Put Reading First

The Research Building Blocks for Teaching Children to Read

KINDERGARTEN THROUGH GRADE 3

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The National Institute for Literacy

The National Institute for Literacy (NIFL), an independent federal organization, supports the development of high-quality state, regional, and national literacy services so that all Americans can develop the literacy skills they need to succeed at work, at home, and in the community.

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.

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.

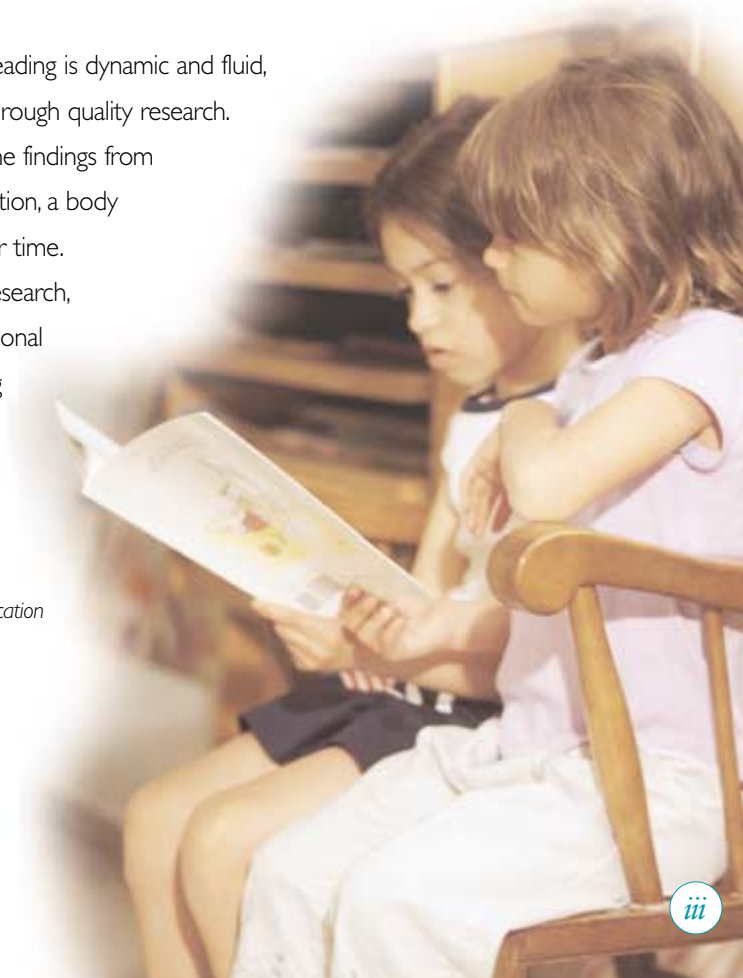
The Panel reviewed more than 100,000 studies. Through a carefully developed screening procedure, Panel members examined research that met several important criteria:

- 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.



Susan B. Neuman

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instruction

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		*Narrower phonological awareness*	
Identifying and making oral rhymes	Identifying and working with syllables in spoken words	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.

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.

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 skill in the easier ones.

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 them 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.

How much time should I spend on phonemic awareness instruction?

You do not need to devote a lot of class time to phonemic awareness instruction. Over the school year, your entire phonemic awareness program should take no more than 20 hours.

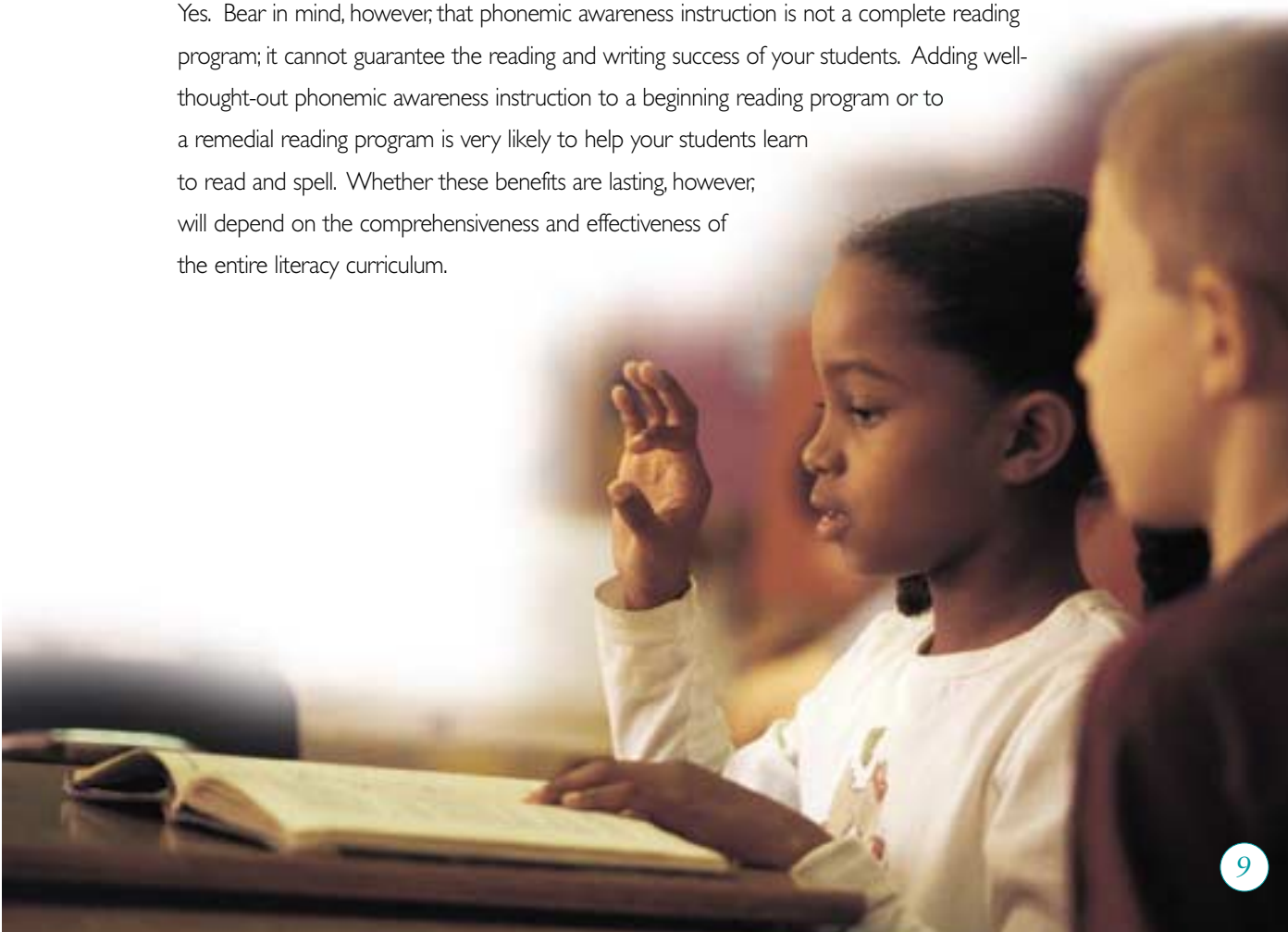
Your students will differ in their phonemic awareness. Some will need more instruction than others. The best approach is to assess students' phonemic awareness before you begin instruction. Assessment will let you know which students do and do not need the instruction, which students should be taught the easier types of phoneme manipulation (such as identifying initial sounds in words), and which should receive instruction in more advanced types (such as segmenting, blending, deletion/addition, and substitution).

Should I teach phonemic awareness to individual students, to small groups, or to the whole class?

In general, small-group instruction is more effective in helping your students acquire phonemic awareness and learn to read. Small-group instruction may be more effective than individual or whole-group instruction because children often benefit from listening to their classmates respond and receive feedback from the teacher.

Do we know enough about the effectiveness of phonemic awareness instruction for me to implement it in my classroom?

Yes. Bear in mind, however, that phonemic awareness instruction is not a complete reading program; it cannot guarantee the reading and writing success of your students. Adding well-thought-out phonemic awareness instruction to a beginning reading program or to a remedial reading program is very likely to help your students learn to read and spell. Whether these benefits are lasting, however, will depend on the comprehensiveness and effectiveness of the entire literacy curriculum.



Summing up

Phonemic awareness is

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

Phonemic awareness is important because

- it improves children's word reading and reading comprehension.
- it helps children learn to spell.

Phonemic awareness can be developed through a number of activities, including asking children to

- identify phonemes,
- categorize phonemes,
- blend phonemes to form words,
- segment words into phonemes,
- delete or add phonemes to form new words, and
- substitute phenomes to make new words.

Phonemic awareness instruction is most effective

- when children are taught to manipulate phonemes by using the letters of the alphabet.
- when instruction focuses on only one or two rather than several types of phoneme manipulation.

phonics instruction

phonics instruction

Phonics instruction teaches children the relationships between the letters (graphemes) of written language and the individual sounds (phonemes) of spoken language. It teaches children to use these relationships to read and write words. Teachers of reading and publishers of programs of beginning reading instruction sometimes use different labels to describe these relationships, including the following:

- ***graphophonemic relationships***
- ***letter-sound associations***
- ***letter-sound correspondences***
- ***sound-symbol correspondences***
- ***sound-spellings***

Regardless of the label, the goal of phonics instruction is to help children learn and use the alphabetic principle—the understanding that there are systematic and predictable relationships between written letters and spoken sounds. Knowing these relationships will help children recognize familiar words accurately and automatically, and "decode" new words. In short, knowledge of the alphabetic principle contributes greatly to children's ability to read words both in isolation and in connected text.

Critics of phonics instruction argue that English spellings are too irregular for phonics instruction to really help children learn to read words. The point is, however, that phonics instruction teaches children a system for remembering how to read words. Once children learn, for example, that ***phone*** is spelled this way rather than ***foan***, their memory helps them to read, spell, and recognize the word instantly and more accurately than they could read ***foan***. The same process is true for all irregularly spelled words. Most of these words contain some regular letter-sound relationships that can help children remember how to read them. In summary, the alphabetic system is a mnemonic device that supports our memory for specific words.

What does scientifically-based research tell us about phonics instruction?

Key findings from the scientific research on phonics instruction include the following conclusions of particular interest and value to classroom teachers:

Systematic and explicit phonics instruction is more effective than non-systematic or no phonics instruction.

Systematic and explicit phonics instruction makes a bigger contribution to children's growth in reading than instruction that provides non-systematic or no phonics instruction.

How do systematic programs of phonics instruction differ from non-systematic programs? The hallmark of programs of systematic phonics instruction is the direct teaching of a set of letter-sound relationships in a clearly defined sequence. The set includes the major sound/spelling relationships of both consonants and vowels.

The programs also provide materials that give children substantial practice in applying knowledge of these relationships as they read and write. These materials include books or stories that contain a large number of words that children can decode by using the letter-sound relationships they have learned and are learning. The programs also might provide children with opportunities to spell words and to write their own stories with the letter-sound relationships they are learning.

Approaches to phonics instruction

Most teachers are acquainted with several approaches to phonics instruction, including those listed below. The distinctions between approaches are not absolute, and some programs of instruction combine approaches.

Synthetic phonics Children learn how to convert letters or letter combinations into sounds, and then how to blend the sounds together to form recognizable words.

Analytic phonics Children learn to analyze letter-sound relationships in previously learned words. They do not pronounce sounds in isolation.

Analogy-based phonics Children learn to use parts of word families they know to identify words they don't know that have similar parts.

Phonics through spelling Children learn to segment words into phonemes and to make words by writing letters for phonemes.

Embedded phonics Children are taught letter-sound relationships during the reading of connected text. (Since children encounter different letter-sound relationships as they read, this approach is not systematic or explicit.)

Onset-rime phonics instruction Children learn to identify the sound of the letter or letters before the first vowel (the onset) in a one-syllable word and the sound of the remaining part of the word (the rime).

Systematic and explicit phonics instruction significantly improves kindergarten and first-grade children's word recognition and spelling.

Systematic phonics instruction produces the greatest impact on children's reading achievement when it begins in kindergarten or first grade.

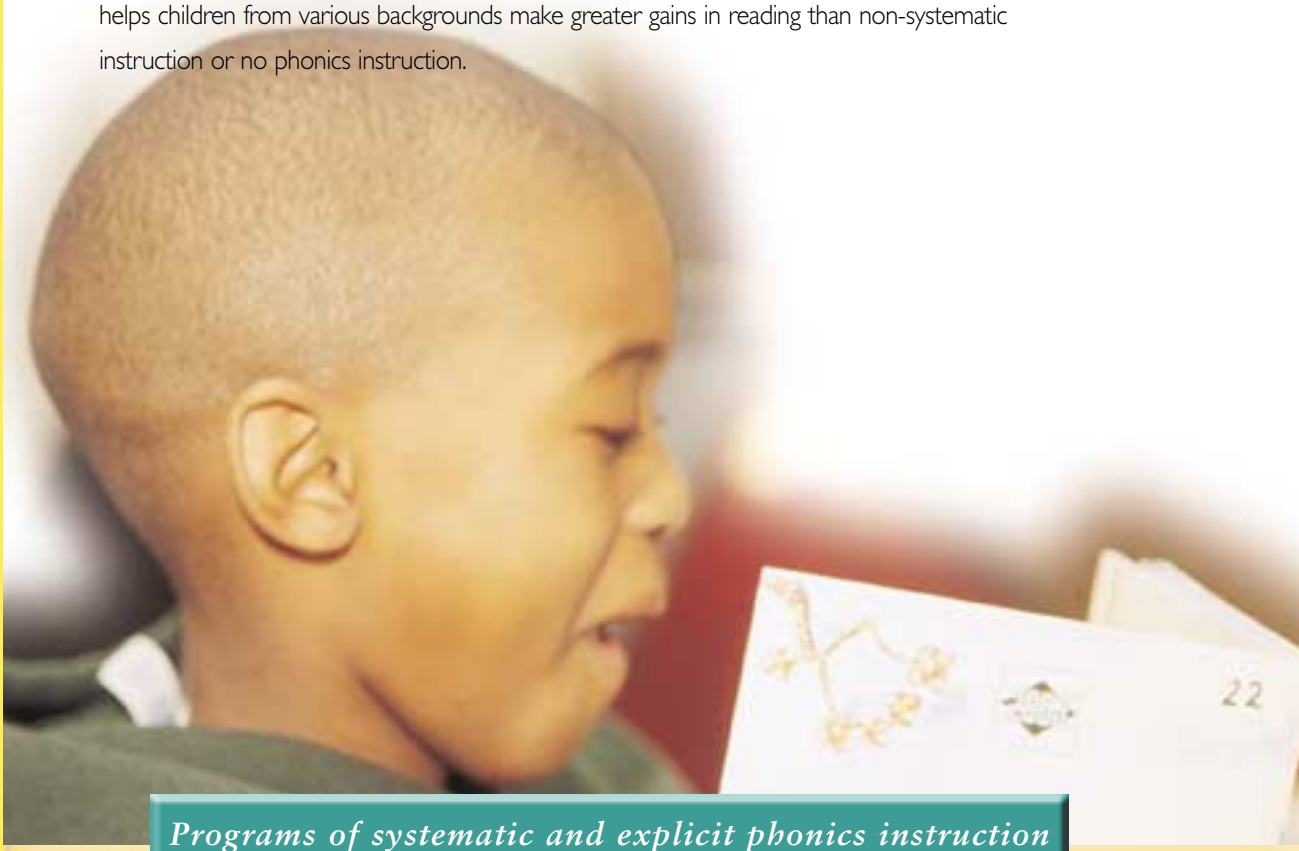
Both kindergarten and first-grade children who receive systematic phonics instruction are better at reading and spelling words than kindergarten and first-grade children who do not receive systematic instruction.

Systematic and explicit phonics instruction significantly improves children's reading comprehension.

Systematic phonics instruction results in better growth in children's ability to comprehend what they read than non-systematic or no phonics instruction. This is not surprising because the ability to read the words in a text accurately and quickly is highly related to successful reading comprehension.

Systematic and explicit phonics instruction is effective for children from various social and economic levels.

Systematic phonics instruction is beneficial to children regardless of their socioeconomic status. It helps children from various backgrounds make greater gains in reading than non-systematic instruction or no phonics instruction.



Programs of systematic and explicit phonics instruction

Systematic and explicit phonics instruction provides practice with letter-sound relationships in a predetermined sequence. Children learn to use these relationships to decode words that contain them.

Systematic and explicit phonics instruction is particularly beneficial for children who are having difficulty learning to read and who are at risk for developing future reading problems.

Systematic phonics instruction is significantly more effective than non-systematic or no phonics instruction in helping to prevent reading difficulties among at risk students and in helping children overcome reading difficulties.

Systematic and explicit phonics instruction is most effective when introduced early.

Phonics instruction is most effective when it begins in kindergarten or first grade. To be effective with young learners, systematic instruction must be designed appropriately and taught carefully. It should include teaching letter shapes and names, phonemic awareness, and all major letter-sound relationships. It should ensure that all children learn these skills. As instruction proceeds, children should be taught to use this knowledge to read and write words.

Phonics instruction is not an entire reading program for beginning readers.

Along with phonics instruction, young children should be solidifying their knowledge of the alphabet, engaging in phonemic awareness activities, and listening to stories and informational texts read aloud to them. They also should be reading texts (both out loud and silently), and writing letters, words, messages, and stories.

Questions you may have about phonics instruction

Do we know enough about the effectiveness of systematic and explicit phonics instruction for me to implement it in my classroom?

Yes. Many teachers are teaching phonics systematically and explicitly and have been doing so for years. Their results, along with the findings of three decades of research, confirm the importance and effectiveness of systematic phonics instruction, particularly in kindergarten and first- and second-grade classrooms.

How can I tell if a phonics program is systematic and explicit?

A program of systematic phonics instruction clearly identifies a carefully selected and useful set of letter-sound relationships and then organizes the introduction of these relationships into a logical instructional sequence. The instructional sequence may include the relationships between the sounds associated with single letters (for example, the sound /m/ with the letter ***m***), as well as with larger units of written language (for example, letter combinations such as ***th*** or ***ing*** or spelling patterns such as ***ea*** or ***ie***). Furthermore, a systematic program of instruction provides children with ample opportunities to practice the relationships they are learning.

What do non-systematic programs of phonics instruction look like?

Programs of phonics instruction that are not systematic do not teach consonant and vowel letter-sound relationships in a prescribed sequence. Rather, they encourage informal phonics instruction based on the teacher's perceptions of what students need to learn and when they need to learn it.

General guidelines

Evaluating programs of phonics instruction

Effective programs offer phonics instruction that:

- helps teachers explicitly and systematically instruct students in how to relate letters and sounds, how to break spoken words into sounds, and how to blend sounds to form words;
- helps students understand why they are learning the relationships between letters and sounds;
- helps students apply their knowledge of phonics as they read words, sentences, and text;
- helps students apply what they learn about sounds and letters to their own writing;
- can be adapted to the needs of individual students, based on assessment;
- includes alphabetic knowledge, phonemic awareness, vocabulary development, and the reading of text, as well as systematic phonics instruction.

Non-systematic instruction often neglects vowels, even though knowing vowel letter-sound relationships is a crucial part of knowing the alphabetic system. Non-systematic programs of phonics instruction do not provide practice materials that offer children the opportunity to apply what they are learning about letter-sound relationships. The reading materials these programs do provide for children are selected according to other criteria, such as their interest to children or their literary value.

What else should I look for in programs of phonics instruction?

Programs should acknowledge that systematic phonics instruction is a means to an end. Some phonics programs focus primarily on teaching children a large number of letter-sound relationships. These programs often do not allot enough instructional time to help children learn how to put this knowledge to use in reading actual words, sentences, and texts. Although children need to be taught the major consonant and vowel letter-sound relationships, they also need ample reading and writing activities that allow them to practice using this knowledge.

What kinds of reading practice materials should I look for?

Usually, practice materials are in the form of short books or stories that contain words that provide children with practice in using the specific letter-sound relationships they are learning. Most programs of systematic phonics instruction also include materials for use in practicing writing. For example, children might have activity sheets on which they write the letters and letter combinations they are learning, and then combine these into words, sentences, messages, and their own stories.

Is phonics instruction more effective when students are taught individually, in small groups, or in whole classes?

You can teach phonics effectively to the whole class, to small groups, or to individual students. The needs of the students in your class and the number of adults working with them determine how you deliver instruction.

Non-systematic programs

Non-systematic programs of phonics instruction

Some programs of instruction do not teach phonics explicitly and systematically.

- ***Literature-based programs*** that emphasize reading and writing activities. Phonics instruction is embedded in these activities, but letter-sound relationships are taught incidentally, usually based on key letters that appear in student reading materials.
- ***Basal reading programs*** that focus on whole-word or meaning-based activities. These programs pay only limited attention to letter-sound relationships and provide little or no instruction in how to blend letters to pronounce words.
- ***Sight-word programs*** that begin by teaching children a sight-word reading vocabulary of from 50 to 100 words. Only after they learn to read these words do children receive instruction in the alphabetic principle.

Further, adding phonics workbooks or phonics activities to these programs of instruction has not been effective. Such "add-ons" confuse rather than help children to read.

Doesn't phonics instruction get in the way of reading comprehension?

Quite the opposite is true. Because systematic phonics instruction helps children learn to identify words, it increases their ability to comprehend what they read. Reading words accurately and automatically enables children to focus on the meaning of text. The research is quite convincing in showing that phonics instruction contributes to comprehension skills rather than inhibiting them.

Does phonics instruction slow down the progress of some children?

Again, the opposite is true. Phonics instruction contributes to growth in the reading of most children. It is important, however, to acknowledge that children vary greatly in the knowledge of reading that they bring to school. For phonics instruction to support the reading progress of all of your students, it is important to work in flexible instructional groups and to pace instruction to maximize student progress.

How does systematic and explicit phonics instruction affect spelling?

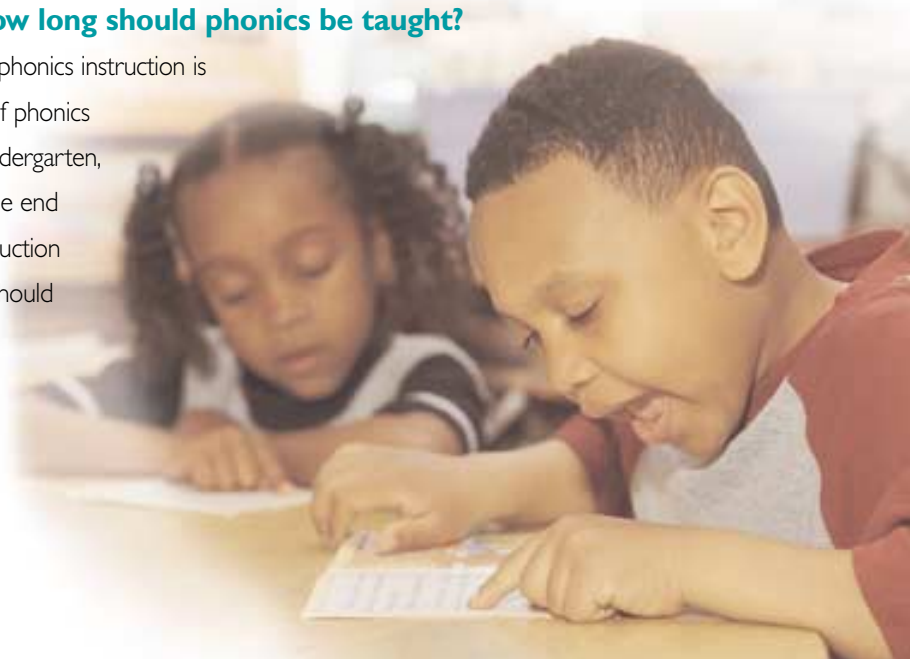
Systematic programs of phonics instruction produce more growth in spelling among kindergarten and first-grade students than non-systematic or no phonics programs. However, systematic phonics instruction for normally developing and poor readers above first grade does not produce gains in spelling. The reason may be that as students move up in the grades, spelling is less a matter of applying letter-sound relationships and more a matter of combining word parts.

How does systematic and explicit phonics instruction affect the reading and spelling of older students?

Systematic phonics instruction by itself may not be enough to significantly improve the overall reading and spelling performance of readers beyond first grade. The effects of phonics instruction on students in second through sixth grades are limited to improving their word reading and oral text reading skills. The effects do not extend to spelling and reading comprehension. For these students, it is important to emphasize reading fluency and comprehension. In addition, these students also require explicit spelling instruction to improve their spelling.

How long should phonics be taught?

Approximately two years of phonics instruction is sufficient for most students. If phonics instruction begins early in kindergarten, it should be completed by the end of first grade. If phonics instruction begins early in first grade, it should be completed by the end of second grade.



Summing up

Phonics instruction	• helps children learn the relationships between the letters of written language and the sounds of spoken language.
Phonics instruction is important because	• it leads to an understanding of the alphabetic principle—the systematic and predictable relationships between written letters and spoken sounds.
Programs of phonics instruction are effective when they are	• **systematic**—the plan of instruction includes a carefully selected set of letter-sound relationships that are organized into a logical sequence. • **explicit**—the programs provide teachers with precise directions for the teaching of these relationships.
Effective phonics programs provide	• ample opportunities for children to apply what they are learning about letters and sounds to the reading of words, sentences, and stories.
Systematic and explicit phonics instruction	• significantly improves children's word recognition, spelling, and reading comprehension. • is most effective when it begins in kindergarten or first grade.

fluency instruction

fluency instruction

Fluency is the ability to read a text accurately and quickly. When fluent readers read silently, they recognize words automatically. They group words quickly to help them gain meaning from what they read. Fluent readers read aloud effortlessly and with expression. Their reading sounds natural, as if they are speaking. Readers who have not yet developed fluency read slowly, word by word. Their oral reading is choppy and plodding.

Fluency is important because it provides a bridge between word recognition and comprehension. Because fluent readers do not have to concentrate on decoding the words, they can focus their attention on what the text means. They can make connections among the ideas in the text and between the text and their background knowledge. In other words, fluent readers recognize words and comprehend at the same time. Less fluent readers, however, must focus their attention on figuring out the words, leaving them little attention for understanding the text.

More fluent readers	*Less fluent readers*
focus their attention on making connections among the ideas in a text and between these ideas and their background knowledge. Therefore, they are able to focus on comprehension.	must focus their attention primarily on decoding individual words. Therefore, they have little attention left for comprehending the text.

Fluency develops gradually over considerable time and through substantial practice. At the earliest stage of reading development, students' oral reading is slow and labored because students are just learning to "break the code"—to attach sounds to letters and to blend letter sounds into recognizable words.

Even when students recognize many words automatically, their oral reading still may be expressionless, not fluent. To read with expression, readers must be able to divide the text into meaningful chunks. These chunks include phrases and clauses. Readers must know to pause appropriately within and at the ends of sentences and when to change emphasis and tone. For example, a reader who lacks fluency may read, probably in a monotone, a line from Bill Martin Jr.'s ***Brown Bear, Brown Bear*** as if it were a list of words rather than a connected text, pausing at inappropriate places:

Brown/
bear brown/
bear what/
do/
you see.

A fluent reader will read the same line as:

Brown bear/
Brown bear/
What do you see?/

Fluency is not a stage of development at which readers can read all words quickly and easily. Fluency changes, depending on what readers are reading, their familiarity with the words, and the amount of their practice with reading text. Even very skilled readers may read in a slow, labored manner when reading texts with many unfamiliar words or topics. For example, readers who are usually fluent may not be able to read technical material fluently, such as a textbook about nuclear physics or an article in a medical journal.

A recent large-scale study by the National Assessment of Educational Progress (NAEP) found that 44% of a representative sample of the nation's fourth graders were low in fluency. The study also found a close relationship between fluency and reading comprehension. Students who scored lower on measures of fluency also scored lower on measures of comprehension, suggesting that fluency is a neglected reading skill in many American classrooms, affecting many students' reading comprehension.

Although some readers may recognize words automatically in isolation or on a list, they may not read the same words fluently when the words appear in sentences in connected text. Instant or automatic word recognition is a necessary, but not sufficient, reading skill. Students who can read words in isolation quickly may not be able to automatically transfer this "speed and accuracy." It is important to provide students with instruction and practice in fluency as they read connected text.

What does scientifically-based research tell us about fluency instruction?

Researchers have investigated two major instructional approaches related to fluency. In the first approach, repeated and monitored oral reading (commonly called "repeated reading"), students read passages aloud several times and receive guidance and feedback from the teacher. In the second approach, independent silent reading, students are encouraged to read extensively on their own. Key findings from the scientific research on fluency instruction include the following conclusions about these two approaches that are of particular interest and value to classroom teachers.

Repeated and monitored oral reading improves reading fluency and overall reading achievement.

Students who read and reread passages orally as they receive guidance and/or feedback become better readers. Repeated oral reading substantially improves word recognition, speed, and accuracy as well as fluency. To a lesser but still considerable extent, repeated oral reading also improves reading comprehension. Repeated oral reading improves the reading ability of all students throughout the elementary school years. It also helps struggling readers at higher grade levels.

Traditionally, many teachers have relied primarily on round-robin reading to develop oral fluency. In round-robin reading, students take turns reading parts of a text aloud (though usually not repeatedly). But round-robin reading in itself does not increase fluency. This may be because students only read small amounts of text, and they usually read this small portion only once.

Researchers have found several effective techniques related to repeated oral reading:

- students read and reread a text a certain number of times or until a certain level of fluency is reached. Four rereadings are sufficient for most students; and
- oral reading practice is increased through the use of audiotapes, tutors, peer guidance, or other means.

In addition, some effective repeated oral reading techniques have carefully designed feedback to guide the reader's performance.

The difference between fluency and automaticity

Although the terms automaticity and fluency often are used interchangeably, they are not the same thing.

Automaticity is the fast, effortless word recognition that comes with a great deal of reading practice. In the early stages of learning to read, readers may be accurate but slow and inefficient at recognizing words. Continued reading practice helps word recognition become more automatic, rapid, and effortless. Automaticity refers only to accurate, speedy word recognition, not to reading with expression. Therefore, automaticity (or automatic word recognition) is necessary, but not sufficient, for fluency.

No research evidence is available currently to confirm that instructional time spent on silent, independent reading with minimal guidance and feedback improves reading fluency and overall reading achievement.

One of the major differences between good and poor readers is the amount of time they spend reading. Many studies have found a strong relationship between reading ability and how much a student reads. On the basis of this evidence, teachers have long been encouraged to promote voluntary reading in the classroom. Teacher-education and reading-education literature often recommends in-class procedures for encouraging students to read on their own, such as Silent Sustained Reading (SSR) or Drop Everything and Read (DEAR).

Research, however, has not yet confirmed whether independent silent reading with minimal guidance or feedback improves reading achievement and fluency. Neither has it proven that more silent reading in the classroom cannot work; its effectiveness without guidance or feedback is as yet unproven. The research suggests that there are more beneficial ways to spend reading instructional time than to have students read independently in the classroom without reading instruction.

Questions you may have about fluency instruction

How can I help my students become more fluent readers?

You can help your students become more fluent readers (1) by providing them with models of fluent reading and (2) by having students repeatedly read passages as you offer guidance. In addition, you can help students improve their fluency by combining reading instruction with opportunities for them to read books that are at their independent level of reading ability.

Model fluent reading, then have students reread the text on their own. By listening to good models of fluent reading, students learn how a reader's voice can help written text make sense. Read aloud daily to your students. By reading effortlessly and with expression, you are modeling for your students how a fluent reader sounds during reading.

After you model how to read the text, you must have the students reread it. By doing this, the students are engaging in repeated reading. Usually, having students read a text four times is sufficient to improve fluency. Remember, however, that instructional time is limited, and it is the actual time that students are actively engaged in reading that produces reading gains.

Have other adults read aloud to students. Encourage parents or other family members to read aloud to their children at home. The more models of fluent reading the children hear, the better. Of course, hearing a model of fluent reading is not the only benefit of reading aloud to children. Reading to children also increases their knowledge of the world, their vocabulary, their familiarity with written language ("book language"), and their interest in reading.

Have students repeatedly read passages aloud with guidance. The best strategy for developing reading fluency is to provide your students with many opportunities to read the same passage orally several times. To do this, you should first know what to have your students read. Second, you should know how to have your students read aloud repeatedly.

Modeling fluent reading

In the primary grades, you might read aloud from a big book. A big book is an enlarged version of a commercially published book—big enough so that all students can clearly see the text. By pointing to each word as you are reading (using either a pointer or your finger), you can show students where and how you are pausing and how the text shows you when to raise or lower your voice. Occasionally, you can also explain to your students why you are reading in a certain way:

Teacher: ***Did you hear how I grouped the words "Brown bear/ brown bear"? That's because the words brown and bear belong together. And then I paused a little before repeating the words.***

Teacher: ***Did you hear how my voice got louder and more excited right here? That's because the author put in this exclamation mark (point to it) to show that the speaker was excited or enthusiastic about what she was saying.***

Then, have the students practice reading the same text.

Independent level text	*Instructional level text*	*Frustration level text*
Relatively easy text for the reader, with no more than approximately 1 in 20 words difficult for the reader (95% success)	Challenging but manageable text for the reader, with no more than approximately 1 in 10 words difficult for the reader (90% success)	Difficult text for the reader, with more than 1 in 10 words difficult for the reader (less than 90% success)

What students should read. Fluency develops as a result of many opportunities to practice reading with a high degree of success. Therefore, your students should practice orally rereading text that is reasonably easy for them—that is, text containing mostly words that they know or can decode easily. In other words, the texts should be at the students' independent reading level. A text is at students' independent reading level if they can read it with about 95% accuracy, or misread only about 1 of every 20 words. If the text is more difficult, students will focus so much on word recognition that they will not have an opportunity to develop fluency.

The text your students practice rereading orally should also be relatively short—probably 50–200 words, depending on the age of the students. You should also use a variety of reading materials, including stories, nonfiction, and poetry. Poetry is especially well suited to fluency practice because poems for children are often short and they contain rhythm, rhyme, and meaning, making practice easy, fun, and rewarding.

How to have your students read aloud repeatedly. There are several ways that your students can practice orally rereading text, including student-adult reading, choral (or unison) reading, tape-assisted reading, partner reading, and readers' theatre.

Student-adult reading. In student-adult reading, the student reads one-on-one with an adult. The adult can be you, a parent, a classroom aide, or a tutor. The adult reads the text first, providing the students with a model of fluent reading. Then the student reads the same passage to the adult with the adult providing assistance and encouragement. The student rereads the passage until the reading is quite fluent. This should take approximately three to four rereadings.

Choral reading. In choral, or unison, reading, students read along as a group with you (or another fluent adult reader). Of course, to do so, students must be able to see the same text that you are reading. They might follow along as you read from a big book, or they might read from their own copy of the book you are reading. For choral reading, choose a book that is not too long and that you think is at the independent reading level of most students. Patterned or predictable books are particularly useful for choral reading, because their repetitious style invites students to join in. Begin by reading the book aloud as you model fluent reading.

Then reread the book and invite students to join in as they recognize the words you are reading. Continue rereading the book, encouraging students to read along as they are able. Students should read the book with you three to five times total (though not necessarily on the same day). At this time, students should be able to read the text independently.

Tape-assisted reading. In tape-assisted reading, students read along in their books as they hear a fluent reader read the book on an audiotape. For tape-assisted reading, you need a book at a student's independent reading level and a tape recording of the book read by a fluent reader at about 80–100 words per minute. The tape should not have sound effects or music. For the first reading, the student should follow along with the tape, pointing to each word in her or his book as the reader reads it. Next, the student should try to read aloud along with the tape. Reading along with the tape should continue until the student is able to read the book independently, without the support of the tape.

Partner reading. In partner reading, paired students take turns reading aloud to each other. For partner reading, more fluent readers can be paired with less fluent readers. The stronger reader reads a paragraph or page first, providing a model of fluent reading. Then the less fluent reader reads the same text aloud. The stronger student gives help with word recognition and provides feedback and encouragement to the less fluent partner. The less fluent partner rereads the passage until he or she can read it independently. Partner reading need not be done with a more and less fluent reader. In another form of partner reading, children who read at the same level are paired to reread a story that they have received instruction on during a teacher-guided part of the lesson. Two readers of equal ability can practice rereading after hearing the teacher read the passage.

Activities for repeated oral reading practice

***Student–adult reading*—**reading one-on-one with an adult, who provides a model of fluent reading, helps with word recognition, and provides feedback.

***Choral reading*—**reading aloud simultaneously in a group.

***Tape-assisted reading*—**reading aloud simultaneously or as an echo with an audio-taped model.

***Partner reading*—**reading aloud with a more fluent partner (or with a partner of equal ability) who provides a model of fluent reading, helps with word recognition, and provides feedback.

***Readers' theatre*—**the rehearsing and performing before an audience of a dialogue-rich script derived from a book.

Procedure for calculating words correct per minute

One-minute reading: Total words read-errors = words correct per minute

1 Select two or three brief passages from a grade-level basal text or other grade-level material (regardless of students' instructional levels).
2. Have individual students read each passage aloud for exactly one minute.
3. Count the total number of words the student read for each passage. Compute the average number of words read per minute.
4. Count the number of errors the student made on each passage. Compute the average number of errors per minute.
5. Subtract the average number of errors read per minute from the average total number of words read per minute. The result is the average number of words correct per minute (WCPM).
6. Repeat the procedure several times during the year. Graphing students' WCPM throughout the year easily captures their reading growth.
7. Compare the results with published norms or standards to determine whether students are making suitable progress in their fluency. For example, according to one published norm, students should be reading approximately 60 words per minute correctly by the end of first grade, 90–100 words per minute correctly by the end of second grade, and approximately 114 words per minute correctly by the end of third grade.

Readers' theatre. In readers' theatre, students rehearse and perform a play for peers or others. They read from scripts that have been derived from books that are rich in dialogue. Students play characters who speak lines or a narrator who shares necessary background information. Readers' theatre provides readers with a legitimate reason to reread text and to practice fluency. Readers' theatre also promotes cooperative interaction with peers and makes the reading task appealing.

What should I do about silent, independent reading in the classroom?

Reading fluency growth is greatest when students are working directly with you. Therefore, you should use most of your allocated reading instruction time for direct teaching of reading skills and strategies. Although silent, independent reading may be a way to increase fluency and reading achievement, it should not be used in place of direct instruction in reading.

Direct instruction is especially important for readers who are struggling. Readers who have not yet attained fluency are not likely to make effective and efficient use of silent, independent reading time. For these students, independent reading takes time away from needed reading instruction.

Rather than allocating instructional time for independent reading in the classroom, encourage your students to read more outside of school. They can read with an adult or other family member. Or, they can read on their own with books at their independent reading level. Of course, students might also read on their own during independent work time in the classroom—for example, as another small group is receiving reading instruction, or after they have completed one activity and are waiting for a new activity to begin.

When should fluency instruction begin? When should it end?

Fluency instruction is useful when students are not automatic at recognizing the words in their texts. How can you tell when students are not automatic? There is a strong indication that a student needs fluency instruction:

- if you ask the student to read orally from a text that he or she has not practiced; and the student makes more than ten percent word recognition errors;
- if the student cannot read orally with expression; or
- if the student's comprehension is poor for the text that she or he reads orally.

Is increasing word recognition skills sufficient for developing fluency?

Isolated word recognition is a necessary but not sufficient condition for fluent reading. Throughout much of the twentieth century, it was widely assumed that fluency was the result of word recognition proficiency. Instruction, therefore, focused primarily on the development of word recognition. In recent years, however, research has shown that fluency is a separate component of reading that can be developed through instruction.

Having students review and rehearse word lists (for example, by using flash cards) may improve their ability to recognize the words in isolation, but this ability may not transfer to words presented in actual texts. Developing reading fluency in texts must be developed systematically.

Should I assess fluency? If so, how?

You should formally and informally assess fluency regularly to ensure that your students are making appropriate progress. The most informal assessment is simply listening to students read aloud and making a judgment about their progress in fluency. You should, however, also include more formal measures of fluency. For example, the student's reading rate should be faster than 90 words a minute, the student should be able to read orally with expression, and the student should be able to comprehend what is read while reading orally.

Probably the easiest way to formally assess fluency is to take timed samples of students' reading and to compare their performance (number of words read correctly per minute) with published oral reading fluency norms or standards.

Monitoring your students' progress in reading fluency will help you determine the effectiveness of your instruction and set instructional goals. Also, seeing their fluency growth reflected in the graphs you keep can motivate students.

Other procedures that have been used for measuring fluency include Informal Reading Inventories (IRIs), miscue analysis, and running records. The purpose of these procedures, however, is to identify the kinds of word recognition problems students may have, not to measure fluency. Also, these procedures are quite time-consuming. Simpler measures of speed and accuracy, such as calculating words read correctly per minute, are more appropriate for monitoring fluency.

Summing up

Fluency is	● the ability to read a text accurately and quickly.
Fluency is important because	● it frees students to understand what they read.
Reading fluency can be developed	● by modeling fluent reading ● by having students engage in repeated oral reading.
Monitoring student progress in reading fluency	● is useful in evaluating instruction and setting instructional goals ● can be motivating to students.

vocabulary instruction

vocabulary instruction

Vocabulary refers to the words we must know to communicate effectively. In general, vocabulary can be described as oral vocabulary or reading vocabulary. Oral vocabulary refers to words that we use in speaking or recognize in listening. Reading vocabulary refers to words we recognize or use in print.

Vocabulary plays an important part in learning to read. As beginning readers, children use the words they have heard to make sense of the words they see in print. Consider, for example, what happens when a beginning reader comes to the word ***dig*** in a book. As she begins to figure out the sounds represented by the letters ***d, i, g,*** the reader recognizes that the sounds make up a very familiar word that she has heard and said many times. Beginning readers have a much more difficult time reading words that are not already part of their oral vocabulary.

Vocabulary also is very important to reading comprehension. Readers cannot understand what they are reading without knowing what most of the words mean. As children learn to read more advanced texts, they must learn the meaning of new words that are not part of their oral vocabulary.

Types of vocabulary

Researchers often refer to four types of vocabulary

listening vocabulary—the words we need to know to understand what we hear.

speaking vocabulary—the words we use when we speak.

reading vocabulary—the words we need to know to understand what we read.

writing vocabulary—the words we use in writing.

What does scientifically-based research tell us about vocabulary instruction?

The scientific research on vocabulary instruction reveals that (1) most vocabulary is learned indirectly, and (2) some vocabulary must be taught directly. The following conclusions about indirect vocabulary learning and direct vocabulary instruction are of particular interest and value to classroom teachers:

Children learn the meanings of most words indirectly, through everyday experiences with oral and written language.

Children learn word meanings indirectly in three ways:

They engage daily in oral language.

Young children learn word meanings through conversations with other people, especially adults. As they engage in these conversations, children often hear adults repeat words several times. They also may hear adults use new and interesting words. The more oral language experiences children have, the more word meanings they learn.

They listen to adults read to them.

Children learn word meanings from listening to adults read to them. Reading aloud is particularly helpful when the reader pauses during reading to define an unfamiliar word and, after reading, engages the child in a conversation about the book. Conversations about books help children to learn new words and concepts and to relate them to their prior knowledge and experience.

They read extensively on their own.

Children learn many new words by reading extensively on their own. The more children read on their own, the more words they encounter and the more word meanings they learn.

Indirect vocabulary learning

Students learn vocabulary indirectly when they hear and see words used in many different contexts—for example, through conversations with adults, through being read to, and through reading extensively on their own.

Direct vocabulary learning

Students learn vocabulary directly when they are explicitly taught both individual words and word-learning strategies. Direct vocabulary instruction aids reading comprehension.

Specific Word Instruction

Word Learning Instruction

Although a great deal of vocabulary is learned indirectly, some vocabulary should be taught directly.

Direct instruction helps students learn difficult words, such as words that represent complex concepts that are not part of the students' everyday experiences. Direct instruction of vocabulary relevant to a given text leads to a better reading comprehension.

Direct instruction includes:

(1) providing students with specific word instruction; and

(2) teaching students word-learning strategies.

Specific word instruction

Specific word instruction, or teaching individual words, can deepen students' knowledge of word meanings. In-depth knowledge of word meanings can help students understand what they are hearing or reading. It also can help them use words accurately in speaking and writing.

In particular:

Teaching specific words before reading helps both vocabulary learning and reading comprehension.

Before students read a text, it is helpful to teach them specific words they will see in the text. Teaching important vocabulary before reading can help students both learn new words and comprehend the text.

Extended instruction that promotes active engagement with vocabulary improves word learning.

Children learn words best when they are provided with instruction over an extended period of time and when that instruction has them work actively with the words. The more students use new words and the more they use them in different contexts, the more likely they are to learn the words.

Repeated exposure to vocabulary in many contexts aids word learning.

Students learn new words better when they encounter them often and in various contexts. The more children see, hear, and work with specific words, the better they seem to learn them. When teachers provide extended instruction that promotes active engagement, they give students repeated exposure to new words. When the students read those same words in their texts, they increase their exposure to the new words.

An example of classroom instruction

Teaching specific words: A teacher plans to have his third-grade class read the novel ***Stone Fox,*** by John Reynolds Gardiner. In this novel, a young boy enters a dogsled race in hopes of winning prize money to pay the taxes on his grandfather's farm. The teacher knows that understanding the concept of ***taxes*** is important to understanding the novel's plot. Therefore, before his students begin reading the novel, the teacher may do several things to make sure that they understand what the concept means and why it is important to the story. For example, the teacher may:

- ***engage students in a discussion of the concept of taxes; and/or***
- ***read a sentence from the book that contains the word taxes and ask students to use context and their prior knowledge to try to figure out what it means.***

To solidify their understanding of the word, the teacher might ask students to use ***taxes*** in their own sentences.

Word learning strategies

Of course, it is not possible for teachers to provide specific instruction for all the words their students do not know. Therefore, students also need to be able to determine the meaning of words that are new to them but not taught directly to them. They need to develop effective word-learning strategies. Word-learning strategies include:
(1) how to use dictionaries and other reference aids to learn word meanings and to deepen knowledge of word meanings;
(2) how to use information about word parts to figure out the meanings of words in text; and
(3) how to use context clues to determine word meanings.

Using dictionaries and other reference aids. Students must learn how to use dictionaries, glossaries, and thesauruses to help broaden and deepen their knowledge of words, even though these resources can be difficult to use. The most helpful dictionaries include sentences providing clear examples of word meanings in context.

An example of classroom instruction

Extended and active engagement with vocabulary

A first-grade teacher wants to help her students understand the concept of ***jobs,*** which is part of her social studies curriculum. Over a period of time, the teacher engages students in exercises in which they work repeatedly with the meaning of the concept of ***jobs.*** The students have many opportunities to see and actively use the word in various contexts that reinforce its meaning.

The teacher begins by asking the students what they already know about jobs and by having them give examples of jobs their parents have. The class might have a discussion about the jobs of different people who work at the school.

The teacher then reads the class a simple book about jobs. The book introduces the idea that different jobs help people meet their needs, and that jobs either provide goods or services. The book does not use the words ***goods*** and ***services,*** rather it uses the verbs ***makes*** and ***helps.***

The teacher then asks the students to make up sentences describing their parents' jobs by using the verbs ***makes*** and ***helps*** (e.g., "My mother is a doctor. She helps sick people get well.")

Next, the teacher asks students to brainstorm other jobs. Together, they decide whether the jobs are "making jobs" or "helping jobs." The job names are placed under the appropriate headings on a bulletin board. They might also suggest jobs that do not fit neatly into either category.

The teacher might then ask the students to share whether they think they would like to have a making or a helping job when they grow up.

The teacher next asks the students to talk with their parents about jobs. She tells them to try to bring to class two new examples of jobs—one making job and one helping job.

As the students come across different jobs throughout the year (for example, through reading books, on field trips, through classroom guests), they can add the jobs to the appropriate categories on the bulletin board.

Repeated exposure to words: A second-grade class is reading a biography of Benjamin Franklin. The biography discusses Franklin's important role as a scientist. The teacher wants to make sure that her students understand the meaning of the words ***science*** and ***scientist***, both because the words are important to understanding the biography and because they are obviously very useful words to know in school and in everyday life.

At every opportunity, therefore, the teacher draws her students' attention to the words. She points out the words ***scientist*** and ***science*** in textbooks and reading selections, particularly in her science curriculum. She has students use the words in their own writing, especially during science instruction.

She also asks them to listen for and find in print the words as they are used outside of the classroom—in newspapers, magazines, at museums, in television shows or movies, or the Internet.

An example of ***classroom instruction***

Then, as they read the biography, she discusses with students in what ways Benjamin Franklin was a scientist and what science meant in his time.

Using word parts. Knowing some common prefixes and suffixes (affixes), base words, and root words can help students learn the meanings of many new words. For example, if students learn just the four most common prefixes in English (un-, re-, in-, dis-), they will have important clues about the meaning of about two thirds of all English words that have prefixes. Prefixes are relatively easy to learn because they have clear meanings (for example, un- means not and re- means again); they are usually spelled the same way from word to word; and, of course, they always occur at the beginnings of words.

Learning suffixes can be more challenging than learning prefixes. This is because some suffixes have more abstract meanings than do prefixes. For example, learning that the suffix -ness means "the state or quality of" might not help students figure out the meaning of kindness. Other suffixes, however, are more helpful.

An example of ***classroom instruction***

Using dictionaries and other reference aids:

As his class reads a text, a second-grade teacher discovers that many of his students do not know the meaning of the word ***board***, as in the sentence, "The children were waiting to board the buses." The teacher demonstrates how to find ***board*** in the classroom dictionary, showing students that there are four different definitions for the word. He reads the definitions one at a time, and the class discusses whether each definition would fit the context of the sentence. The students easily eliminate the inappropriate definitions of ***board***, and settle on the definition, "to get on a train, an airplane, a bus, or a ship."

The teacher next has students substitute the most likely definition for ***board*** in the original sentence to verify that it is "The children were waiting to get on the buses" that makes the best sense.

For example, –less, which means "without" (hopeless, thoughtless); and –ful, which means "full of" (hopeful, thoughtful). Latin and Greek word roots are found commonly in content-area school subjects, especially in the subjects of science and social studies. As a result, Latin and Greek word parts form a large proportion of the new vocabulary that students encounter in their content-area textbooks. Teachers should teach the word roots as they occur in the texts students read. Furthermore, teachers should teach primarily those root words that students are likely to see often.

Word parts

Word parts include *affixes* (prefixes and suffixes), *base words*, and *word roots*.

Affixes are word parts that are "fixed to" either the beginnings of words (prefixes) or the ending of words (suffixes). The word *disrespectful* has two affixes, a prefix (*dis-*) and a suffix (*-ful*).

Base words are words from which many other words are formed. For example, many words can be formed from the base word *migrate: migration, migrant, immigration, immigrant, migrating, migratory.*

Word roots are the words from other languages that are the origin of many English words. About 60% of all English words have Latin or Greek origins.

Using word parts:

- A second-grade teacher wants to teach her students how to use the base word ***play*** as a way to help them think about the meanings of new words they will encounter in reading. To begin, she has students brainstorm all the words or phrases they can think of that are related to *play*. The teacher records their suggestions: ***player, playful, playpen, ballplayer***, and ***playing field***. Then she has the class discuss the meaning of each of their proposed words and how it relates to ***play***.
- A third-grade teacher identifies the base word ***note***. He then sets up a "word wall," and writes the word ***note*** at the top of the wall. As his students read, the teacher has them look for words that are related to ***note*** and add them to the wall. Throughout their reading, they gradually add to the wall the words ***notebook, notation, noteworthy***, and ***notable***.

An example of ***classroom instruction***

Using context clues. Context clues are hints about the meaning of an unknown word that are provided in the words, phrases, and sentences that surround the word. Context clues include definitions, restatements, examples, or descriptions. Because students learn most word meanings indirectly, or from context, it is important that they learn to use context clues effectively.

Not all contexts are helpful, however. Some contexts give little information about a word's meaning. An example of an unhelpful context is the sentence, "We heard the back door open, and then recognized the buoyant footsteps of Uncle Larry." A number of possible meanings of buoyant could fit this context, including heavy, lively, noisy, familiar, dragging, plodding, and so on. Instruction in using context clues as a word-learning strategy should include the idea that some contexts are more helpful than others.

An example of ***classroom instruction***

Using context clues: In a third-grade class, the teacher models how to use context clues to determine word meanings as follows:

Student *(reading the text):* When the cat pounced on the dog, the dog jumped up, yelping, and knocked over a lamp, which crashed to the floor. The animals ran past Tonia, tripping her. She fell to the floor and began sobbing. Tonia's brother Felix yelled at the animals to stop. As the noise and confusion mounted, Mother hollered upstairs, "What's all that ***commotion***?"

Teacher: The context of the paragraph helps us determine what ***commotion*** means. There's yelping and crashing, sobbing, and yelling. And then the last sentence says, "as the noise and confusion mounted." The author's use of the words ***noise*** and ***confusion*** gives us a very strong clue as to what ***commotion*** means. In fact, the author is really giving us a definition there, because ***commotion*** means something that's noisy and confusing—a disturbance. Mother was right; there was definitely a ***commotion***!

Questions you may have about vocabulary instruction

How can I help my students learn words indirectly?

You can encourage indirect learning of vocabulary in two main ways. First, read aloud to your students, no matter what grade you teach. Students of all ages can learn words from hearing texts of various kinds read to them. Reading aloud works best when you discuss the selection before, during, and after you read. Talk with students about new vocabulary and concepts and help them relate the words to their prior knowledge and experiences.

The second way to promote indirect learning of vocabulary is to encourage students to read extensively on their own. Rather than allocating instructional time for independent reading in the classroom, however, encourage your students to read more outside of school. Of course, your students also can read on their own during independent work time in the classroom—for example, while you teach another small group or after students have completed one activity and are waiting for a new activity to begin.

What words should I teach?

You won't be able to directly teach your students *all* the words in a text that they might not already know. In fact, there are several reasons why you should *not* directly teach all unknown words.

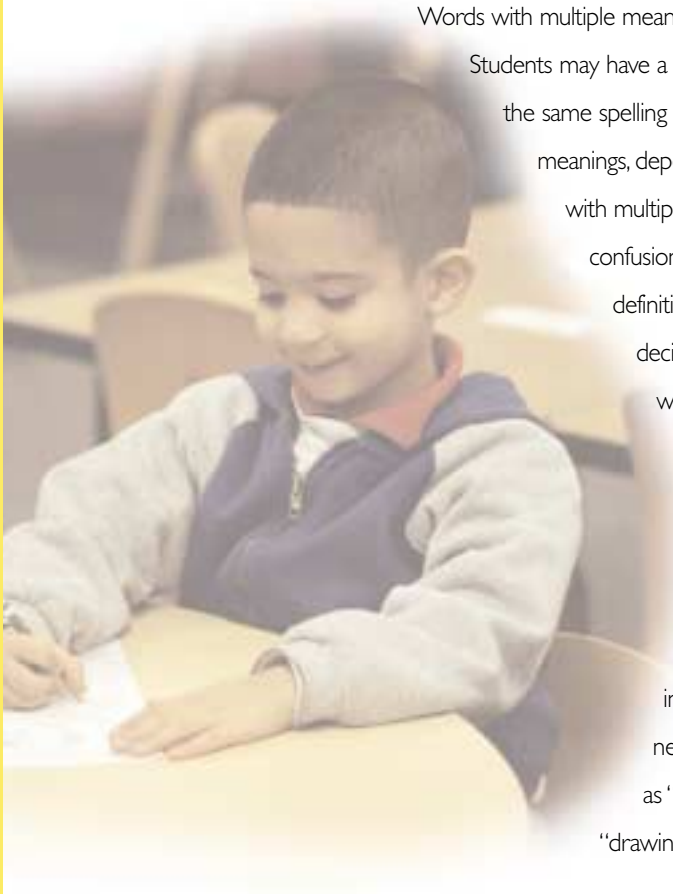
- The text may have a great many words that are unknown to students—too many for direct instruction.
- Direct vocabulary instruction can take a lot of class time—time that you might better spend on having your students read.
- Your students can understand most texts without knowing the meaning of every word in the text.
- Your students need opportunities to use word-learning strategies to learn on their own the meanings of unknown words.

You will probably to be able to teach thoroughly only a few new words (perhaps eight or ten) per week, so you need to choose the words you teach carefully. Focus on teaching three types of words:

Important words. When you teach words before students read a text, directly teach those words that are important for understanding a concept or the text. Your students might not know several other words in the selection, but you will not have time to teach them all. Of course, you should prepare your students to use word-learning strategies to figure out the meanings of other words in the text.

Useful words. Teach words that students are likely to see and use again and again. For example, it is probably more useful for students to learn the word *fragment* than the word *fractal*; likewise, the word *revolve* is more useful than the word *gyrate*.

Difficult words. Provide some instruction for words that are particularly difficult for your students.



Words with multiple meanings are particularly challenging for students. Students may have a hard time understanding that words with the same spelling and/or pronunciation can have different meanings, depending on their context. Looking up words with multiple meanings in the dictionary can cause confusion for students. They see a number of different definitions listed, and they often have a difficult time deciding which definition fits the context. You will have to help students determine which definition they should choose.

Idiomatic expressions also can be difficult for students, especially for students who are English language learners. Because idiomatic expressions do not mean what the individual words usually mean, you often will need to explain to students expressions such as "hard hearted," "a chip off the old block," "drawing a blank," or "get the picture."

Multiple-meaning words that can be difficult for students:	Examples
Words that are spelled the same but are pronounced differently	***sow*** (a female pig); ***sow*** (to plant seeds) ***bow*** (a knot with loops); ***bow*** (the front of a ship)
Words that are spelled and pronounced the same, but have different meanings	***mail*** (letters, cards, and packages); ***mail*** (a type of armor) ***ray*** (a narrow beam of light); ***ray*** (a type of fish); ***ray*** (part of a line)

How well do my students need to "know" vocabulary words?

Students do not either ***know*** or ***not know*** words. Rather, they know words to varying degrees. They may never have seen or heard a word before. They may have heard or seen it, but have only a vague idea of what it means. Or they may be very familiar with the meaning of a word and be able to use it accurately in their own speech and writing. These three levels of word knowledge are called ***unknown, acquainted,*** and ***established.***

As they read, students can usually get by with some words at the unknown or acquainted levels. If students are to understand the text fully, however, they need to have an established level of knowledge for most of the words that they read.

Level of Word Knowledge	Definition
Unknown	*The word is completely unfamiliar and its meaning is unknown.*
Acquainted	*The word is somewhat familiar; the student has some idea of its basic meaning.*
Established	*The word is very familiar; the student can immediately recognize its meaning and use the word correctly.*

Are there different types of word learning? If so, are some types of learning more difficult than others?

Four different kinds of word learning have been identified:

- learning a new meaning for a known word;
- learning the meaning for a new word representing a known concept;
- learning the meaning of a new word representing an unknown concept; and
- clarifying and enriching the meaning of a known word.

These types vary in difficulty. One of the most common, yet challenging, is the third type: learning the meaning of a new word representing an unknown concept. Much of learning in the content areas involves this type of word learning. As students learn about ***deserts, hurricanes,*** and ***immigrants***, they may be learning both new concepts and new words. Learning words and concepts in science, social studies, and mathematics is even more challenging because each major concept often is associated with many other new concepts. For example, the concept ***deserts*** is often associated with other concepts that may be unfamiliar, such as cactus, plateau, and mesa.

Type of word Learning	Explanation
Learning a new meaning for a known word	The student has the word in her oral or reading vocabulary, but she is learning a new meaning for it. For example, the student knows what a ***branch*** is, and is learning in social studies about both ***branches*** of rivers and ***branches*** of government.
Learning the meaning for a new word representing a known concept	The student is familiar with the concept but he does not know the particular word for that concept. For example, the student has had a lot of experience with baseballs and globes, but does not know that they are examples of ***spheres.***
Learning the meaning of a new word representing an unknown concept	The student is not familiar with either the concept or the word that represents that concept, and she must learn both. For example, the student may not be familiar with either the process or the word ***photosynthesis.***
Clarifying and enriching the meaning of a known word	The student is learning finer, more subtle distinctions, or connotations, in the meaning and usage of words. For example, he is learning the differences between ***running, jogging, trotting, dashing, and sprinting.***

What else can I do to help my students develop vocabulary?

Another way you can help your students develop vocabulary is to foster *word consciousness*—an awareness of and interest in words, their meanings, and their power. Word-conscious students know many words and use them well. They enjoy words and are eager to learn new words—and they know *how* to learn them.

You can help your students develop word consciousness in several ways. Call their attention to the way authors choose words to convey particular meanings. Encourage students to play with words by engaging in word play, such as puns or palindromes. Help them research a word's origin or history. You can also encourage them to search for examples of a word's usage in their everyday lives.

Summing up

Vocabulary refers to

- the words we must know to communicate effectively.
- **Oral** vocabulary refers to words that we use in speaking or recognize in listening.
- **Reading** vocabulary refers to words we recognize or use in print.

Vocabulary is important because

- beginning readers use their oral vocabulary to make sense of the words they see in print.
- readers must know what most of the words mean before they can understand what they are reading.

Vocabulary can be developed

- **indirectly,** when students engage daily in oral language, listen to adults read to them, and read extensively on their own.
- **directly,** when students are explicitly taught both individual words and word learning strategies.

text comprehension instruction

text comprehension instruction

Comprehension is the reason for reading. If readers can read the words but do not understand what they are reading, they are not really reading.

As they read, good readers are both purposeful and active.

Good readers are purposeful. Good readers have a purpose for reading. They may read to find out how to use a food processor, read a guidebook to gather information about national parks, read a textbook to satisfy the requirements of a course, read a magazine for entertainment, or read a classic novel to experience the pleasures of great literature.

Good readers are active. Good readers think actively as they read. To make sense of what they read, good readers engage in a complicated process. Using their experiences and knowledge of the world, their knowledge of vocabulary and language structure, and their knowledge of reading strategies (or plans), good readers make sense of the text and know how to get the most out of it. They know when they have problems with understanding and how to resolve these problems as they occur.

Research over 30 years has shown that instruction in comprehension can help students understand what they read, remember what they read, and communicate with others about what they read.

What does scientifically-based research tell us about effective text comprehension instruction?

The scientific research on text comprehension instruction reveals important information about what students should be taught about text comprehension and how it should be taught. The following key findings are of particular interest and value to classroom teachers.

Text comprehension can be improved by instruction that helps readers use specific comprehension strategies.

Comprehension strategies are conscious plans—sets of steps that good readers use to make sense of text. Comprehension strategy instruction helps students become purposeful, active readers who are in control of their own reading comprehension.

The following six strategies appear to have a firm scientific basis for improving text comprehension.

Monitoring comprehension. Students who are good at monitoring their comprehension know when they understand what they read and when they do not. They have strategies to "fix up" problems in their understanding as the problems arise. Research shows that instruction, even in the early grades, can help students become better at monitoring their comprehension.

Comprehension monitoring instruction teaches students to

- be aware of what they ***do*** understand,
- identify what they ***do not*** understand, and
- use appropriate "fix-up" strategies to resolve problems in comprehension.

Meta-cognition

Metacognition can be defined as "thinking about thinking." Good readers use metacognitive strategies to think about and have control over their reading. Before reading, they might clarify their purpose for reading and preview the text. During reading, they might monitor their understanding, adjusting their reading speed to fit the difficulty of the text and "fixing up" any comprehension problems they have. After reading, they check their understanding of what they read.

Comprehension monitoring, a critical part of metacognition, has received a great deal of attention in the reading research.

Students may use several comprehension monitoring strategies.

- Identify where the difficulty occurs ("I don't understand the second paragraph on page 76.").
- Identify what the difficulty is ("I don't get what the author means when she says, 'Arriving in America was a milestone in my grandmother's life.'").
- Restate the difficult sentence or passage in their own words ("Oh, so the author means that coming to America was a very important event in her grandmother's life.").
- Look back through the text ("The author talked about Mr. McBride in Chapter 2, but I don't remember much about him. Maybe if I reread that chapter, I can figure out why he's acting this way now.").
- Look forward in the text for information that might help them to resolve the difficulty. ("The text says, 'The groundwater may form a stream or pond or create a wetland. People can also bring groundwater to the surface.' Hmm, I don't understand how people can do that . . . Oh, the next section is called 'Wells.' I'll read this section to see if it tells how they do it.").

Using graphic and semantic organizers. Graphic organizers illustrate concepts and interrelationships among concepts in a text, using diagrams or other pictorial devices. Graphic organizers are known by different names, such as maps, webs, graphs, charts, frames, or clusters. Semantic organizers (also called semantic maps or semantic webs) are graphic organizers that look somewhat like a spider web. In a semantic organizer, lines connect a central concept to a variety of related ideas and events.

Regardless of the label, graphic organizers can help readers focus on concepts and how they are related to other concepts. Graphic organizers help students read to learn from informational text in the content areas, such as science and social studies textbooks and trade books. Used with informational text, graphic organizers can help students see how concepts fit common text structures. Graphic organizers are also used with narrative text, or stories, as story maps. Graphic organizers can:

- help students focus on text structure as they read;
- provide students with tools they can use to examine and visually represent relationships in a text; and
- help students write well-organized summaries of a text.

Answering questions. Teachers have long used questions to guide and monitor students' learning. Research shows that teacher questioning strongly supports and advances students' learning from reading. Questions appear to be effective for improving learning from reading because they:

- give students a purpose for reading;
- focus students' attention on what they are to learn;
- help students to think actively as they read;
- encourage students to monitor their comprehension; and
- help students to review content and relate what they have learned to what they already know.

Question-answering instruction encourages students to learn to answer questions better and, therefore, to learn more as they read. One type of question-answering instruction simply teaches students to look back in the text to find answers to questions that they cannot answer after the initial reading. Another type helps students understand question-answer relationships—the relationships between questions and where the answers to those questions are found. In this instruction, readers learn to answer questions that require an understanding of information that is

- text explicit (stated explicitly in a single sentence);
- text implicit (implied by information presented in two or more sentences); or
- scriptal (not found in the text at all, but part of the reader's prior knowledge or experience).

Generating questions. Teaching students to ask their own questions improves their active processing of text and their comprehension. By generating questions, students become aware of whether they can answer the questions and if they understand what they are reading. Students learn to ask themselves questions that require them to integrate information from different segments of text. For example, students can be taught to ask main idea questions that relate to important information in a text.

Examples of question-answer relationships

Text: (from *The Skirt*, by Gary Soto)

After stepping off the bus, Miata Ramirez turned around and gasped, "Ay!" The school bus lurched, coughed a puff of stinky exhaust, and made a wide turn at the corner. The driver strained as he worked the steering wheel like the horns of a bull.

Miata yelled for the driver to stop. She started running after the bus. Her hair whipped against her shoulders. A large book bag tugged at her arm with each running step, and bead earrings jingled as they banged against her neck.

"My skirt!" she cried loudly. "Stop!"

Question: Did Miata try to get the driver to stop?

Answer: Yes.

Question-Answer Relationship (Text explicit, because the information is given in one sentence):

"Miata yelled for the driver to stop."

Question: Why did Miata want the driver to stop?

Answer: She suddenly remembered that she had left a skirt on the bus.

Question-Answer Relationship (Text implicit, because the information must be inferred from different parts of the text):

Miata is crying "My skirt!" as she is trying to get the driver to stop.

Question: Was the skirt important to Miata?

Answer: Yes.

Question-Answer Relationship (Scriptal, because the information is not contained in the text, but must be drawn from the reader's prior knowledge): She probably would not have tried so hard to get the driver to stop if the skirt were not important to her.

Recognizing story structure. Story structure refers to the way the content and events of a story are organized into a plot. Students who can recognize story structure have greater appreciation, understanding, and memory for stories. In story structure instruction, students learn to identify the categories of content (setting, initiating events, internal reactions, goals, attempts, and outcomes) and how this content is organized into a plot. Often, students learn to recognize story structure through the use of story maps. Story maps, a type of graphic organizer, show the sequence of events in simple stories. Instruction in the content and organization of stories improves students' comprehension and memory of stories.

Summarizing. A summary is a synthesis of the important ideas in a text. Summarizing requires students to determine what is important in what they are reading, to condense this information, and to put it into their own words. Instruction in summarizing helps students:

- identify or generate main ideas;
- connect the main or central ideas;
- eliminate redundant and unnecessary information; and
- remember what they read.

Students can be taught to use comprehension strategies.

In addition to identifying which comprehension strategies are effective, scientific research provides guidelines for how to teach comprehension strategies.

Effective comprehension strategy instruction is explicit, or direct. Research shows that explicit teaching techniques are particularly effective for comprehension strategy instruction. In explicit instruction, teachers tell readers why and when they should use strategies, what strategies to use, and how to apply them. The steps of explicit instruction typically include direct explanation, teacher modeling ("thinking aloud"), guided practice, and application.

- ***Direct explanation.*** The teacher explains to students why the strategy helps comprehension and when to apply the strategy.
- ***Modeling.*** The teacher models, or demonstrates, how to apply the strategy, usually by "thinking aloud" while reading the text that the students are using.
- ***Guided practice.*** The teacher guides and assists students as they learn how and when to apply the strategy.
- ***Application.*** The teacher helps students practice the strategy until they can apply it independently.

Effective comprehension strategy instruction can be accomplished through cooperative learning. Cooperative learning (and the closely related concept, collaborative learning) involves students working together as partners or in small groups on clearly defined tasks. Cooperative learning instruction has been used successfully to teach comprehension strategies in content-area subjects. Students work together to understand content-area texts, helping each other learn and apply comprehension strategies. Teachers help students learn to work in groups. Teachers also provide demonstrations of the comprehension strategies and monitor the progress of students.

Effective instruction helps readers use comprehension strategies flexibly and in combination. Although it can be helpful to provide students with instruction in individual comprehension strategies, good readers must be able to coordinate and adjust several strategies to assist comprehension.

Multiple-strategy instruction teaches students how to use strategies flexibly as they are needed to assist their comprehension. In a well-known example of multiple-strategy instruction called "reciprocal teaching," the teacher and students work together so that the students learn four comprehension strategies:

- asking questions about the text they are reading;
- summarizing parts of the text;
- clarifying words and sentences they don't understand; and
- predicting what might occur next in the text.

Teachers and students use these four strategies flexibly as they are needed in reading literature and informational texts.

Questions you may have about text comprehension instruction

Is enough known about comprehension strategy instruction for me to implement it in my classroom?

Yes. Scientific study of text comprehension instruction over the past 30 years has suggested instructional approaches that are ready to be implemented in classrooms.

When should text comprehension instruction begin?

Even teachers in the primary grades can begin to build the foundation for reading comprehension. Reading is a complex process that develops over time. Although the basics of reading—word recognition and fluency—can be learned in a few years, reading to learn subject matter does not occur automatically once students have "learned to read." Teachers should emphasize text comprehension from the beginning, rather than waiting until students have mastered "the basics" of reading. Instruction at all grade levels can benefit from showing students how reading is a process of making sense out of text, or constructing meaning. Beginning readers, as well as more advanced readers, must understand that the ultimate goal of reading is comprehension.

You can highlight meaning in all interactions with text. Talk about the content, whether reading aloud to students or guiding them in reading on their own. Model, or "think aloud," about your own thinking and understanding as you read. Lead students in a discussion about the meaning of what they are reading. Help students relate the content to their experience and to other texts they have read. Encourage students to ask questions about the text.

Has research identified comprehension strategies other than the six described here?

The six strategies described have received the strongest scientific support. The following strategies, however, have received some support from research. You may want to consider them for use in your classroom.

Making use of prior knowledge. Good readers draw on prior knowledge and experience to help them understand what they are reading. You can help your students make use of their prior knowledge to improve their comprehension. Before your students read, preview the text with them. As part of previewing, ask the students what they already know about the content of the selection (for example, the topic, the concept, or the time period). Ask them what they know about the author and what text structure he or she is likely to use. Discuss the important vocabulary used in the text. Show students some pictures or diagrams to prepare them for what they are about to read.

Using mental imagery. Good readers often form mental pictures, or images, as they read. Readers (especially younger readers) who visualize during reading understand and remember what they read better than readers who do not visualize. Help your students learn to form visual images of what they are reading. For example, urge them to picture a setting, character, or event described in the text.

Which comprehension strategies should be taught? When should they be taught?

Comprehension strategies are not ends in themselves; they are means of helping your students understand what they are reading. Help your students learn to use comprehension strategies in natural learning situations—for example, as they read in the content areas. If your students are struggling to identify and remember the main points in a chapter they are reading in their social studies textbook, teach them how to write summaries. Or, if students have read a chapter in their science textbook but are unable to answer questions about the chapter, teach them question-answering strategies. When your students find that using comprehension strategies can help them to learn, they are more likely to be motivated and involved actively in learning.

Keep in mind that not all comprehension strategies work for all types of text. Obviously, you can only teach story structure when students are reading stories, not informational text or poetry.

Summing up

Text comprehension is important because	• comprehension is the reason for reading.
Text comprehension is	• purposeful. • active.
Text comprehension can be developed	• by teaching comprehension strategies.
Text comprehension strategies can be taught	• through explicit instruction. • through cooperative learning. • by helping readers use strategies flexibly and in combination.

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The findings described in this document were drawn from the 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.* A complete copy of the NRP report can be read, downloaded, or ordered at no cost from the NRP website at www.nationalreadingpanel.org.

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