11.12: Learning Difficulties

When children don’t seem to be developing or learning in the typical pattern one might be assessed for a disorder or disability. What is a learning disorder or disability? In the next section we’ll learn about the spectrum of disorders and how they may impact many areas of the child’s life.

- A **learning disorder** is a classification of disorders in which a person has difficulty learning in a typical manner within one of several domains. Types of learning disorders include difficulties in reading (dyslexia), mathematics (dyscalculia), and writing (dysgraphia). These disorders are diagnosed with certain criteria.

- A **learning disability** has problems in a specific area or with a specific task or type of activity related to education.

Children with learning challenges are usually identified in school because this is when their academic abilities are being tested, compared, and measured. In the Diagnostic and Statistical Manual of Mental Disorders -DSM-5, a qualified person will make a diagnosis, identified causes, and will make a treatment plan for disorders and disabilities. The diagnosis of specific learning disorder was added to the DSM-5 in 2013.

The DSM does not require that a single domain of difficulty (such as reading, mathematics, or written expression) be identified—instead, it is a single diagnosis that describes a collection of potential difficulties with general academic skills, simply including detailed specifies for the areas of reading, mathematics, and writing. Academic performance must be below average in at least one of these fields, and the symptoms may also interfere with daily life or work. In addition, the learning difficulties cannot be attributed to other sensory, motor, developmental, or neurological disorders.

The following is an example of the DSM-5 - learning disorders.

**Learning Disorders:**

- Dyslexia - Reading
Dyscalculia – Mathematics
Dyspraxia - Motor Coordination
Dysgraphia - Writing
Auditory Processing Disorder - Hearing
Visual Processing Disorder - Visual

Speech and Language Disorders:

- Aphasia - Loss of language - expressive and receptive
- Articulation Disorder - An articulation disorder
- Fluency Disorders - Fluency disorders
- Voice Disorders - Disorders of the voice

Learning Disorders or Disabilities

Dyslexia

Dyslexia, sometimes called “reading disorder,” is the most common learning disability; of all students with specific learning disabilities, 70%–80% have deficits in reading. The term “developmental dyslexia” is often used as a catchall term, but researchers assert that dyslexia is just one of several types of reading disabilities. A reading disability can affect any part of the reading process, including word recognition, word decoding, reading speed, prosody (oral reading with expression), and reading comprehension.

Dyscalculia

Dyscalculia is a form of math-related disability that involves difficulties with learning math-related concepts (such as quantity, place value, and time), memorizing math-related facts, organizing numbers, and understanding how problems are organized on the page. Dyscalculics are often referred to as having poor "number sense."

Dyspraxia

Children who have motor skills substantially below what is expected for their age are diagnosed with dyspraxia – or developmental coordination disorder (DCD) as it is more formally known. They are not lazy, clumsy or unintelligent – in fact, their intellectual ability is in line with the general population – but they do struggle with everyday tasks that require coordination.
Figure 11.32: Children with learning challenges are usually identified in school because this is when their academic abilities are being tested, compared, and measured.63

**Dysgraphia**

The term **dysgraphia** is often used as an overarching term for all disorders of written expression. Individuals with dysgraphia typically show multiple writing-related deficiencies, such as grammatical and punctuation errors within sentences, poor paragraph organization, multiple spelling errors, and excessively poor penmanship. 64

**Auditory Processing Disorder**

A processing deficit in the auditory modality that spans multiple processes is **auditory processing disorder** (APD). To date, APD diagnosis is mostly based on the utilization of speech material. Unfortunately, acceptable non-speech tests that allow differentiation between an actual central hearing disorder and related disorders such as specific language impairments are still not adequately available.

**Visual Processing Disorder**

Difficulty processing or interpreting visual information is referred to as **visual processing disorder** (VPD). Kids with visual processing issues may have difficulty telling the difference between two shapes or finding a specific piece of information on a page.65

<table>
<thead>
<tr>
<th>Disability</th>
<th>Difficulties</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyslexia</td>
<td>Difficulty with reading</td>
<td>Problems reading, writing, spelling</td>
</tr>
<tr>
<td>Dyscalculia</td>
<td>Difficulty with math</td>
<td>Problems doing math problems, understanding time, using money</td>
</tr>
<tr>
<td>Dyspraxia (Sensory Integration Disorder)</td>
<td>Difficulty with fine motor skills</td>
<td>Problems with hand-eye coordination, balance manual dexterity</td>
</tr>
</tbody>
</table>
Disability | Difficulties | Effects
--- | --- | ---
Dysgraphia | Difficulty with writing | Problems with handwriting, spelling, organizing ideas
Auditory Processing Disorder | Difficulty hearing difference between sounds | Problems with reading, comprehension, language
Visual Processing Disorder | Difficulty interpreting visual information | Problems with reading, math, maps, charts, symbols, pictures

Speech and Language Disorders

Aphasia

A loss of the ability to produce or understand language is referred to as **aphasia**. Without the brain, there would be no language. The human brain has a few areas that are specific to language processing and production. When these areas are damaged or injured, capabilities for speaking or understanding can be lost, a disorder known as aphasia. These areas must function together in order for a person to develop, use, and understand language.

Articulation Disorder

**An articulation disorder** refers to the inability to correctly produce speech sounds (phonemes) because of imprecise placement, timing, pressure, speed, or flow of movement of the lips, tongue, or throat (NIDCD, 2016). Sounds can be substituted, left off, added or changed. These errors may make it hard for people to understand the speaker. They can range from problems with specific sounds, such as lisping to severe impairment in the phonological system. Most children have problems pronouncing words early on while their speech is developing. However, by age three, at least half of what a child says should be understood by a stranger. By age five, a child's speech should be mostly intelligible. Parents should seek help if by age six the child is still having trouble producing certain sounds. It should be noted that accents are not articulation disorders (Medline Plus, 2016a).

Fluency disorders

**Fluency disorders** affect the rate of speech. Speech may be labored and slow, or too fast for listeners to follow. The most common fluency disorder is stuttering.

**Stuttering** is a speech disorder in which sounds, syllables, or words are repeated or last longer than normal. These problems cause a break in the flow of speech, which is called dysfluency (Medline Plus, 2016b). About 5% of young children, aged two-five, will develop some stuttering that may last from several weeks to several years (Medline Plus, 2016c). Approximately 75% of children recover from stuttering. For the remaining 25%, stuttering can persist as a lifelong communication disorder (National Institute on Deafness and other Communication Disorders, NIDCD, 2016).
This is called developmental stuttering and is the most common form of stuttering.

Brain injury, and in very rare instances, emotional trauma may be other triggers for developing problems with stuttering. In most cases of developmental stuttering, other family members share the same communication disorder. Researchers have recently identified variants in four genes that are more commonly found in those who stutter (NIDCD, 2016).

### Voice disorders

**Disorders of the voice** involve problems with pitch, loudness, and quality of the voice (American Speech-Language and Hearing Association, 2016). It only becomes a disorder when problems with the voice make the child unintelligible. In children, voice disorders are significantly more prevalent in males than in females. Between 1.4% and 6% of children experience problems with the quality of their voice. Causes can be due to structural abnormalities in the vocal cords and/or larynx, functional factors, such as vocal fatigue from overuse, and in rarer cases psychological factors, such as chronic stress and anxiety.

![Figure 11.33: Speech therapy. 68](image)

### Children with Disabilities: Legislation

Since the 1970s political and social attitudes have moved increasingly toward including people with disabilities into a wide variety of "regular" activities. In the United States, the shift is illustrated clearly in the Federal legislation that was enacted during this time. Three major laws were passed that guaranteed the rights of persons with disabilities, and of children and students with disabilities in particular. The third law has had the biggest impact on education.

**The Rehabilitation Act of 1973, Section 504**

This law, the first of its kind, required that individuals with disabilities be accommodated in any program or activity that receives Federal funding (PL93-112, 1973). Although this law was not intended specifically for education, in practice it has protected students’ rights in some extra-curricular activities (for older students) and in some childcare or after-school care programs (for younger students). If those programs receive Federal funding of any kind, the programs are not allowed to exclude children or youths with disabilities, and they have to find reasonable ways to accommodate the individuals' disabilities.
Americans with Disabilities Act of 1990 (or ADA)

This legislation also prohibited discrimination on the basis of disability, just as Section 504 of the Rehabilitation Act had done (PL 101-336, 1990). Although the ADA also applies to all people (not just to students), its provisions are more specific and “stronger” than those of Section 504. In particular, ADA extends to all employment and jobs, not just those receiving Federal funding.

It also specifically requires accommodations to be made in public facilities such as with buses, restrooms, and telephones. ADA legislation is therefore responsible for some of the “minor” renovations in schools that you may have noticed in recent years, like wheelchair-accessible doors, ramps, and restrooms, and public telephones with volume controls.

Figure 11.34: President George H. W. Bush Signs the Americans with Disabilities Act, 07/26/1990. 69

Individuals with Disabilities Education Act (or IDEA)

As its name implied this legislation was more focused on education than either Section 504 or ADA. It was first passed in 1975 and has been amended several times since, including most recently in 2004 (PL 108-446, 2004). In its current form, the law guarantees the following rights related to education for anyone with a disability from birth to age 21.

The first two rights influence schooling in general, but the last three affect the work of classroom teachers rather directly:

• **Free, appropriate education:** An individual or an individual's family should not have to pay for education simply because the individual has a disability, and the educational program should be truly educational; i.e., not merely caretaking or babysitting.

• **Due process:** In case of disagreements between an individual with a disability and the schools or other professionals, there must be procedures for resolving the disagreements that are fair and accessible to all parties, including the person himself or herself or the person's representative.

• **Fair evaluation of performance in spite of disability:** Tests or other evaluations should not assume test taking skills that a person with a disability cannot reasonably be expected to have, such as holding a pencil, hearing or seeing questions, working quickly, or understanding and speaking orally. Evaluation procedures should be modified to allow for these differences. This provision of the law applies both to evaluations made by teachers and to school-wide or “high-stakes” testing programs.

• **Education in the “least restrictive environment”**: Education for someone with a disability should provide as many educational opportunities and options for the person as possible, both in the short term and in the long term.
In practice, this requirement has meant including students in regular classrooms and school activities as much as possible.

- **An Individualized Educational Plan (IEP):** Given that every disability is unique, instructional planning for a person with a disability should be unique or individualized as well. In practice, this provision has led to classroom teachers planning individualized programs jointly with other professionals (like reading specialists, psychologists, or medical personnel) as part of a team.70

![Special Education Process](https://socialsci.libretexts.org/Bookshelves/Early_Childhood_Education/Book%3A_Child_Growth_and_Development_(Paris%...)

Figure 11.35: The special education process.71