

# Learning Disabilities Internationally and in Brazil: Issues to Consider in Developing Services for Brazilian Students with Learning Disabilities

*Thomas Oakland*  
*University of Florida*

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## Abstract

Brazilian students with learning disabilities (LD) generally are not identified or receive special education services. However, a desire to better serve them has been evident. The purpose of this article is to discuss issues pertaining to the development of LD services for Brazilian students. An international context for understanding LD is presented. LD may constitute the plurality, even majority, of education-related disorders among students. However, students with LD often remain invisible because most countries do not provide services for them. Additionally, tests and other assessment methods used to assess LD are not available universally and, among those countries that have such tests, their use differs considerably. Six international authoritative sources that offer diagnostic criteria are identified. The status of LD in the United States is reviewed. Diagnostic and intervention models are discussed. Suggestions for developing services for students with LD, supported by tests and other assessment methods in Brazil, are offered.

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## An International Context for Understanding Learning Disabilities

Professionals often use tests and other assessment methods to acquire reliable and valid data that help address practical issues, including diagnosing common disorders. These methods are developed in response to needs expressed by professionals or the public to assess constructs (e.g., learning disabilities, intelligence) that are defined, in part, by professional associations and other authoritative sources. For example, mental retardation may be the most widely recognized disorder among students. Considerable agreement among authoritative international sources as to the construct of mental retardation and methods to diagnose it enhances the development and use of

tests to assess this disability and intervention efforts to address it (Oakland, et al., 2004).

Although mental retardation constitutes a serious pervasive disorder, its prevalence (approximately 2%; American Psychiatric Association, 1994) is low and considerably less than that of other serious pervasive disabilities and disorders. Among them, learning disabilities (LD) may be the most common among students, with prevalence estimates for them between 2 and 10% (American Psychiatric Association, 2000). Moreover, respondents to an international survey of test use with children and youth identified tests to assess LD as most urgently needed (Hu & Oakland, 1991).

## Six International Sources Used To Define Disabilities and Disorders

A consensus on behaviors that constitute the construct of LD is needed before attempting to

## Notas do Autor

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2)Correspondência sobre este artigo deve ser encaminhada ao autor.  
Email: oakland@coe.ufl.edu

diagnose it. Knowledge of the construct of LD and its definition is critical to developing assessment and intervention methods in Brazil and elsewhere. Six authoritative international sources offer diagnostic criteria that may impact the definition of LD and thus test development and use. Three sources provide authoritative, comprehensive, and widely used systems to classify mental disorders, including LD: the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR) (American Psychiatric Association [APA], 2000); its international edition (American Psychiatric Association, 1995); and the International Classification of Diseases and Related Health Problems, Tenth Edition (ICD-10; World Health Organization, 1992). The disorders identified by the ICD-10 generally are consistent with those cited in and are cross-referenced to the DSM's International Version (APA, 1995).

The International Classification of Functioning and Disability (World Health Organization, 1992) and its revision, the International Classification of Functioning, Disability and Health (World Health Organization, 2001), provide a unified and standard language framework for describing human functioning and disability components of health, including physical and mental health. Although these two sources do not provide a system for classifying mental disorders and thus are silent on LD, they provide a framework for viewing behaviors, including LD, from three broad and different perspectives: physiologic, physical, or psychological body functions; the extent to which persons engage in functional life activities; and their participation in social settings.

The Organization for Economic Co-operation and Development (2004) proposed the use of three broader criteria to classify students with disabilities: those whose difficulties are organic (e.g., hearing impairments or severe cognitive disabilities), social, and organic or social (e.g., dyslexia—a common form of LD).

### **An International Definition of Learning Disabilities<sup>1</sup>**

The DSM-IV International Version defines LD as “diagnosed when the individual’s achievement on individually administered, standardized tests in reading, mathematics, or written expression is substantially below that expected for age, schooling and level of intelligence. The learning problems

significantly interfere with academic achievement or activities of daily living that require reading, mathematical, or writing skills” (APA, 1995).

Possible etiological conditions may predispose LD, including deficits in visual perception, linguistic processes, attention, memory, a family history for LD, perinatal injury, and various neurological or general medical conditions (e.g., lead poisoning, fetal alcohol syndrome, fragile X syndrome). However, the presence of one or more of these conditions does not always predispose a LD (APA, 1994; 1995).

### **Degree LD Terminology is Uniform Internationally**

The Organization for Economic Co-operation and Development (2004) emphasizes the need to adopt common terminology internationally so as to promote research and communication. This is achievable in medicine and psychology through the use of the DSM and the ICD-10. However, their definitions have not been accepted within education. Additionally, terminology used to describe students with LD is not uniform internationally. For example, Australia uses the term learning difficulties and Belgium uses instrumental disabilities. Additional semantic confusion occurs when countries use the term learning disabilities to refer to mental retardation, as does the United Kingdom.

### **Qualities Thought to Characterize LD Internationally**

Differences exist in the qualities thought to characterize LD. For example, educational authorities in some countries (e.g. Zimbabwe) assume deficiencies are due to inadequate instruction and may be remediated within months following quality instruction.

Those in other countries (e.g., the United States) assume instruction has been adequate and that LD is a pervasive disorder with a neuropsychological origin. Thus, while international authorities may define LD and offer etiological explanations for it (e.g., APA, 1994; 1995), national practices display little international agreement on the most fundamental question: what qualities characterize LD?

### **Methods Used to Assess LD Internationally**

Implementation of the DSM and ICD-10 definitions assumes the use of individually administered standardized tests in reading, mathematics, written

<sup>1</sup>The DSM-IV-TR (APA, 2000) and its companion editions (APA, 1995; World Health Organization, 1992) use the term *learning disorder*, not *learning disabilities*. Nevertheless, their definition of *learning disorder* is similar to the definition of *learning disabilities* as used in the United States and some other countries. Thus, the term *learning disabilities* is used throughout this paper.

expression, and intelligence. These resources are available in some (e.g., Canada, Western Europe, United States) but not most countries. Many countries, including Brazil, lack individually administered measures of these qualities normed on its population (Oakland, 1995) and thus cannot implement the DSM and ICD-suggested methodology.

#### Frequency of LD Services Internationally

Despite the high prevalence rates for students with LD as well as the pervasiveness of the disorder, school services for them are not common. For example, among 22 industrially advanced countries (i.e., those most likely to provide services to special needs students), only 54% provide LD services (Organization for Economic Co-operation and Development, 2004). By implication, few other countries serve students with LD.

#### Learning Disabilities in the United States

##### **LD Definition**

Federal and state-sponsored public educational services for students with special needs were established in the U.S. in 1977 at which time a set of wide-ranging programs for students with disabilities, including LD were established. Federal law defines LD as

those children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Such disorders include conditions [such] as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Such term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or environmental, cultural or economic disadvantage (Individuals with Disabilities Education Act of 1977, 1977).

The creation of LD as a diagnostic category reflected broad concerns that large numbers of students who seemingly should be doing well academically (e.g., have normal intelligence and received adequate general instruction) instead were failing in reading, math, and/or written language. Additionally, many of these students displayed one or more of the following qualities: inattention, hyperactivity, impulsivity, neurological irregularities, perceptual-motor impairments, emotional liability, general coordination deficits, or disorders in memory,

thinking, speech, and hearing (Clements, 1966, p. 13). Learning disabilities are thought to be intrinsic and are likely to persist throughout a person's lifespan.

Responsibility for education generally rests with each of the 50 states. However, the federal government imposes national standards for the delivery of some regular and special education services. Some funding for LD services comes from the federal government and most comes from state and local governments. During the 1999-2000 school year, the average cost to educate a student in special education was \$12,474 (National Center for Education Statistics, 2002; U.S. Department of Education, 2003). Approximately 50% of all students receiving special education services are LD.

##### **LD Identification**

Departments of education in each of the 50 states, not the federal department of education, prescribe methods used to identify and place students with LD within the parameters established by federal law and policy. Most states use a discrepancy formula similar to that advocated by the DSM that examines whether significant differences exist between a student's general intellectual ability and achievement (e.g., scores from an intelligence test generally must be 1 to 2 standard deviations [SDs] higher than scores from an achievement test) in one or more of the following achievement areas: basic reading skills (i.e., word recognition), reading comprehension, oral expression, listening comprehension, mathematics calculation, mathematics reasoning, written expression, or spelling. Some states also require students with LD to display a disorder in at least one psychological process (i.e., mental operations that transform, access, or manipulate information). These criteria also may change for age (e.g., requiring 1 SD for younger students and 1 ½ to 2 SDs for older students)

A recent change in federal laws governing learning disabilities allows school districts greater latitude in how students with LD are identified. Many school districts are expected to discontinue use of a discrepancy formula and instead to adopt methods that focus more directly on the degree to which special education efforts are needed to help overcome the disability. Using this model, commonly called response to intervention, students with LD will be those whose achievement remains below expected levels based on age, grade, and intelligence despite prolonged remedial efforts.

### **LD Assessment**

Students typically are referred for assessment by their classroom teachers following failed efforts to improve their low achievement. A school-based child study team composed of representatives from special education, regular education, and school administration as well as the student's parents is responsible for diagnosis and program planning. Following parental consent for the evaluation, a school administrator reviews the referral and designates the diagnostic specialists who should assist in the evaluation. Specialists often include school psychologists, speech-language specialists, and social workers and may include occupational, physical therapists, and others. Recent vision and hearing screenings also will be verified or conducted to rule-out any sensory deficits prior to the LD evaluation.

Following parent consent, a school psychologist reviews the child's school records; interviews the parents and teacher; observes the child's classroom behaviors; evaluates the child's achievement, intellectual abilities, and psychological processes, and may assess the child's social and emotional behaviors and other qualities thought to be important to the evaluation. Teachers often complete a measure that assesses the child's social and emotional qualities as well as those associated with Attention Deficit Hyperactive Disorder (ADHD).

A school social worker or school psychologist consults with parents to acquire information on the child's history and home-related behaviors. Parents may complete tests to measure the child's adaptive behavior, social and emotional development, and ADHD-related behaviors.

A specialist in speech and language may assess speech and language qualities of students who do not pass speech/language screenings. Students who fail vision or hearing screening are assessed by a specialist in these areas. Those who exhibit sensory and/or motor problems may be assessed by an occupational therapist to determine their ability to independently perform functional skills associated with daily living (e.g., pencil use, washing, toileting, dressing, toileting, working) or by a physical therapist to evaluate gross and fine motor skills. Evaluations generally rely on individually administered standardized tests. Professionals using tests can select from among hundreds when conducting their evaluations.

The child study team reviews all data and determines whether a student is eligible for special education services in light of rules established by each

state departments of education. If a student is found eligible for special education services, a child study team develops an individual education plan that includes educational objects, a behavior plan, if needed, and specifies the location, their duration, and frequency of services. The plan must be developed with the intention to provide meaningful educational benefit to the student. The child's individual education plan is approved by parents and reviewed yearly. The child study team meets at least yearly to review program progress and to make needed changes to the student's education plan. A re-evaluation occurs at least every three years. Students who are not eligible for special education services yet need additional assistance may be considered for other special school-related assistance

#### **Discussion: Implications for Brazil**

Opinions as to the origins of LD, the qualities thought to characterize it, whether it is pervasive, as well as preferred diagnostic and intervention methods differ internationally. International attempts to define, measure, and treat LD in a consistent fashion are not possible at this time. Thus, Brazil cannot look to the international arena for clear and consistent guidelines to follow when attempting to meet the needs of its students with LD. The following suggestions are provided as possible pathways that may lead to this goal.

#### **Recognize the Developmental Nature of Special Education Services.**

Special education services generally develop in the following pattern: definitions, diagnoses, and programs are established first for students with mental retardation as well as those who are blind or deaf. Many countries provide at least some services for students with these three disorders. Definitions, diagnoses, and program for students with LD or emotional disorders may follow. Few countries provide services for students with these disorders. A lack of LD services may be attributable to insufficient funds or the lack of political will to establish them.

#### **Advocate for Creating and Funding LD Services**

Insufficient funds may be a legitimate reason for not establishing LD programs. Lack of political will is less legitimate. Politicians often respond to groups that are passionate in their beliefs and persistence in pursuing them.

The birth of most special education services

follows the actions of well organized, committed, and persistent parent group that lobby for services. Many if not most special education services are initiated following prolonged efforts by parent organization that advocate for such services. Ironically, educators are unlikely to be at the forefront of leadership. Thus, the formation of strong local, regional, and national parent organizations that are dedicated and passionate in their work to achieve LD services for their children and others, together with support from the Federal Council of Psychologists and other professional associations, are needed to pressure legislatures to provide services to Brazilian students with LD. This action may be one of the first and most important steps needed to create such services.

### **Create Consensus as to the Behaviors That Do and Do Not Characterize LD.**

Agreement is needed as to the qualities that do and do not characterize LD. These efforts could be aided by initially accepting a definition of learning disabilities/disorders found in the DSM or ICD-10 as a starting point. Additional information from two other sources is critical. First, professional judgments of seasoned professionals, including teachers and clinicians experienced in working with children who display learning difficulties, are needed to help identify those qualities that do and do not constitute LD. Second, their professional judgments together with knowledge from international scholarship on LD should be used as a basis for conducting research to determine empirically the qualities of students in Brazil who display LD and its prevalence. Possible differences by age, gender, social class, ethnicity, and geographic region should be considered.

### **Two Critical Assessment Orientations: One for Diagnosis and Another for Intervention.**

Seasoned professionals need two sources of data: those needed to diagnose and those needed to assist with intervention planning and evaluation. These two sources typically differ. Diagnosis typically credentials students to receive special education services. Test data important to diagnosis rarely is important to intervention planning. For example, consistent with the DSM and ICD LD models, achievement and intelligence test data may be sufficient for arriving at a diagnosis. However, these data lack the specificity needed to assist with intervention planning and evaluation efforts. Thus, psychologists and others involved in working with students with LD must have two forms of test data:

those needed to diagnose and those needed to plan and evaluate. Both are discussed below.

Resist efforts to develop diagnostic and intervention models based on Brazil's current assessment resources to implement them. Preferred diagnostic and intervention models should be supported by tests and other assessment methods, not dictated by their current availability. The infrastructure to support test development in Brazil is sufficiently mature to assume responsibility for developing assessment methods, including tests, needed to implement preferred diagnostic and intervention models.

Decide on Methods to Diagnose LD. Various models can be developed that assist in the diagnosis of students with LD. This paper outlined only two: a discrepancy model and a response to intervention model. In a discrepancy model (e.g., consistent with the DSM and ICD), data from measures of intelligence and achievement are used to determine whether a student's achievement is substantially lower than her or his intelligence. In a response to intervention model, students who display little to no improvement in achievement following prolonged remedial efforts are thought to have a LD.

The need to develop and use nationally normed achievement tests is obvious. Brazil currently lacks this needed resource. The availability of group administered achievement measures will assist in creating national standards for achievement, screening for those with possible LD, and in determining the degree of improvement in achievement. The use of both group and individually administered achievement tests is likely to be critical to implementing any LD model.

### **Decide on Methods to Intervene with Students with LD.**

The implementation of interventions that lead to improvement in achievement is the ultimate program goal. Test development efforts are needed to support this goal.

Those who view LD as being pervasive and offer services at various times during a student's school career may find the following question serves as a basis for their intervention LD model: what combinations of intervention, specific to this student, delivered by whom, under what conditions, and over what length of time are likely to have some degree of success? This question acknowledges the foundation principle of psychology: we all differ in how and to what level we achieve.

Those who work with students with LD generally recognize a student's low achievement is due to various underlying causes, that no one developmental or remediation program is best for a specific form of LD (e.g., to help improve low reading comprehension), that educational strategies may have some success, that progress is likely to be slow, and that achievement elevated to average levels should not be expected for all students. Moreover, progress is not likely to be documented well by norm-referenced standardized tests designed to assess achievement over several grades and reported through standardized scores.

Most nationally normed achievement tests are designed for use in many grades. Thus, the number of items used to assess achievement in any one grade may be somewhat limited. Achievement tests for use in LD intervention are likely to require measures

which test data may figure prominently.

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- that document small yet important degrees of change in achievement, including reporting scores using item response theory generated growth scores and other meaningful scores that allow students, their teachers, parents, and practitioners to see growth in ipsative rather than normative ways. Thus, curriculum-based rather than norm-referenced-based tests may be needed for these efforts. Items on curriculum based tests typically are both more numerous per grade level and calibrated more finely, thus allowing one to detect changes that may not be apparent on traditional norm-referenced measures.
- Test developers and researcher may assist intervention efforts by helping professionals identify the combinations of intervention, specific to this student, delivered by one or more persons, under various conditions, and over various lengths of time, that are likely to have the best success. These issues are amenable to single subject research designs in National Center for Education Statistics. (2002). *Profile of Undergraduates in U.S. Postsecondary Institutions: 1999-2000*, Washington, DC: author.
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