

Research-Based Best Practices

It is important to note that in Texas, the approach to teaching students with dyslexia is founded on research-based best practices. The ideas upon which the state's approach is based are summarized here.

- Gains in reading can be significant if students with reading problems are provided systematic, explicit, and intensive reading instruction of sufficient duration in phonemic awareness, phonics, fluency, vocabulary (e.g., the relationships among words and the relationships among word structure, origin, and meaning), reading comprehension strategies, and writing.
- A failure to learn to read impacts a person's life significantly. The key to preventing this failure for students with dyslexia is early identification and early intervention.
- Instruction by a highly skilled and knowledgeable educator who has specific preparation in the remediation of dyslexia is necessary.

It is vital to start evidence-based interventions as soon as possible. Effective treatments for dyslexia should consist of explicit academic teaching of reading and spelling skills.

The following research reflects the essential components of dyslexia instruction discussed above and may serve as additional sources of information for those working with students identified with dyslexia. The similarities between the state's approach and the research are noted in bold. Unless otherwise indicated, the following pages contain excerpts from the resources cited.

1. August and Shanahan (2006, pp. 3–5) state the following:
 - **Instruction that provides substantial coverage in the key components of reading—identified by the National Reading Panel (NICHD, 2000) as phonemic awareness, phonics, fluency, vocabulary, and text comprehension**—has clear benefits for language-minority students.
 - **Instruction in the key components of reading** is necessary—but not sufficient—for teaching language-minority students to read and write proficiently in English. Oral proficiency in English is critical as well, but student performance suggests that it is often overlooked in instruction.
 - Oral proficiency and literacy in the first language can be used to facilitate literacy development in English.

August, D., & Shanahan, T. (Eds.). (2006). *Executive summary: Developing literacy in second-language learners: Report of the National Literacy Panel on language-minority children and youth*. Mahwah, NJ: Lawrence Erlbaum.

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2. Berninger and Wolf (2009, p. 49–50) state the following:

Until children are reading without effort, each reading lesson should consist of **teacher-directed**,

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explicit, systematic instruction in 1) phonological awareness; 2) applying phonics (alphabetic principle) and morphology to decoding; 3) applying background knowledge already learned to unfamiliar words or concepts in material to be read (activating prior knowledge); 4) both oral reading and silent reading, with appropriate instructional materials; 5) activities to develop oral reading fluency; and 6) reading comprehension.

Berninger, V. W., & Wolf, B. J. (2009). *Teaching students with dyslexia and dysgraphia: Lessons from teaching and science*. Baltimore, MD: Paul H. Brookes Publishing.

3. Birsh (2018, p. 3) states the following:

Teachers need to undergo extensive **preparation in the disciplines inherent in literacy**, which include the following:

- Language development
- **Phonology and phonemic awareness**
- Alphabetic knowledge
- Handwriting
- **Decoding (reading)**
- **Spelling (encoding)**
- **Fluency**
- **Vocabulary**
- **Comprehension**
- Composition
- Testing and assessment
- Lesson planning
- Behavior management
- Study skills
- History of the English language
- Technology
- Needs of older struggling students

Birsh, J. R. (2018). Connecting research and practice. In J. R. Birsh, *Multisensory teaching of basic language skills* (4th ed., pp. 2–34). Baltimore, MD: Paul H. Brookes Publishing.

4. Clark and Uhry (2004, pp. 89–92) state the following:

- Children with dyslexia need the following:
 - **Direct, intensive, and systematic** input from and interaction with the teacher
 - Immediate feedback from the teacher
 - Careful pacing of instruction
 - **Systematic** structured progression from the simple to the complex
- Other components of instruction include the following:
 - Learning to mastery

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- Multisensory instruction

Clark, D., & Uhry, J. (Eds.). (2004). *Dyslexia: Theory and practice of instruction* (3rd ed.). Austin, TX: Pro-Ed.

5. Henry (2010, p. 21) states the following:

By teaching the concepts inherent in the word origin and word structure model across a decoding-spelling continuum from the early grades through at least eighth grade, and by using technology when it serves to reinforce these concepts, teachers ensure that students have strategies to decode and spell most words in the English language. This framework and continuum readily organize a large body of information for teachers and their students. Not only do students gain a better understanding of English word structure, but they also become better readers and spellers.

Henry, M. K. (2010). *Unlocking literacy: Effective decoding and spelling instruction* (2nd ed.). Baltimore, MD: Paul H. Brookes Publishing.

6. Mather and Wendling (2012, p. 171) state the following: Individuals with dyslexia need to
- understand how phonemes (sounds) are represented with graphemes (letters);
 - learn how to blend and segment phonemes to pronounce and spell words;
 - learn how to break words into smaller units, such as syllables, to make them easier to pronounce;
 - learn to recognize and spell common orthographic graphic patterns (e.g., -tion);
 - learn how to read and spell words with irregular elements (e.g., ocean); and
 - spend time engaged in meaningful reading and writing activities.

Mather, N. M., & Wendling, B. J. (2012). *Essentials of dyslexia assessment and intervention*. Hoboken, NJ: John Wiley & Sons.

7. Moats (1999, pp. 7–8) states that

Well designed, controlled comparisons of instructional approaches have consistently supported these components and practices in reading instruction:

- **direct teaching** of decoding, comprehension, and literature appreciation;
- **phoneme awareness** instruction;
- **systematic and explicit instruction** in the code system of written English;
- daily exposure to a variety of texts, as well as incentives for children to read independently and with others;
- **vocabulary** instruction that includes a variety of complementary methods designed to explore the relationships among words and the relationships among word structure, origin, and meaning;
- **comprehension** strategies that include prediction of outcomes, summarizing, clarification,

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questioning, and visualization; and

- frequent **writing** of prose to enable a deeper understanding of what is read.

Moats, L. C. (1999). *Teaching reading is rocket science: What expert teachers of reading should know and be able to do* (Item No. 39-0372). Washington, DC: American Federation of Teachers.

8. Moats (1999, pp. 7– 20) states the following:

The **knowledge and skills needed to teach reading** include the following:

- The psychology of reading and reading development
 - Basic facts about reading
 - Characteristics of poor and novice readers
 - Environmental and physiological factors in reading development
 - How reading and spelling develop
- Knowledge of the language structure
 - **Phonology**
 - **Phonetics**
 - **Morphology**
 - **Orthography**
 - **Semantics**
 - **Syntax and text structure**
- Practical skills of instruction—use of validated instructional practices
- Assessment of classroom reading and writing skills

Moats, L. C. (1999). *Teaching reading is rocket science: What expert teachers of reading should know and be able to do* (Item No. 39-0372). Washington, DC: American Federation of Teachers.

9. The National Reading Panel's (2000) *Report of the National Reading Panel* highlights the following:

Emphasis is placed on the importance of **identifying early** which children are at risk for reading failure and **intervening quickly** to help them.

How reading is taught matters—reading instruction is most effective when it is taught **comprehensively, systematically, and explicitly**.

National Reading Panel. (2000). *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Washington, DC: National Institute of Child Health and Human Development.

10. Shaywitz (2005, pp. 257–262) outlines the following essentials for a successful reading intervention and effective early intervention program:

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Essentials of a successful reading intervention include the following:

- **Early intervention**—The best intervention begins in kindergarten with remediation beginning in first grade.
- **Intense instruction**—Reading instruction must be delivered with great intensity. Optimally, a child who is struggling to read should be given instruction in a group of three and no larger than four students, and the child should receive this focused reading instruction at least four, and preferably five, days a week.
- **High-quality instruction**—High-quality instruction is provided by a highly qualified teacher. Recent studies highlight the difference that a teacher can make in the overall success or failure of a reading program.
- **Sufficient duration**—One of the most common errors in teaching a student with dyslexia to read is to withdraw prematurely the instruction that seems to be working. A child who is reading accurately but not fluently at grade level still requires intensive reading instruction.

Essentials of an effective **early intervention** program include the following:

- Systematic and direct instruction in the following:
 - **Phonemic awareness**—noticing, identifying, and manipulating the sounds of spoken language
 - **Phonics**—how letters and letter groups represent the sounds [of] spoken language
 - Sounding out words (decoding)
 - Spelling
 - Reading sight words
 - **Vocabulary** and concepts
 - **Reading comprehension** strategies
- Practice in applying the above skills in reading and in writing
- **Fluency** training
- Enriched language experiences: listening to, talking about, and telling stories

Shaywitz, S. (2003). *Overcoming dyslexia: A new and complete science-based program for reading problems at any level*. New York, NY: Alfred A. Knopf.

11. Torgesen (2004, p. 376) states the following:

The first implication for practice and educational policy is that schools must work to provide **preventive interventions** to eliminate the enormous reading practice deficits that result from prolonged reading failure. The second implication is that schools must find a way to provide interventions for older children with reading disabilities that are appropriately focused and sufficiently intensive.

Torgesen, J. K. (2004). Lessons learned from research on interventions for students who have difficulty learning to read. In P. McCardle, & V. Chhabra (Eds.), *The voice of evidence in reading research* (pp. 355–382). Baltimore, MD: Paul H. Brookes Publishing.

Research-Based Best Practices. (2018). *The Dyslexia Handbook - 2018 Update: Procedures Concerning Dyslexia and Related Disorders*, 46-52. Retrieved March 7, 2019, from <https://tea.texas.gov/academics/dyslexia/>.

12. Vaughn and Linan-Thompson (2003, pp. 299–320) state the following:

- Mounting evidence suggests that most students with reading problems can make significant gains in reading if provided **systematic, explicit, and intensive** reading instruction based on critical elements associated with improved reading such as **phonemic awareness, phonics, fluency in word recognition and text reading, and comprehension**.
- There were no statistically significant differences between students receiving intervention instruction in a teacher-to-student ratio of 1:1 or 1:3 though both groups outperformed students in a 1:10 teacher to student ratio.
- Student progress determined the length of intervention.

Vaughn, S., & Linan-Thompson, S. (2003). Group size and time allotted to intervention. In B. Foorman (Ed.), *Preventing and remediating reading difficulties* (pp. 275–320). Parkton, MD: York Press.