



# DYSLEXIA 101

## A Summary

### [Abstract](#)

A short explanation of the components of Dyslexia and why all must be addressed for the purposes of remediation

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## General Dyslexia Facts

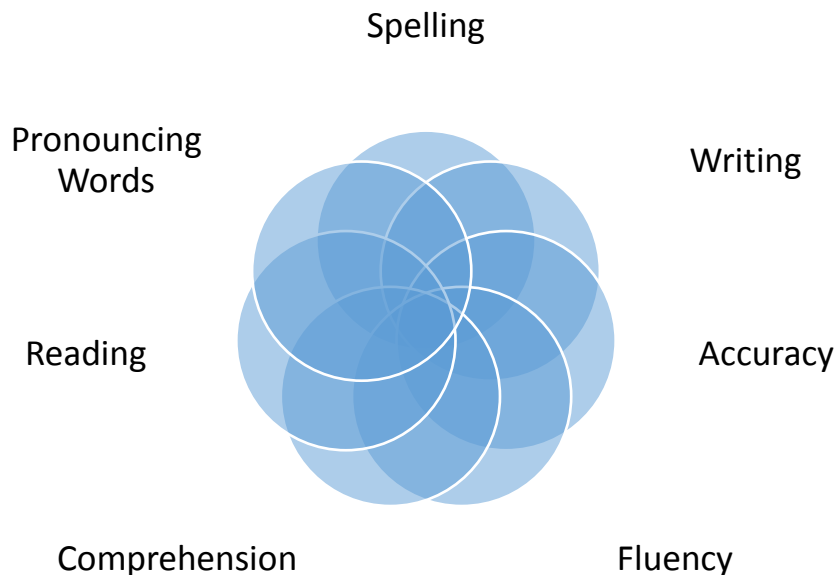
Dyslexia is a language processing disorder. –Dr. Sally Shaywitz, *Overcoming Dyslexia*

*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.*

<https://dyslexiada.org/definition-of-dyslexia/>

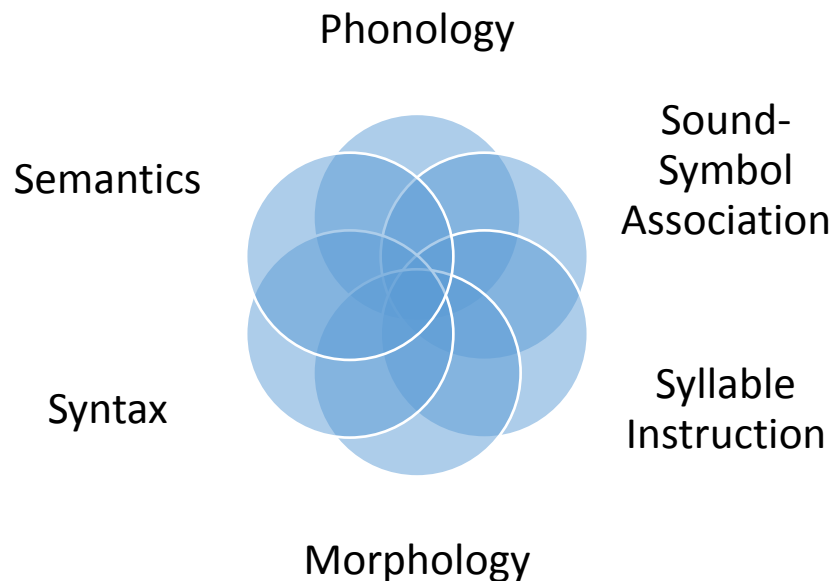
<https://dyslexiada.org/dyslexia-basics/>

Within the Venn diagram below, all aspects which dyslexia can and do impact are presented. Through proper, meaningful and on-going evaluation, the shift in the circles can be well documented. Remediation must evolve as the dyslexic's strengths and weaknesses become apparent. Proper remediation is only achieved when the intersection of all of the circles is successful, meaning when each circle is remediated individually, but also in how it interrelates to the whole. Successful remediation will enable all of the pieces to come together to shape a successful reader, writer and speller.



## Structured Literacy

<https://dyslexiaida.org/effective-reading-instruction/>



### Texas Dyslexia Handbook Revised 10-2018

Per the handbook, on pages 40-41, “For students with dyslexia who have been determined eligible for and who are receiving special education services, specially designed instruction **must** also address the critical, evidence-based components described in this chapter (Chapter IV). Specially designed instruction differs from standard protocol dyslexia instruction in that it offers a more individualized program specifically designed to meet a student's unique needs.

#### Critical, Evidence-Based Components of Dyslexia Instruction:

- Phonological Awareness
- Sound-Symbol Association
- Syllabication
- Orthography
- Morphology
- Syntax
- Reading Comprehension
- Reading Fluency

In addition, the Texas Dyslexia Handbook states that a child must have support in written expression.

“As appropriate intervention is provided, students with dyslexia make significant gains in reading. Effective instruction is highly-structured, systematic, and explicit, and it lasts for sufficient duration. With regard to explicit instruction, Torgesen (2004) states, “Explicit instruction is instruction that does

not leave anything to chance and does not make assumptions about skills and knowledge that children will acquire on their own” (p. 353).

In addition, because effective intervention requires highly structured and systematic delivery, it is critical that those who provide intervention for students with dyslexia be trained in the program used and that the program is implemented with fidelity.”

## Dysgraphia

*Dysgraphia* is a Greek word. The base word *graph* refers both to the hand’s function in writing and to the letters formed by the hand. The prefix *dys* indicates that there is impairment. *Graph* refers to producing letter forms by hand. The suffix *ia* refers to having a condition. Thus, *dysgraphia* is the condition of impaired letter writing by hand, that is, disabled handwriting. Impaired handwriting can interfere with learning to spell words in writing and speed of writing text. Children with dysgraphia may have only impaired handwriting, only impaired spelling (without reading problems), or both impaired handwriting and impaired spelling.

<https://dyslexiaida.org/understanding-dysgraphia/>

## Handwriting Resources

<http://www.handwriting-solutions.com/dysgraphia.asp>

<http://www.davidsongifted.org/Search-Database/entry/A10709>

“This chapter presented specific techniques for teaching handwriting using a multisensory framework and integrating the teaching of print and cursive handwriting with reading and spelling. The importance of handwriting instruction in early education and in remediation, a brief history of the teaching of handwriting, techniques used to teach it in schools now, some syndromes related to difficulties with handwriting, research evidence of the efficacy of direct teaching of handwriting to dyslexic students, and the use of assistive technologies have been discussed.

Emphasis is placed on a hierarchy of skills – utilizing large-muscle movements, providing a model of cursive over print to tie the written letter to the printed letter in reading material, practicing individual strokes within letters, and connecting letters. Spacing’ proportion of single letter shapes, both individually and in relation to other letters; rhythm; and fluency are emphasized, which leads to instant writing and writing from memory. All is done in a structured way in correct position, with students naming the letters before writing to utilize the visual, auditory, kinesthetic, and tactile senses. The teacher does not hurry students to reduce the size of the letter shapes prematurely but demands automaticity and fluency at each level of air writing, tracing, copying and writing large letters from memory before allowing smaller letters to be practiced.

A number of programs have been specifically developed to emphasize the proper formation of letters, treating handwriting as a basic skill to be taught systematically. All of the programs direct the writer’s attention to the distinctive features of each letter. Letters are grouped by beginning stroked; by the number of spaces above and below the lines; and by stopping points, vertical lines, loops, and curves. The main feature of these programs is consistent motor patterns supported by explicit verbalization of the proper order and directions for making the strokes as the letters are learned and practiced. Verbal

descriptions have been developed for all 26 lowercase cursive and print letters. Uppercase cursive letters are usually taught later. (See Appendix B for a list of published multisensory structured language programs that deal directly and explicitly with handwriting as a remedial adjunct to reading and spelling.)

Research has shown that students who are unable to take notes and write papers at an efficient level fall behind not only in notation but also in comprehension (Phelps, Stempel, & Browne, 1989). Because the basic skill areas appear closely linked, handwriting should be integrated into curricula designed to help students who have academic difficulties. Very often the focus in language arts education is on spelling and reading to the exclusion of handwriting. This vital omission can lower overall achievement and affect a child's attitude toward all school learning (Askov & Peck, 1982).

Assistive or bypass technologies are available, but careful consideration of a child's strengths and weaknesses is required to determine the degree of assistance that the technologies might provide. Once keyboarding skills are automatic, the keyboard and word processor are useful tools. Students' needs and the limitations of other technologies will influence the effectiveness of these alternatives."

## Spelling

"The definition of dyslexia endorsed by The International Dyslexia Association \*Lyon, Shaywitz, & Shaywitz, 2003) included reading disabilities as well as specific spelling disabilities. As noted in Chapters 5 and 8, students with dyslexia have difficulty learning to decode because of a core deficit in phonological processing (Adams, 1990; Bradley & Bryant, 1983; Goswami & Bryant, 1990). It is rare for students with dyslexia who have difficulty with decoding not to have difficulty with spelling. It is possible, however, for students to be fairly good readers but poor spellers. Moats (1995) made these observations about poor spellers. Good readers who are poor spellers have problems with the exact recall of letter sequences and subtle difficulties with complex spelling patterns and aspects of language structure, but they do not have a deficit in phonological processing. Poor readers who are poor spellers have a deficit in phonological processing that interferes with their mastery of spelling. These readers also have a specific problem with memory of letter patterns, which is rooted in their poor phonological processing. In addition, poor spellers do not possess the ability to deal with several layers of language simultaneously. With proper instruction, poor spellers who are poor readers will improve their decoding skills, but they seldom master spelling (Moats, 1994; Oakland, Black, Stanford, Nuddbaum, & Blaise, 1998).

Roberts and Mather (1997) characterized poor spelling as the result of difficulties in both phonological and orthographic processing. Difficulties with phonological processing may include poor sequencing of sounds, omission, or addition of sounds, confusion with similar-sounding phonemes (e.g. /f/ and /th/, /p/ and /b/), and limited knowledge of spelling rules. Orthographic processing difficulties are manifested as poor sequencing of nonphonetic patterns, confusion with graphemes that look similar (e.g., *b* and *d*, *n* and *u*), transposition of letters (e.g., *fro* instead of *for*), overgeneralization of rules, and overreliance on auditory features (e.g., *becuz* for *because*).

## Spelling Lessons for Students with Dyslexia

Teaching students with dyslexia to spell is a long, tedious process that requires careful lesson planning. The teacher must plan for success because success builds confidence and confidence builds independence. Students with dyslexia need spelling instruction that is closely integrated with reading

instruction. Because of the exacting demands of spelling on complete and accurate recall of letter patterns, students with dyslexia need to spell words with sounds and patterns that have previously been introduced for reading and practiced. Reading words before spelling them heightens students' awareness of orthographic patterns. The number and choices of activities for a spelling lesson will depend on the readiness and needs of the student or students. The teacher will want to plan a rotation of activities that ensures that all areas of spelling are covered regularly. The teacher also will want to discuss the meanings and usages of spelling words to ensure that all of the different layers of language structure are covered in a lesson.

Spelling instruction must be designed to address phonological processing because it is the primary deficit of students with dyslexia. Without phonemic awareness, students with dyslexia will not be able to develop facility in reading or spelling. Initially, spelling instruction for students with dyslexia should build phonemic awareness. Students should engage in activities that require segmenting words into sounds. As students prepare to spell words, they need to engage in activities that heighten the recognition or discrimination of specific sounds, such as listening for a specific sound in a word or listening for the position of a specific sound in a word. After letter-sound correspondences have been introduced for reading, they can be introduced for spelling. These spelling associations are reviewed daily using a sound or spelling deck. Students spell words and derivatives with regular spellings using these sounds. Students can use the S.O.S. procedure when spelling words. New spelling patterns or rules are introduced as needed. As described in previous sections, multisensory structured guided discovery teaching is used to introduce the new pattern or rule.

When students are ready, the lesson plan is extended. Students begin dictation practice, first with phrases and then with sentences. High-Frequency irregular words can be introduced as needed, and students can use the irregular word procedure discussed previously. Analyzing and sorting activities focus students' attention on letter patterns in words, reinforce letter-sound correspondences, and help students generalize patterns and rules. Students can analyze and sort words written on individual index cards by sounds or letter patterns. As they gain greater knowledge of letter patterns, they may analyze and sort words as regular words, rule word or irregular words. Students can compile a spelling notebook in which they record information about spelling. The notebooks could contain a section for spelling patterns, with one page for each speech sound (see Figure 9.5). The reliable patterns for each sound are delineated on the pages. Students write words that follow each pattern as well as exceptions to the patterns on each page as the sound and spelling(s) are taught. Students may also have a section for rule words, with one page for each rule, and a section for irregular words, with one page for each letter of the alphabet so that irregular words can be recorded on the pages by first letter. Students may record information in their spelling notebooks once a week during a spelling lesson. On other days, students may simply read information from the notebooks as a means of reviewing spelling information.

Spelling serves as a foundation for reading; provides a means of communication; and even if not right or fairly, is used by society to judge one's level of literacy and intelligence. Spelling is a valuable skill, yet it receives a modicum of attention and respect in schools. It has been reduced to mindless busywork or has been subjugated by the content in writing. Perhaps this has happened because of the misconception that English orthography is impossibly irregular and that there is no way to teach it or because of the perception that spelling is a rote, mechanical skill that does not promote cognition. The time has come to view spelling instruction in a different light.

The orthography of English is not hopeless (Kessler & Treiman, 2003). There are frequent, reliable patterns and rules that can be taught, which thus equips students with a system for managing the orthography of English for spelling. These patterns and rules are not taught through passive, rote memorization. Spelling instruction is deeply ensconced in a rich study of language structures and takes place in a manner that promotes active, reflective thought. Spelling instruction does not distract from the content of writing but rather enhances it by enabling students to choose the words that best express their thoughts instead of those words that are easy to spell. Effective spelling instruction is engaging, thought provoking, and exciting.”

*Excerpts from Multisensory Teaching of Basic Language Skills, 3<sup>rd</sup> Edition, by Judith R. Birsch and Sally Shaywitz*

### Introduction to Phonology

Scientific Spelling teaches students to spell by translating sounds into letters or letter clusters. The choice of letters or letter clusters used to represent the sounds is dependent on the reliable patterns of the language. To insure success with Scientific Spelling, students must be able to discriminate and unblend sounds in words. The following section provides practice in discriminating and unblending. Beginning spellers will benefit from daily practice. Other students will benefit from phonology practice supplementing their spelling instruction.

*Excerpt from 1992, 2002 by Suzanne Carreker*

### What is the Nonsense Word Fluency Assessment?

Nonsense word fluency measures a student’s ability to decode individual phonemes (use of the alphabetic principle) and then blend the sounds together to read words. There is a large body of evidence that supports the use of pseudowords (nonsense words) for assessment purposes. According to research (Ravthon, N., 2004) “pseudoword decoding is the best single predictor of word identification for poor and normal readers” and is the “most reliable indicator of reading disabilities” (Ravthon, N, 2004; Stanovich, 2000). The assessment is really that powerful and when you administer the assessment, you glean a lot of information on the child’s mastery of the alphabetic principle as well as his/her ability to blend sounds into words. On the DIBELS Next NWF assessment, the student is given a page of “nonsense words” (pud, dak) and essentially asked to read the words. Some students are able to read the whole words (/pud/, others say the sounds (/p/ /u/ /d/), and some use onset-rime (/p/ /ud/). The assessment is a one minute assessment and the assessor records sound errors as well as if and how the student blended the sounds. A score is recorded (22 correct letter sequences/3 whole words read) and then compared to a set standard for the student’s grade. Using this score, the teacher can determine if the student’s ability falls within the benchmark (doing fine), strategic (require some additional instruction) or intensive (significantly at-risk) range.

<https://dibels.uoregon.edu/assessment/dibels/>- best spelling assessment for determining appropriate spelling goals.