI) is used here as an appropriate assessment tool for it. The following summary details the features that the Child Depression Inventory (CDI) has to determine whether or not children have LD (Ollendick & Hersen, 1984).

- The most widely used measure of depression in children.
- CDI scores can discriminate between emotionally disturbed children diagnosed as depressed and those who are not, and also between depressed and normal children.
- Other measures of depression in children are not as well investigated as the CDI.

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