



FACTS ABOUT PHONEMIC AWARENESS

A phoneme is an individual sound. The word cat has 3 phonemes: /c/ /a/ /t/.

The ability to hear and manipulate phonemes plays a casual role in the acquisition of beginning reading skills.

There is considerable evidence that the primary difference between good and poor readers lies in the good reader's phonological processing ability.

Phonological awareness is teachable, learnable, and promoted by attention to instructional variables.

Children need to be taught to listen to the sounds of language because what we say is not what children see in print.

Phonemic awareness is the most important core and casual factor separating normal and disabled readers and the lack of phonemic awareness is the most powerful determinant of the likelihood of failure to learn. - G. Reid Lyon

Some people there are who, being grown; forgot the horrible task of learning to read. It is perhaps the greatest single effort that the human undertakes, and he must do it as a child. - John Steinbeck



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What is dyslexia?

The student who struggles with reading and spelling often puzzles teachers and parents. This student receives the same classroom instruction that benefits most children, but continues to struggle with some or all of the many facets of reading and spelling. This student may have dyslexia.

The International Dyslexia Association (IDA) and the National Institutes of Health adopted the following definition in 2003:

Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized 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 the growth of vocabulary and background knowledge. (Lyon, Shaywitz, and Shaywitz, 2003)

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What are the common characteristics of dyslexia?

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- Difficulty acquiring and using oral and written language
- Difficulty in phonological awareness, including segmenting, blending and manipulating sounds in words
- Difficulty mastering the alphabetic principle and basic decoding skills (mapping sounds to letters)
- Slow, inaccurate, or labored oral reading (lack of reading fluency)
- Difficulty acquiring age appropriate sight word recognition skills
- Difficulty learning to spell accurately
- Oral language skills often stronger than written language skills
- Difficulty learning and retaining multi-syllabic vocabulary required for mastery of academic content
- Limited reading comprehension due to weak decoding, word recognition and fluency skills

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What are the National Statistics on dyslexia?

- Fifteen to twenty percent of the population is affected by dyslexia. Dyslexia exists on a continuum of severity, from poor spelling to a total inability to read. (The National Institutes of Health)
- Individuals may inherit the genetic links for dyslexia, and at least half of the identified cases of dyslexia have a genetic predisposition for this disorder of learning. (Pennington, Shaywitz, Olsen)
- Research supports the essential role of early identification and appropriate instruction in preventing and alleviating the symptoms of dyslexia. (Torgesen, Foorman, Wise)
- Unremediated dyslexia is associated with documented functional brain differences visible in imaging studies. These differences may be "normalized" if instruction is effective. (IDA, NIH)
- Children with a family history and/or early history of speech and language delays are at high risk.

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What instruction is appropriate for dyslexia?

- Individuals with dyslexia require direct, explicit and systematic instruction in both oral and written language
- Even if a student's problem is not so severe as to require special education, classroom supports and accommodations are often necessary for the student to benefit fully from classroom and supplemental instruction
- Explicit instruction in the code of written language (the letter-sound system) is critical
- Structured, multi-sensory delivery of language content is characteristic of effective programs
- Individuals with dyslexia may require instruction of greater intensity and duration than typically developing readers and writers
- Individuals with dyslexia require research-based instruction in all five components of reading (phonemic awareness, phonics, fluency, vocabulary, and comprehension) as well as writing and spelling
- Because instruction is a complex undertaking, teachers who provide instruction and remediation should be trained and supervised in the use of the program or approach selected

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Early Intervention

What is an Early Intervention Program

An Early Intervention Program is a way to find students at highest risk of reading failure **early enough to prevent it**.

The National Institutes of Health (NIH) state that 95 percent of poor readers can be brought up to grade level if they receive effective help early. The window of opportunity is during kindergarten and first grade.

The longer help is delayed, the harder it is for the child to catch up. If help is provided in fourth grade (instead of in kindergarten), it takes four times as long to improve the same skills by the same amount.

Find At-Risk Student

The best predictor of a child destined for later reading failure is a child who lacks age-appropriate phonemic awareness.

"The **lack of phonemic awareness** is the core and causal factor separating normal readers from disabled readers" *Keith Stanovich NIH Researcher*

More recent research has expanded that list to include 3 reliable early predictors: phonemic awareness, rapid naming, and auditory memory.

All three are essential **pre**-reading skills. Children who are below age-appropriate norms in any one of those three areas are at extremely high risk of later reading failure.

Since these are **pre**-reading skills, children can be tested as young as age five - before they've been exposed to formal reading instruction.

Recommended for public and private schools - screen **all** kindergartners or beginning first graders using the CTOPP. CTOPP stands for Comprehensive Test of Phonological Processing. It is published by Pro-Ed Books, 800-897-3202, www.proedinc.com. Their part number for the CTOPP is 8930.

If a school gives the same test to **all** students, they do not need parental approval.

Students whose composite scores in either Phonemic Awareness, Rapid Naming or Auditory Memory are lower than the 35th percentile are at extremely high risk of later reading failure or reading disability.

In fact, the scoring manual states that a low score in any one of these areas is a hallmark of dyslexia.

Early Intervention Research

A Summary of the Research

Research on the long-term consequences of early reading difficulty provides an incentive for early intervention. Juel (1988) found that students who are poor readers in first grade are almost certain to remain poor readers at the end of fourth grade. Cunningham and Stanovich (1997) found that first-grade reading achievement strongly predicts 11th-grade reading achievement.

Other researchers have shown that students at risk for reading failure can be identified early, using tests of phonological awareness, and treated successfully with intensive, explicit instruction in phonological awareness, followed by systematic phonics instruction.

Early intervention for reading problems reduces the number of students identified as learning disabled (Dickson & Bursuck, 1999; Jenkins & O'Connor, O'Connor 2000).

One-on-one tutoring is the gold standard for reading instruction, and the benefits of that type of tutoring is supported by research (Cohen, Kulik, & Kulik, 1982; Juel, 1996; Waskik, 1998; Wasik & Slavin, 1993).

That's why the *No Child Left Behind Act* includes a mandate that failing schools make one-on-one tutoring available for their students.

Yet most schools do not have enough trained personnel available to offer one-on-one tutoring.

American Educational Research Associates

Researchers Support Early Intervention for ALL Children Who Experience Difficulty Learning to Read

Catch Them Before They Fall

by Joseph Torgeson

Identification and Assessment to Prevent Reading Failure in Young Children

No Child Left Behind Act

The No Child Left Behind Act is an attempt to force schools to use research-based methods to teach reading, and to hold schools accountable for their student's reading scores.

The No Child Left Behind Act also requires low-performing schools to provide one-on-one tutoring.

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What are the implications for long term management of dyslexia?

Dyslexia is a life-long characteristic. Students respond to instruction in varying degrees. But, most students continue to need support and /or accommodations with writing, study skills, reading lengthy assignments, foreign language learning, and mathematical computation skills even if remediation of basic reading skills is successful. Parents, students, and teachers should have access to current, research-based information about dyslexia and related learning problems to aid in decision making and the management of students' academic careers.

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How does dyslexia fit in an RTI model?

According to the Colorado Department of Education's Practitioner's Guide to Implementation: "RTI is a comprehensive system of tiered interventions for addressing the full range of student needs" (p. 1).

www.cde.state.co.us/cdegen/downloads/RtIGuide.pdf

Inherent in this model is the idea that research based instruction will be used, students' progress will be continually monitored, and individual strengths and needs will be addressed. Since dyslexia exists on a continuum of severity, each student's needs will be served by a varying degree of intensity required to produce increased academic outcomes.

The RTI model is predicated on:

- High quality standards-based instruction
- Evidenced based materials
- Universal screening of all students
- Continuous progress monitoring
- Problem solving and instructional decision making

The intent of this model is that each student has access to instruction of sufficient intensity to ensure adequate progress.

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The Orton Gillingham Multisensory Method

The Orton-Gillingham Multisensory Method was developed in the early 1930's by Anna Gillingham and a group of master teachers. Dr. Samuel Orton assigned Anna's group the task of designing a whole new way of teaching the phonemic structure of our written language to people with dyslexia. The goal was to create a sequential system that builds on itself in an almost 3-dimensional way. It must show how sounds and letters are related and how they act in words; it must also show how to attack a word and break it into smaller pieces. And it must be a multi-sensory approach, as dyslexic people learn best by involving all of their senses: visual, auditory, tactile, and kinesthetic.

The Orton-Gillingham Multisensory Method is different from other reading methods in two ways: *what* is taught, and *how* it is taught.

What is taught:

- **Phonemic Awareness** is the first step. You must teach someone how to listen to a single word or syllable and break it into individual phonemes. They also have to be able to take individual sounds and blend them into a word, change sounds, delete sounds, and compare sounds -- all in their head. These skills are easiest to learn *before* someone brings in printed letters.
- **Phoneme/Grapheme Correspondence** is the next step. Here you teach which sounds are represented by which letter(s), and how to blend those letters into single-syllable words.
- The **Six Types of Syllables** that compose English words are taught next. If students know what type of syllable they're looking at, they'll know what sound the vowel will make. Conversely, when they hear a vowel sound, they'll know how the syllable must be spelled to make that sound.
- **Probabilities and Rules** are then taught. The English language provides several ways to spell the same sounds. For example, the sound /SHUN/ can be spelled either TION, SION, or CION. The sound of /J/ at the end of a word can be spelled GE or DGE. Dyslexic students need to be taught these rules and probabilities.
- **Roots and Affixes, as well as Morphology** are then taught to expand a student's vocabulary and ability to comprehend (and spell) unfamiliar words. For instance, once a student has been taught that the Latin root TRACT means pull, and a student knows the various Latin affixes, the student can figure out that retract means pull again, contract means pull together, subtract means pull away (or pull under), while tractor means a machine that pulls.

**The Orton
Gillingham
Multisensory
Method**

(continued)

How it is taught:

- **Simultaneous Multisensory Instruction:** research has shown that dyslexic people who use all of their senses when they learn (visual, auditory, tactile, and kinesthetic) are better able to store and retrieve the information. So a beginning dyslexic student might see the letter A, say its name and sound, and write it in the air -- all at the same time.
- **Intense Instruction with Ample Practice:** instruction for dyslexic students must be much more intense, and offer much more practice, than for regular readers.
- **Direct, Explicit Instruction:** dyslexic students do not intuit anything about written language. So, you must teach them, directly and explicitly, each and every rule that governs our written words. And you must teach one rule at a time, and practice it until it is stable in both reading and spelling, before introducing a new rule.
- **Systematic and Cumulative:** by the time most dyslexic students are identified, they are usually quite confused about our written language. So you must go back to the very beginning and create a solid foundation with no holes. You must teach the logic behind our language by presenting one rule at a time and practicing it until the student can automatically and fluently apply that rule both when reading and spelling. You must continue to weave previously learned rules into current lessons to keep them fresh and solid. The system must make logical sense to our students, from the first lesson through the last one.
- **Synthetic and Analytic:** dyslexic students must be taught both how to take the individual letters or sounds and put them together to form a word (synthetic), as well as how to look at a long word and break it into smaller pieces (analytic). Both synthetic and analytic phonics must be taught all the time.
- **Diagnostic Teaching:** the teacher must continuously assess their student's understanding of, and ability to apply, the rules. The teacher must ensure the student isn't simply recognizing a pattern and blindly applying it. And when confusion of a previously-taught rule is discovered, it must be retaught.

To watch a 20-minute demo of this approach, go to:
www.webcastgroup.com/client/start.asp?wid=0660721062578&auto=true

Research supports the Orton-Gillingham approach

If a child is struggling with reading in 1st grade, there is a 90% chance of struggling in high school. 1st grade reading achievement strongly predicts 11th grade reading achievement.

95% of reading failure is preventable with effective early intervention. The window of opportunity is K-1. The longer help is delayed, the harder it is to catch up, if they ever do.

No Child Left Behind includes a mandate that failing schools are required to provide one-on-one tutoring to students.

If your child has an I.E.P., this description of a reading program should be on the I.E.P.:

"Independent scientific, replicated research supports the use of a reading and spelling system that is simultaneously multisensory, systematic, and cumulative with direct and explicit instruction in both synthetic and analytic phonics with intense practice."

Yes, you can get methodology onto an I.E.P.

Here are links to some of that research:

Preventing Reading Difficulties in Young Children
books.nap.edu/openbook.php?record_id=6023&page=R1

National Reading Panel Report
www.nichd.nih.gov/publications/nrp/smallbook.cfm

Summary of NIH Reading Research by G. Reid Lyon
Director of Research Programs in Reading Development and Disorders, Learning Disabilities, Language Development and Disorders, and Cognitive Neuroscience. Also Chief of the Child Development and Behavior Branch at the National Institute of Child Health and Human Development (NICHD) within the National Institutes of Health (NIH)
www.schwablearning.org

Why Reading is not a Natural Process by G. Reid Lyon
www.cdl.org/resource-library/articles/why_reading.php?type=recent&id=Yes

NIH Research Results
www.nichd.nih.gov/publications/pubs/jeffords.htm
and
www.ncl.org/research/keys99_nichd.cfm

Article on Brain Differences
www.schwablearning.org
select Reading from the Topic list, click on Brain Research and Reading

National Center on Learning Disabilities Research Links
www.nclld.org/research/links.cfm

Catch Them Before They Fall, Identification and Assessment to Prevent Reading Failure in Young Children by Joseph Torgeson
www.ldonline.org/article/225

California Reading Initiative
www.cde.ca.gov/sp/se/sr/documents/readnit.pdf

Texas Reading Initiative
www.tea.state.tx.us/reading

Children of the Code
A Social Education Project

A Public Television, DVD & Web Documentary Series

American children suffer more long-term life-harm from failing to learn to read than from parental abuse, accidents, and all other childhood diseases and disorders combined. In purely economic terms, reading related difficulties cost our nation more than the war on terrorism, crime, and drugs combined.

More than any other subject or skill, our children's futures are determined by how well they learn to read.

So begins this fascinating website that contains amazing statistics, quotes, and over 100 interviews with leading neuroscientists, reading researchers, educators, and policy leaders.

To watch a 5-minute on-line video called Part 1: We Have A Problem, which contains statements from many of these famous professionals, go to:
www.childrenofthecode.org/genpreview/index.htm

To read the interviews and other fascinating information on this website, go to: www.ChildrenoftheCode.org

What Won't Work

Most parents have tried one or more of the following products or treatments, and know they do NOT work for children with dyslexia.

- Hooked on Phonics or The Phonics Game
- Reading Recovery
- Vision Therapy
- Fast ForWord
- Brain Gym or other neurodevelopmental exercises
- Special glasses
- Medicine
- Special diets
- Accelerated Reader
- Most commercial learning center chains, such as Sylvan, Kumon and Score

For research proving these methods don't work, buy the Summer 2001 issue of *Perspectives*, from the International Dyslexia Association by calling 800-ABCD-123

No Child Left Behind Requirements

The *No Child Left Behind Act* provides funding to ensure that every student can read at grade level or above not later than the end of grade 3.

It also includes legal definitions of reading, reading instruction, and reading research.

NCLB definition of reading

A complex system of deriving meaning from print that requires all of the following:

- skills and knowledge to understand how phonemes or speech sounds are connected to print
- the ability to decode unfamiliar words
- the ability to read fluently
- sufficient background information and vocabulary to foster reading comprehension
- the development of appropriate active strategies to construct meaning from print, and
- the development and maintenance of a motivation to read

NCLB Essential Components of Reading Instruction

Explicit systematic instruction in:

- A: Phonemic Awareness
- B: Phonics
- C: Vocabulary Development
- D: Reading Fluency, including oral reading skills
- E: Reading Comprehension strategies

NCLB requires that schools use reading programs that are based on scientific reading research

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Where can I find more resources on this subject?

- The International Dyslexia Association-Rocky Mountain branch:
www.dyslexia-rmbida.org
- The International Dyslexia Association:
www.interdys.org
- Florida Center for Reading Research:
www.ferr.org
- Great Schools:
www.greatschools.net
- National Center for Learning Disabilities:
www.nclld.org
- National Research Center for Learning Disabilities:
www.nrclld.org

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Books

- Colorado Department of Education - Response to Intervention (RtI): A Practitioner's Guide to Implementation, 2008.
- Brown-Chidsey, Rachel & Steege, Mark W. Response to Intervention - Principles and Strategies for Effective Practice. New York, NY: Guilford Press, 2005.
- Hosp, Michelle; Hosp, John; & Howell, Kenneth: The ABC's of CBM - A Practical Guide to Curriculum-Based Measurement. New York, NY: Guilford Press, 2007.
- Moats, Louisa and Hall, Susan: Parenting the Struggling Reader. New York, NY: Broadway Books, 2002.
- Moats, Louisa and Dakin, Karen: Basic Facts about Dyslexia and Other Reading Problems. Baltimore, MD: IDA, 2008.
- Richards, Regina: The Source for Dyslexia and Dysgraphia. E. Moline, IL: Linguisystems, 1999.
- Shaywitz, Dr. Sally: Overcoming Dyslexia: A New and Complete Science-Based Program for Reading Problems at Any Level. New York, NY: Random House, 2003.
- Torgesen, Joseph: FCRR Technical Report #8: Dyslexia: A Brief for Educators, Parents, and Legislators in Florida.
- Wolf, Maryanne. Proust and the Squid: The Story and Science of the Reading Brain. New York, NY: Harper, 2007.

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what is
DYSLEXIA?

by Deena Miller

www.BlockYourWay.com