



Can You Spot the Student With a Learning Disability?



What is a Learning Disability?

According to the Title 5 (SECTION 56036) regulations that govern the California Community Colleges, in accordance with the State Education Code and State and Federal legislative guidelines, the definition of a learning disability is as follows:

Is as a persistent condition of presumed neurological dysfunction which may exist with other disabling conditions. The dysfunction is not explained by lack of educational opportunity, lack of proficiency in the language of instruction, or other non-neurological factors, and this dysfunction limits the student's ability to access the educational process. To be categorized as a student with a learning disability, a student must meet the following criteria through psycho-educational assessment verified by a qualified specialist certified to assess learning disabilities:

- a) Average to above-average intellectual ability; and
- b) Statistically significant processing deficit(s); and/or
- c) Statistically significant aptitude-achievement discrepancies.

Intellectual Disability

According to the Title 5 (SECTION 56039) regulations that govern the California Community Colleges, in accordance with the State Education Code and State and Federal legislative guidelines, the definition of an Intellectual disability is as follows:

Intellectual disability (ID) is defined as **significant limitations both in intellectual functioning and in adaptive behavior** that affect and limit the student's ability to access the educational process. An individual may have an intellectual disability when:

- (1) the person's **functioning level is below average intellectual ability**; and
- (2) the person has **significant limitations in adaptive skill areas** as expressed in **conceptual, social, academic and practical skills** in independent living and employment; and,
- (3) the disability originated before the age of 18.

What is Dyslexia?

International Dyslexia Association (IDA): Deficits in accurate and fluent word recognition, decoding, and spelling with secondary effects on reading comprehension.

International Classification of Diseases (ICD-10): Reading achievement substantially below that expected given the individual's chronological age, measured intelligences, and age-appropriate education

World Health Organization (WHO): A neurodevelopmental disorder hindering the acquisition of reading that cannot otherwise be explained by IQ, academic opportunities, motivation or specific sensory acuity.

DSM-5: Classified under the broad term of specific learning disorder, dyslexia refers to a pattern of learning difficulties characterized by deficits in accurate or fluent word recognition, poor decoding, poor spelling abilities.

IDEIA: A learning disability with a basic disorder of a psychological process used in understanding, oral, spoken, or written language, and may manifest in the imperfect ability to listen, think, speak, read, write, spell, or do math; it may include conditions such as dyslexia.

The California Dyslexia Guidelines include this definition of dyslexia:

Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

Dyslexia Facts

- According to the IDA (2016b), dyslexia affects people from different cultural, ethnic, and socioeconomic backgrounds nearly equally.
- Hereditary
- Dyslexia often occurs in combination with other conditions (e.g., dysgraphia, dyscalculia, oral language impairment, and attention-deficit/hyperactivity disorder [ADHD]).
- Is a Spectrum

Dyslexia Subtypes

Dysphonetic Dyslexia-Weaknesses within letter-sound relationships (phonemic awareness/phonological processing).

Surface Dyslexia-Strong phonological skills, weaknesses with word recognition automaticity...sounding out everything!

Mixed Dyslexia-Most severe type.

Reading Comprehension-Weaknesses in interpreting meaning influenced by executive functioning, working memory, language skills (vocabulary).

Characteristics of Students with Dyslexia

- A childhood history of reading and spelling difficulties, many of which persist
- Slow reading rate; extreme fatigue when reading
- May confuse visually similar word like *can* and *cab*
- An avoidance of reading for pleasure and of reading aloud
- Difficulty with handwriting in general and note taking in lecture-based classes
- Difficulty with spelling and written composition
- Trouble learning a foreign language

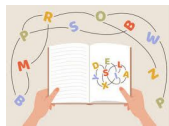
- Difficulty organizing projects and completing assignments on time.
- Difficulty with multiple-choice tests

- May exhibit left/right confusion and difficulties with concepts related to time and space
- May have difficulty solving math word problems

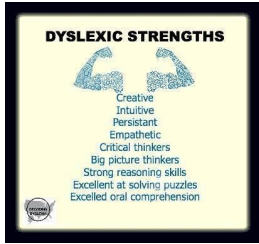
Characteristics of Students with Dyslexia cont.

Speech

- A tendency to pause or hesitate often when speaking and the use of imprecise language, such as "stuff" and "things"
- Frequent mispronunciation of the names of people and places.
- Difficulty remembering names of people and places and confusion over names that sound alike
- A tendency to struggle to retrieve words; the student has the "It was on the tip of my tongue" moment frequently
- An avoidance of saying words that might be mispronounced



Strengths of Dyslexia



"One thing we know for certain about dyslexia, is that this is one small area of difficulty in a sea of strengths"

Dr. Sally Shaywitz



If you are reading this on an iPhone, thank **Steve Jobs** who was **DYSLEXIC**.

If you are reading this on a Windows product, thank **Bill Gates** who is **DYSLEXIC**.

If you are reading this with the assistance of a light, thank the boy who came home from school with a note pinned to his shirt that read, "this boy is too stupid to learn" that boy was **Thomas Edison**, a **DYSLEXIC**.

Simulation of Dyslexia

<https://tll.gse.harvard.edu/dyslexia-simulator>

Ways to Support Students with Dyslexia

- Wherever possible, present your material in more than one way.
- Diagrams/Graphic organizer apps-Inspiration or Mindomo (can be used for teaching and/or student review)
- **Low-tech options**—Examples include reading rulers & highlighting.
- Encourage use of **Spell checkers**
- **Word prediction (WP)**—As a student types, word prediction software selects several word choices on the basis of the context of the sentence.
- **Alternative Media**. Stay tuned

What is Dysgraphia?

Dysgraphia is defined by the **National Institute of Health** as "a neurological disorder characterized by writing disabilities. Specifically, the disorder causes a person's writing to be distorted or incorrect."

IDEIA: as "a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations."

Dysgraphia Subtypes

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TYPES OF DYSGRAPHIA

- 1. DYSLLEXIA DYSGRAPHIA**
This condition is characterized by illegible handwriting, spelling errors, and excellent copied work.
- 2. MOTOR DYSGRAPHIA**
This condition is characterized by deficient fine motor skills, poor dexterity, poor muscle tone, and unspecified motor clumsiness.
- 3. SPATIAL DYSGRAPHIA**
The individual with this condition has difficulty understanding the spaces between the letters.
- 4. PHONOLOGICAL DYSGRAPHIA**
Individuals with phonological dysgraphia are often unable to memorize phonemes and tend to blend them in their appropriate sequence to write the targeted word.
- 5. LEXICAL DYSGRAPHIA**
This condition occurs when a person can spell but relies on their sound to letter patterns to write. This creates misspelling of irregular words.

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Characteristics of Dysgraphia

Both:

- May be unable to take effective notes in class or from readings.
- Legibility of written work may be poor, becoming increasingly worse from the beginning to the end of the document.

Language:

- Unfinished words or letters, omitted words
- Difficulties with writing mechanics, like spelling, grammar, punctuation, and sentence structure
- Spelling may be inaccurate and/or inconsistent
- Challenge writing longer sentences (produce more fragments, use fewer advanced vocabulary words)
- Trouble organizing their writing
- Content which does not reflect the student's other language skills

Motor:

- Inconsistencies : mixtures of print and cursive, upper and lower case, or irregular sizes, shapes, or slant of letters
- Difficulties discriminating between letters of similar shape (ie. b/d, g/q)
- Inconsistent position on page with respect to lines and margins
- Inconsistent spaces between words and letters
- Writing by hand may be slow and effortful, resulting in diminished content in comparison with the student's knowledge
- Cramped or unusual grip, Strange wrist, body, or paper position

Dysgraphia Simulation

<https://www.youtube.com/watch?v=WHzu701vlsA>

Materials needed: pen/pencil and paper

Ways to Support Students with Dysgraphia

- Provide access to **powerpoint/handouts in advance** to reduce copying
- Give **examples** of finished assignments
- Provide a **rubric** and explain how each step is graded within a writing assignment
- Offer **alternatives to written responses**, like giving an oral report or presentation (when deemed appropriate)
- Pencil grips
- Graph paper (or lined paper to be used sideways) to help line up math problems.
- **Notability** app (best for ipad)
- Graph organizer apps-**Inspiration or Mindomo** (can be used for teaching and/or student review)
- Assistive tech stay tuned.....

What is Dyscalculia?

The National Numeracy Strategy (DFES, 2001):

Dyscalculia is a condition that affects the ability to acquire arithmetical skills. Dyscalculic learners may have difficulty understanding simple number concepts, lack an intuitive grasp of numbers, and have problems learning number facts and procedures. Even if they produce a correct answer or use a correct method, they may do so mechanically and without confidence.

DSM-5 defines Dyscalculia as a specific learning disorder, an impediment in mathematics, evidencing problems with:

- Number sense
- Memorisation of arithmetic facts
- Accurate and fluent calculation
- Accurate math reasoning.

IDEIA- A learning disability with a basic disorder of a psychological process used in understanding, oral, spoken, or written language, and may manifest in the imperfect ability to listen, think, speak, read, write, spell, or do math

Dyscalculia Subtypes (Fiefer)

Verbal

- Main difficulty is the automatic retrieval of math facts and math word problems
- Comorbidity with Dyslexia

Procedural

- Difficulty recalling math algorithms or sequence of steps for longer math operations
- Associated with inattentive type of ADHD and working memory challenges

Semantic Memory

- Difficulty with understanding math concepts and visual spatial challenges
- Difficulty applying math skills to solve real world problems
- Difficulty transcoding math operations (i.e. 9×4 is the same as $(4 \times 10) - 4$)

Visual spatial challenges include:

- Difficulties with column alignment, place value
- Recognising and understanding symbols. For example confusing x with $+$
- Interpreting visual representations of mathematical objects. For example being able to recognise the net of a square
- Placing numbers on a number line.
- Visualising geometric figures, such as 3 D shapes
- Interpreting graphs and tables.

Real World Characteristics of Dyscalculia

- Have trouble remembering numbers such as zip codes, phone numbers, or game scores
- Have a hard time telling left from right
- Have difficulty reading clocks and telling time
- Making mistakes in copying and memorizing phone numbers, logins, and dates
- Having trouble with everyday calculations like estimating a shopping total or change given, the tip in a restaurant or sharing the bill, calculating fractions when you need to double or reduce the recipe
- Managing finances in general; a bank account, a checkbook, keeping track of credit card payments and understanding the annual percentage rate (APR)
- Understanding directions and using maps and graphs, calculating distance and speed
- Keeping track of time, missing appointments and deadlines

Dyscalculia Simulation

<https://youtu.be/BwO8TD0b8j-E?si=FBCIOzJ3-tToHAI3>

Materials needed:
Pen & paper

Ways to Support Students with Dyscalculia

- Using more real-life examples to relate math problems with students' knowledge.
- Access to visual aids
- Allow space to illustrate problems on tests.
- Access to formulas, math facts, vocabulary on tests
- Provide a vocabulary list before lecture
- Use of graph paper to organize numbers on page
- *Photomath* app-shows steps and explains terminology



Now What? Referring Students to DSPTS

The Disability Resource Center (DRC) offers support services for students with physical, communication, learning, and psychological disabilities (including Autism, Developmental Disabilities, Mental Health diagnoses)

Step 1: Refer students to website to complete application.
<https://www.laspositascollege.edu/dsps/apply.php>
(Must have active MyPortal account)

Step 2: Application is reviewed to see if they need assistance obtaining disability verification documents (IEP, 504 plan, Medical etc.) or if **testing** is needed to determine a **learning** or **intellectual disability**.

Learning Disability Assessment Process

Figure 2. Components of the learning disabilities eligibility and services process



Presentation Feedback

<https://forms.gle/2WVvUE5vNiNBTEvi?>