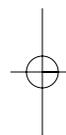


Put Reading First

Kindergarten Through Grade 3

The Research
Building Blocks
For Teaching
Children to Read

Third Edition



The Research Building Blocks for Teaching Children to Read

Put Reading First

Kindergarten Through Grade 3

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National Institute for Literacy
The Partnership for Reading



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This publication was developed by the Center for the Improvement of Early Reading Achievement (CIERA) and was funded by the National Institute for Literacy (NIFL) through the Educational Research and Development Centers Program, PR/Award Number R305R70004, as administered by the Office of Educational Research and Improvement (OERI), U.S. Department of Education. However, the comments or conclusions do not necessarily represent the positions or policies of NIFL, OERI, or the U.S. Department of Education, and you should not assume endorsement by the Federal Government.

The National Institute for Literacy

The National Institute for Literacy, an agency in the Federal government, is authorized to help strengthen literacy across the lifespan. The Institute works to provide national leadership on literacy issues, including the improvement of reading instruction for children, youth, and adults by sharing information on scientifically based research.

Sandra Baxter, Director

Lynn Reddy, Deputy Director

The Partnership for Reading

This document was published by The Partnership for Reading, a collaborative effort of the National Institute for Literacy, the National Institute of Child Health and Human Development, and the U.S. Department of Education to make evidence-based reading research available to educators, parents, policy-makers, and others with an interest in helping all people learn to read well. The findings and conclusions in this publication were drawn from the 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—Reports of the Subgroups.

The writers and editors express their sincere thanks to:

- Isabel Beck, Douglas Carnine, Deborah Simmons, and Anne Sweet for their careful reviews and suggestions*
- Sandra Baxter and Andrew Hartman at the National Institute for Literacy for their guidance and support*
- The Subgroup Chairs of the National Reading Panel for their thoughtful and thorough comments: Linnea Ehri, Michael L. Kamil, S.J. Samuels, Timothy Shanahan, and Gloria Correro*
- Susan Klaiber, Everett Barnes, and Douglas Hamman of RMC Research Corporation for their conceptual and editorial contributions*
- The teacher collaborative groups across the United States that provided valuable feedback*

Introduction

In today's schools, too many children struggle with learning to read. As many teachers and parents will attest, reading failure has exacted a tremendous long-term consequence for children's developing self-confidence and motivation to learn, as well as for their later school performance.

While there are no easy answers or quick solutions for optimizing reading achievement, an extensive knowledge base now exists to show us the skills children must learn in order to read well. These skills provide the basis for sound curriculum decisions and instructional approaches that can help prevent the predictable consequences of early reading failure.

The National Reading Panel (NRP) issued a report in 2000 that responded to a Congressional mandate to help parents, teachers, and policymakers identify key skills and methods central to reading achievement. The Panel was charged with reviewing research in reading instruction (focusing on the critical years of kindergarten through third grade) and identifying methods that consistently relate to reading success.

The Panel reviewed more than 100,000 studies. Through a carefully developed screening procedure, Panel members examined research that met several important criteria:

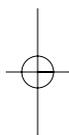
- the research had to address achievement of **one or more skills in reading**. Studies of effective teaching were not included unless reading achievement was measured;
- the research had to be **generalizable** to the larger population of students. Thus, case studies with small numbers of children were excluded from the analysis;
- the research needed to examine the **effectiveness** of an approach. This type of research requires the comparison of different treatments, such as comparing the achievement of students using guided repeated reading to another group of students not using that strategy. This experimental research approach was necessary to understand whether changes in achievement could be attributed to the treatment;
- the research needed to be regarded as **high quality**. An article or book had to have been reviewed by other scholars from the relevant field and judged to be sound and worthy of publication. Therefore, discussions of studies reported in meetings or conferences without a stringent peer review process were excluded from the analysis.

These criteria are not new in the world of educational research; they are often used as a matter of course by researchers who set out to determine the effectiveness of any educational program or approach. The National Reading Panel embraced the criteria in its review to bring balance to a field in which decisions have often been made based more on ideology than

evidence. These criteria offer administrators, teachers, and parents a standard for evaluating critical decisions about how children will be taught to read. In addition to identifying effective practices, the work of the National Reading Panel challenges educators to consider the evidence of effectiveness whenever they make decisions about the content and structure of reading instruction programs. By operating on a “what works” basis, scientific evidence can help build a foundation for instructional practice. Teachers can learn about and emphasize methods and approaches that have worked well and caused reading improvement for large numbers of children. Teachers can build their students’ skills efficiently and effectively, with greater results than before. Most importantly, with targeted “what works” instruction, the incidence of reading success should increase dramatically.

This guide, designed by teachers for teachers, summarizes what researchers have discovered about how to successfully teach children to read. It describes the findings of the National Reading Panel Report and provides analysis and discussion in five areas of reading instruction: ***phonemic awareness, phonics, fluency, vocabulary, and text comprehension***. Each section defines the skill, reviews the evidence from research, suggests implications for classroom instruction, describes proven strategies for teaching reading skills, and addresses frequently raised questions.

Our understanding of “what works” in reading is dynamic and fluid, subject to ongoing review and assessment through quality research. This guide begins the process of compiling the findings from scientifically based research in reading instruction, a body of knowledge that will continue to grow over time. We encourage all teachers to explore the research, open their minds to changes in their instructional practice, and take up the challenge of helping all children become successful readers.







Phonemic Awareness Instruction

Phonemic awareness is the ability to notice, think about, and work with the individual sounds in spoken words. Before children learn to read print, they need to become aware of how the sounds in words work. They must understand that words are made up of speech sounds, or phonemes.

Phonemes are the smallest parts of sound in a spoken word that make a difference in the word's meaning. For example, changing the first phoneme in the word **hat** from /h/ to /p/ changes the word from **hat** to **pat**, and so changes the meaning. (A letter between slash marks shows the phoneme, or sound, that the letter represents, and not the name of the letter. For example, the letter **h** represents the sound /h/.)

Children can show us that they have phonemic awareness in several ways, including:

- recognizing which words in a set of words begin with the same sound (“**Bell**, **bike**, and **boy** all have /b/ at the beginning.”);
- isolating and saying the first or last sound in a word (“The beginning sound of **dog** is /d/.” “The ending sound of **sit** is /t/.”);
- combining, or blending the separate sounds in a word to say the word (“/m/, /a/, /p/—**map**.”);
- breaking, or segmenting a word into its separate sounds (“**Up**—/u/, /p/.”).

Children who have phonemic awareness skills are likely to have an easier time learning to read and spell than children who have few or none of these skills.

Although phonemic awareness is a widely used term in reading, it is often misunderstood. One misunderstanding is that phonemic awareness and phonics are the same thing. Phonemic awareness is **not** phonics. Phonemic awareness is the understanding that the sounds of **spoken** language work together to make words. Phonics is the understanding that there is a predictable relationship between phonemes and graphemes, the letters that represent those sounds in **written** language. If children are to benefit from phonics instruction, they need phonemic awareness.

The reason is obvious: children who cannot hear and work with the phonemes of spoken words will have a difficult time learning how to relate these phonemes to the graphemes when they see them in written words.

Another misunderstanding about phonemic awareness is that it means the same as phonological awareness. The two names are **not** interchangeable. Phonemic awareness is a subcategory of phonological awareness. The focus of phonemic awareness is narrow—identifying and manipulating the individual sounds in words. The focus of phonological awareness is much broader. It includes identifying and manipulating larger parts of spoken language, such as words, syllables, and onsets and rimes—as well as phonemes. It also encompasses awareness of other aspects of sound, such as rhyming, alliteration, and intonation.

Children can show us that they have phonological awareness in several ways, including:

- identifying and making oral rhymes;
“The pig has a (wig).”
“Pat the (cat).”
“The sun is (fun).”
- identifying and working with syllables in spoken words;
“I can clap the parts in my name: An-drew.”
- identifying and working with onsets and rimes in spoken syllables or one-syllable words;
“The first part of sip is s-.”
“The last part of win is -in.”
- identifying and working with individual phonemes in spoken words.
“The first sound in sun is /s/.”

PHONOLOGICAL AWARENESS

Phonemic awareness is only one type of phonological awareness.

Broader phonological awareness

- *Identifying and making oral rhymes*
- *Identifying and working with syllables in spoken words*

Narrower phonological awareness

- *Identifying and working with onsets and rimes in spoken syllables*
- *Identifying and working with individual phonemes in words spoken (phonemic awareness)*

THE LANGUAGE OF LITERACY

Here are some definitions of terms used frequently in reading instruction.

Phoneme

A phoneme is the smallest part of **spoken** language that makes a difference in the meaning of words. English has about 41 phonemes. A few words, such as **a** or **oh**, have only one phoneme. Most words, however, have more than one phoneme: The word **if** has two phonemes (/i/ /f/); **check** has three phonemes (/ch/ /e/ /k/), and **stop** has four phonemes (/s/ /t/ /o/ /p/). Sometimes one phoneme is represented by more than one letter.

Grapheme

A grapheme is the smallest part of **written** language that represents a phoneme in the spelling of a word. A grapheme may be just one letter, such as **b**, **d**, **f**, **p**, **s**; or several letters, such as **ch**, **sh**, **th**, **-ck**, **ea**, **-igh**.

Phonics

Phonics is the understanding that there is a predictable relationship between phonemes (the sounds of **spoken** language) and graphemes (the letters and spellings that represent those sounds in **written** language).

Phonemic awareness

Phonemic awareness is the ability to hear, identify, and manipulate the individual sounds—phonemes—in spoken words.

Phonological awareness

Phonological awareness is a broad term that includes phonemic awareness. In addition to phonemes, phonological awareness activities can involve work with rhymes, words, syllables, and onsets and rimes.

Syllable

A syllable is a word part that contains a vowel or, in spoken language, a vowel sound (**e-vent**; **news-pa-per**; **ver-y**).

Onset and rime

Onsets and rimes are parts of spoken language that are smaller than syllables but larger than phonemes. An **onset** is the initial consonant(s) sound of a syllable (the onset of **bag** is **b-**; of **swim**, **sw-**). A **rime** is the part of a syllable that contains the vowel and all that follows it (the rime of **bag** is **-ag**; of **swim**, **-im**).

What does scientifically based research tell us about phonemic awareness instruction?

Key findings from the scientific research on phonemic awareness instruction provide the following conclusions of particular interest and value to classroom teachers:

Phonemic awareness can be taught and learned.

Effective phonemic awareness instruction teaches children to notice, think about, and work with (manipulate) sounds in spoken language. Teachers use many activities to build phonemic awareness, including:

- **Phoneme isolation**

Children recognize individual sounds in a word.

Teacher: "What is the first sound in **van**?"

Children: "The first sound in **van** is /v/."

- **Phoneme identity**

Children recognize the same sounds in different words.

Teacher: "What sound is the same in **fix**, **fall**, and **fun**?"

Children: "The first sound, /f/, is the same."

- **Phoneme categorization**

Children recognize the word in a set of three or four words that has the "odd" sound.

Teacher: "Which word doesn't belong? **Bus**, **bun**, **rug**."

Children: "**Rug** does not belong. It doesn't begin with /b/."

- **Phoneme blending**

Children listen to a sequence of separately spoken phonemes, and then combine the phonemes to form a word. Then they write and read the word.

Teacher: "What word is /b/ /i/ /g/?"

Children: "/b/ /i/ /g/ is **big**."

Teacher: "Now let's write the sounds in **big**: /b/, write **b**; /i/, write **i**; /g/, write **g**."

Teacher: (Writes **big** on the board.) "Now we're going to read the word **big**."

- **Phoneme segmentation**

Children break a word into its separate sounds, saying each sound as they tap out or count it. Then they write and read the word.

Teacher: "How many sounds are in **grab**?"

Children: "/g/ /r/ /a/ /b/. Four sounds."

Teacher: "Now let's write the sounds in **grab**: /g/, write **g**; /r/, write **r**; /a/, write **a**; /b/, write **b**."

Teacher: (Writes **grab** on the board.) "Now we're going to read the word **grab**."

- **Phoneme deletion**

Children recognize the word that remains when a phoneme is removed from another word.

Teacher: "What is *smile* without the /s/?"

Children: "*Smile* without the /s/ is *mile*."

- **Phoneme addition**

Children make a new word by adding a phoneme to an existing word.

Teacher: "What word do you have if you add /s/ to the beginning of *park*?"

Children: "*Spark*."

- **Phoneme substitution**

Children substitute one phoneme for another to make a new word.

Teacher: "The word is *bug*. Change /g/ to /n/. What's the new word?"

Children: "*Bun*."

Phonemic awareness instruction helps children learn to read.

Phonemic awareness instruction improves children's ability to read words. It also improves their reading comprehension. Phonemic awareness instruction aids reading comprehension primarily through its influence on word reading. For children to understand what they read, they must be able to read words rapidly and accurately. Rapid and accurate word reading frees children to focus their attention on the meaning of what they read. Of course, many other things, including the size of children's vocabulary and their world experiences, contribute to reading comprehension.

Phonemic awareness instruction helps children learn to spell.

Teaching phonemic awareness, particularly how to segment words into phonemes, helps children learn to spell. The explanation for this may be that children who have phonemic awareness understand that sounds and letters are related in a predictable way. Thus, they are able to relate the sounds to letters as they spell words.

Phonemic awareness instruction is most effective when children are taught to manipulate phonemes by using the letters of the alphabet.

Phonemic awareness instruction makes a stronger contribution to the improvement of reading and spelling when children are taught to use letters as they manipulate phonemes than when instruction is limited to phonemes alone. Teaching sounds along with the letters of the alphabet is important because it helps children to see how phonemic awareness relates to their reading and writing. Learning to blend phonemes with letters helps children read words. Learning to segment sounds with letters helps them spell words.

If children do not know letter names and shapes, they need to be taught them along with phonemic awareness.

Relating sounds to letters is, of course, the heart of phonics instruction, which is the subject of the next section of this booklet.

Phonemic awareness instruction is most effective when it focuses on only one or two types of phoneme manipulation, rather than several types.

Children who receive instruction that focuses on one or two types of phoneme manipulation make greater gains in reading and spelling than do children who are taught three or more types of manipulation.

One possible explanation for this is that children who are taught many different ways to manipulate phonemes may become confused about which type to apply. Another explanation is that teaching many types of manipulations does not leave enough time to teach any one type thoroughly. A third explanation is that instruction that includes several types of manipulations may result in teaching children more difficult manipulations before they acquire skills in the easier ones.

SOME COMMON PHONEMIC AWARENESS TERMS

Phoneme manipulation

When children work with phonemes in words, they are manipulating the phonemes. Types of phoneme manipulation include blending phonemes to make words, segmenting words into phonemes, deleting phonemes from words, adding phonemes to words, or substituting one phoneme for another to make a new word.

Blending

When children combine individual phonemes to form words, they are blending the phonemes. They also are blending when they combine onsets and rimes to make syllables and combine syllables to make words.

Segmenting (segmentation)

When children break words into their individual phonemes, they are segmenting the words. They are also segmenting when they break words into syllables and syllables into onsets and rimes.

Questions you may have about phonemic awareness instruction

Which activities will help my students acquire phonemic awareness?

Your instruction to increase children’s phonemic awareness can include various activities in blending and segmenting words. Clearly, however, you should provide your students with instruction that is appropriate for their level of literacy development. If you teach younger children or less able, older readers, your instruction should begin with easier activities, such as having children identify and categorize the first phonemes in words. When the children can do these activities, move on to more difficult ones.

Which methods of phonemic awareness instruction will have the greatest impact on my students’ learning to read?

You can use a variety of teaching methods that contribute to children’s success in learning to read. However, teaching one or two types of phoneme manipulation—specifically blending and segmenting phonemes in words—is likely to produce greater benefits to your students’ reading than teaching several types of manipulation.

Teaching your students to manipulate phonemes along with letters can also contribute to their reading success.

Your instruction should also be explicit about the connection between phonemic awareness and reading. For example:

Teacher: “Listen: I’m going to say the sounds in the word **jam**—/j/ /a/ /m/.

What is the word?”

Children: “**Jam.**”

Teacher: “You say the sounds in the word **jam.**”

Children: “/j/ /a/ /m/.”

Teacher: “Now let’s write the sounds in **jam.** /j/, write **j**; /a/, write **a**; /m/, write **m.**”

Teacher: (Writes **jam** on the board.) “Now we’re going to read the word **jam.**”

Which of my students will benefit from phonemic awareness instruction?

Phonemic awareness instruction can help essentially all of your students learn to read, including preschoolers, kindergartners, first graders who are just starting to read, and older, less able readers.

Phonemic awareness instruction can help most of your students learn to spell. Instruction can be effective with preschoolers, kindergartners, and first graders. It can help children from all economic levels.

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